Okha Light Well Intervention Environment Plan

Global Wells and Seismic

October 2026

Revision: 0

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

This page has been intentionally left blank

Table of contents

1. Introduction 14
1.1 Overview 14
1.2 Purpose of the Environment Plan 14
1.3 Environment Plan summary 14
1.4 Structure of the Environment Plan 15
1.5 Description of the titleholder 16
1.5.1 Details of titleholder and nominated liaison person 17
1.5.1.1 Titleholder 17
1.5.1.2 Nominated liaison person 17
1.5.2 Arrangements for notifying change 17
1.6 Woodside Management System 17
1.6.1 Woodside Management System purpose 17
1.6.2 Environment and Biodiversity Policy 19
1.7 Description of relevant requirements 19
1.7.1 *Offshore Petroleum and Greenhouse Gas Storage Act 2006* (Cth) 19
1.7.2 *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) 20
1.7.2.1 Recovery plans and threat abatement plans 20
1.7.2.2 Australian Marine Parks 20
1.7.2.3 World Heritage properties 21
2. Environment Plan process 22
2.1 Overview 22
2.2 Environment Plan process 22
2.3 Establish the context 23
2.3.1 Describe the activity 24
2.3.2 Describe the existing environment 24
2.3.3 Environmental legislation and other requirements 24
2.3.4 Impact and risk management 24
2.3.4.1 Impact and risk identification and analysis 24
2.3.4.2 Decision support framework 25
2.3.4.3 Decision support framework tools 26
2.3.4.4 Decision calibration 27
2.3.5 Control measures 27
2.3.6 Impact and risk classification 28
2.3.6.1 Impact classification 28
2.3.6.2 Risk classification 29
2.4 Impact and risk evaluation 30
2.4.1 Demonstration of ‘as low as reasonably practicable’ 30
2.4.2 Demonstration of acceptability 31
2.5 Recovery plan and threat abatement plan assessment 31
2.6 Environmental performance objectives/outcomes, standards and measurement criteria 32
2.7 Implement, monitor, review and report 32
2.8 Stakeholder consultation 32
3. Description of the activity 33
3.1 Overview 33

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

3.2 Location 34
3.3 Operational Area 36
3.4 Timing 36
3.5 Subsea intervention activities 36
3.5.1 Connection of integrated well control package 38
3.5.2 Underwater acoustic positioning 39
3.5.3 Marine growth removal 39
3.6 Project vessels 39
3.7 Support operations 40
3.7.1 Helicopters 40
3.7.2 Remotely operated vehicle 40
3.7.3 Resupply 40
3.8 Contingency operations 40
3.8.1 Well kill 40
3.8.2 Emergency shutdown and disconnect 41
4. Description of the existing environment 42
4.1 Overview 42
4.2 Regional context 45
4.3 Matters of national environmental significance (EPBC Act) 47
4.4 Physical environment 47
4.5 Habitats and biological communities 49
4.6 Protected species 50
4.6.1 Fish, sharks and rays 50
4.6.1.1 Whale sharks 54
4.6.2 Marine reptiles 54
4.6.3 Marine mammals 60
4.6.4 Seabirds and migratory shorebirds 66
4.6.4.1 Wedge-tailed shearwater 72
4.6.5 Seasonal sensitivities for protected species 72
4.7 Key ecological features 74
4.7.1 Ancient Coastline at 125 Depth Contour 76
4.8 Protected places 76
4.9 Socioeconomic environment 79
4.9.1 Cultural values and heritage 79
4.9.1.1 Native Title 79
4.9.1.2 Coastally adjacent Indigenous groups 79
4.9.1.3 Marine Parks 82
4.9.1.4 Indigenous protected areas 82
4.9.1.5 Sea Country values 83
4.9.1.6 Summary of cultural features and heritage values 110
4.9.1.7 Historic sites of significance 116
4.9.1.8 Historic underwater heritage 116
4.9.1.9 World, National and Commonwealth Heritage listed places 116
4.9.2 Commercial fisheries 116
4.9.3 Traditional and customary fishing 123
4.9.4 Tourism and recreation 123

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

4.9.5 Commercial shipping 123
4.9.6 Oil and gas facilities, infrastructure and other industries 125
4.9.7 Submarine communications infrastructure 127
4.9.8 Defence 127
5. Stakeholder consultation 129
5.1 Summary 129
5.2 Consultation – general context 130
5.3 Identification of relevant persons for consultation 133
5.3.1 Regulation 25(1)(a),(b) and (c) 133
5.3.2 Identification of relevant persons under Regulations 25(1)(a),(b) and (c) 134
5.3.3 Regulation 25(1)(d) 134
5.3.4 Identification of relevant persons under Regulation 25(1)(d) 135
5.3.5 Regulation 25(1)(e) 141
5.3.6 Identification of relevant persons under Regulation 25(1)(e) 141
5.3.7 Persons or organisations Woodside chooses to contact 141
5.3.8 Assessment of relevant persons for the proposed activity 141
5.4 Consultation material and timing 142
5.4.1 Sufficient information 142
5.4.2 Reasonable period for consultation 145
5.4.3 Discharge of Regulation 25 146
5.5 Context of consultation approach with Traditional Owners 146
5.5.1 Approach to methodology – Woodside's interpretation of Tipakalippa Appeal 146
5.5.2 Consultation method 147
5.5.3 Identification of relevant persons 149
5.5.4 Opportunity to self-identify and identifying other individuals 150
5.5.5 Sufficient information 150
5.5.6 Reasonable period for consultation 151
5.5.7 Discharge of Regulation 25 151
5.6 Providing feedback and assessment of merit of objections or claims 151
5.7 Ongoing consultation 152
6. Environmental impact and risk assessment, performance outcomes, standards and measurement criteria 153
6.1 Overview 153
6.2 Impacts and risks not deemed credible or outside the scope of this Environment Plan 156
6.2.1 Shallow/nearshore activities 156
6.2.2 Ongoing management of wells 156
6.3 Cumulative impacts 156
6.4 Environmental performance outcomes, standards and measurement criteria 156
6.5 Presentation 157
6.6 Planned activities (routine and non-routine) 159
6.6.1 Physical presence: interaction with other marine users 159
6.6.2 Physical presence: disturbance to seabed 164
6.6.3 Routine and non-routine acoustic emissions 169
6.6.4 Routine and non-routine discharges: subsea fluids and fugitive hydrocarbons 178
6.6.5 Routine and non-routine discharges: vessel utility systems (bilge water, grey water, sewage, putrescible wastes and deck drainage water) 183

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.6.6 Routine atmospheric and greenhouse gas emissions: fuel combustion and cold venting.....191
6.6.7 Routine and non-routine: external lighting on the project vessels.....196
6.7 Unplanned activities (accidents, incidents, emergency situations).....202
6.7.1 Quantitative spill risk assessment methodology.....202
6.7.1.1 Worst case scenarios.....203
6.7.1.2 Environment that may be affected (EMBA) and hydrocarbon contact thresholds.....203
6.7.1.3 Operational and scientific monitoring.....206
6.7.1.4 Hydrocarbon characteristics.....206
6.7.2 Unplanned hydrocarbon release: wellbore release.....211
6.7.3 Unplanned hydrocarbon release: vessel collision.....226
6.7.4 Unplanned discharges: hydrocarbon and chemical spills from vessel and subsea activities.....237
6.7.5 Unplanned discharges: release of solid hazardous and non-hazardous wastes (including dropped objects).....242
6.7.6 Physical presence (unplanned): interactions with marine fauna.....247
6.7.7 Physical presence (unplanned): introduction of invasive marine species.....252
6.7.8 Physical presence (unplanned): interaction with live infrastructure.....258
6.8 Recovery plan and threat abatement assessment.....262
6.9 Cultural features and heritage values assessment.....276
7. Implementation strategy.....288
7.1 Overview.....288
7.2 Systems, practices, and procedures.....288
7.2.1.1 Environmental selection criteria.....288
7.2.2 Woodside invasive marine species risk assessment process.....290
7.2.2.1 Objective and scope.....290
7.2.2.2 Risk assessment process.....291
7.2.3 Unexpected finds procedure.....293
7.2.4 Offshore Seabird Management Plan.....293
7.3 Roles and responsibilities.....294
7.4 Training and competency.....300
7.4.1 Overview.....300
7.4.2 Inductions.....300
7.4.3 Petroleum Activity-specific environmental awareness.....300
7.4.4 Management of training requirements.....300
7.5 Monitoring, auditing, and managing non-conformance and review.....300
7.5.1 Monitoring.....300
7.5.2 Auditing.....301
7.5.2.1 Light well intervention vessel activities.....301
7.5.2.2 Marine assurance.....302
7.5.2.3 Risk assessment.....302
7.5.3 Management of non-conformance.....303
7.5.4 Review.....303
7.5.4.1 Management review.....303
7.5.4.2 Learning and knowledge sharing.....304
7.5.4.3 Review of impacts, risks and controls across the life of the Environment Plan.....304
7.6 Management of knowledge.....304
7.7 Management of Newly Identified Impacts and Risks.....305
7.8 Management of change and revision.....305

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

7.8.1 Environment Plan management of change 305
7.8.2 Oil Pollution Emergency Plan management of change 305
7.9 Record keeping 306
7.10 Ongoing consultation 306
7.11 Reporting 308
7.11.1 Routine reporting (internal) 308
7.11.1.1 Regular health, safety and environment meetings 308
7.11.1.2 Performance reporting 308
7.11.2 Routine reporting (external) 308
7.11.2.1 Start and end notifications of the Petroleum Activity 308
7.11.2.2 Environmental performance review and reporting 308
7.11.2.3 End of the Environment Plan 309
7.11.3 Incident reporting (internal) 309
7.11.4 Incident reporting (external) – Reportable and recordable 309
7.11.4.1 Reportable incidents 309
7.11.4.2 Recordable incidents 310
7.11.4.3 Other external incident reporting requirements 310
7.12 Emergency preparedness and response 314
7.12.1 Overview 314
7.12.2 Emergency response training 314
7.12.3 Emergency response preparation 315
7.12.4 Oil and other hazardous materials spill 316
7.12.5 Emergency and spill response 316
7.12.6 Emergency and spill response drills and exercises 316
7.12.7 Testing of hydrocarbon spill response arrangements 317
7.12.8 Testing of arrangements schedule 317
7.12.9 Cyclone and dangerous weather preparation 320
8. References 321
9. List of terms and acronyms 331
Appendix A Woodside environment and biodiversity, climate and risk management policies 335
Appendix B Relevant requirements 336
Appendix C EPBC Act Protected Matters Search Tool results 337
Appendix D NOPSEMA report forms 340
Appendix E DEPARTMENT OF PLANNING LAND, HERITAGE AND ABORIGINAL ENQUIRY SYSTEM RESULTS 341
Appendix F STAKEHOLDER CONSULTATION 342
Appendix G OIL SPILL PREPAREDNESS AND RESPONSE STRATEGY SELECTION AND EVALUATION 343
Appendix H OIL POLLUTION FIRST STRIKE PLAN 344
Appendix I MASTER EXISTING ENVIRONMENT 345

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

List of tables

Table 1-1: Environment Plan summary 14
Table 1-2: Process phases, applicable Environment Regulations and relevant section of the Environment Plan 15
Table 1-3: Joint venture participants for relevant petroleum titles and pipeline license 16
Table 2-1: Example of layout of identification of risks and impacts in relation to risk sources 25
Table 2-2: Woodside impact and impact risk matrix (environment and community and culture) consequence descriptions 29
Table 2-3: Woodside risk matrix likelihood levels 30
Table 2-4: Woodside risk matrix determination of risk rating 30
Table 2-5: Summary of Woodside's criteria for 'as low as reasonably practicable' demonstration 30
Table 2-6: Summary of Woodside's criteria for acceptability 31
Table 3-1: Petroleum Activity overview 34
Table 3-2: Approximate location details for the Petroleum Activity 34
Table 3-3: Summary of the timing of the Petroleum Activity 36
Table 3-4: LWI scope activity steps 36
Table 3-5: Emissions and discharges during the light well intervention 37
Table 3-6: Marine growth removal 39
Table 3-7: Indicative light well intervention vessel specifications 39
Table 3-8: Indicative support vessel specifications 40
Table 4-1: Hydrocarbon spill thresholds used to define EMBA for surface and in-water hydrocarbons 43
Table 4-2: Summary of relevant matters of national environmental significance identified by the EPBC Act Protected Matters Search Tool as potentially occurring within the Operational area and EMBA 47
Table 4-3: Habitats and communities within the environment that may be affected (distance calculated from Operational area) 49
Table 4-4: Threatened and migratory fish, shark and ray species predicted to occur in the Operational area and EMBA 51
Table 4-5: Fish, shark and ray biologically important areas (BIAs) in the EMBA 52
Table 4-6: Threatened and migratory marine reptile species predicted to occur in the Operational area and EMBA 55
Table 4-7: Marine turtle BIAs in the EMBA 55
Table 4-8: Habitat critical to the survival of the marine turtles predicted to occur within EMBA 57
Table 4-9: Threatened and migratory marine mammal species predicted to occur in the Operational area and EMBA 61
Table 4-10: Marine mammal BIAs in the EMBA 62
Table 4-11: Habitat critical to the survival of the marine mammals predicted to occur within the EMBA 62
Table 4-12: Threatened and migratory seabird and migratory shorebird species predicted to occur in the Operational area and EMBA 67
Table 4-13: Seabird and shorebird BIAs in the Operational area and EMBA 70
Table 4-14: Key seasonal sensitivities for protected migratory species identified as occurring in the Operational area 72
Table 4-15: Key ecological features within the Operational area and EMBA 74
Table 4-16: Established protected places and other sensitive areas overlapping the EMBA 76
Table 4-17: Summary of native title claims, determinations and Indigenous Land Use Agreements which overlap or are coastally adjacent to the EMBA 80
Table 4-18: Summary of the Operational area' and EMBA overlap with Commonwealth and State marine park management plan areas 82
Table 4-19: Cultural features and heritage values identified in publicly available literature 84
Table 4-20: Summary of feedback received via consultation to describe the existing environment 95

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 4-21: Summary of cultural features and heritage values 111
Table 4-22: World, National and Commonwealth Heritage listed places within the EMBA 116
Table 4-23: Commonwealth and State commercial fishery management areas overlapping the Operational area and EMBA 117
Table 5-1: Categories of relevant persons 136
Table 5-2: Methodology for identifying relevant persons within the EMBA undertaken under Regulation 25(1)(d) – by category 137
Table 6-1: Environmental impact analysis summary of planned and unplanned activities 154
Table 6-2: Thresholds for permanent threshold shift, temporary threshold shift and behavioural response onset for low, high and very high frequency cetaceans 171
Table 6-3: Thresholds for permanent threshold shift, temporary threshold shift and behavioural response onset in marine turtles for impulsive and continuous noise 172
Table 6-4: Impact thresholds to fish, sharks and rays for continuous noise 173
Table 6-5: Greenhouse gas emissions sources and quantities 191
Table 6-6: Thresholds applied to the quantitative hydrocarbon spill risk modelling results 203
Table 6-7: The Bonn Agreement oil appearance code 204
Table 6-8: Characteristics of the hydrocarbon types used for modelling and ecotoxicological studies 206
Table 6-9: Summary of worst-case subsea wellbore release scenarios 212
Table 6-10: Modelling inputs – loss of containment 213
Table 6-11: Key receptor locations and sensitivities potentially contacted above impact thresholds by the wellbore release scenario with summary hydrocarbon spill contact (table cell values correspond to probability of contact [%]) 215
Table 6-12: Summary of credible hydrocarbon spill scenario as a result of vessel collision 227
Table 6-13: Credibility, consequence and likelihood of introducing invasive marine species 253
Table 6-14: Identification of applicability of recovery plan and threat abatement plan objectives and action areas 263
Table 6-15: Assessment against relevant actions of the Recovery Plan for Marine Turtles in Australia 269
Table 6-16: Assessment against relevant actions of the Blue Whale Conservation Management Plan 271
Table 6-17: Assessment against relevant actions of the Recovery Plan for the Grey Nurse Shark (*Carcharias taurus*) 272
Table 6-18: Assessment against relevant actions of the Sawfishes and River Sharks Multispecies Recovery Plan 273
Table 6-19: Assessment against relevant actions of the Threat Abatement Plan for the impacts of marine debris on the vertebrate wildlife of Australia's coasts and oceans 274
Table 6-20: Assessment against relevant actions of the National Recovery Plan for the Southern Right Whale 274
Table 7-1: Centre for Environment, Fisheries and Aquaculture Science's Offshore Chemical Notification Scheme grouping based on ecotoxicity results 289
Table 7-2: Key factors considered as a part of the risk assessment process for vessels 291
Table 7-3: Key factors considered as a part of the risk assessment process for immersible equipment 292
Table 7-4: Roles and responsibilities 295
Table 7-5: Ongoing consultation engagements 307
Table 7-6: Routine external reporting requirements 308
Table 7-7: External incident reporting requirements 311
Table 7-8: Oil pollution preparedness and response overview 314
Table 7-9: Emergency response training requirements 315
Table 7-10: Testing of response capability 317
Table 9-1: List of terms and definitions 331

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

List of figures

Figure 1-1: The Woodside Management System structure 18
Figure 1-2: The Woodside Management System information structure and document hierarchy 19
Figure 2-1: Environment Plan development process 23
Figure 2-2: Risk-related decision-making framework 26
Figure 3-1: Location of the Petroleum Activity 35
Figure 4-1: Environment that may be affected by the Petroleum Activity 44
Figure 4-2: Location of the Operational area and relevant marine bioregions 46
Figure 4-3: Bathymetry of the Operational area 48
Figure 4-4: Whale shark BIAs overlapping the EMBA and tagged whale shark satellite tracks 53
Figure 4-5: Marine turtles BIAs near the EMBA 58
Figure 4-6: Habitat critical to the survival of marine turtles near the Operational area 59
Figure 4-7: Pygmy blue whale BIAs near the EMBA and tagged whale tracks for northbound and southbound migration 63
Figure 4-8: Humpback whale BIAs and tagged tracks overlapping the EMBA 64
Figure 4-9: Southern right whale BIAs near the EMBA 65
Figure 4-10: Seabird breeding BIAs in proximity to the Operational area 71
Figure 4-11: Key ecological features overlapping the Operational area 75
Figure 4-12: Protected areas overlapping the EMBA 78
Figure 4-13: Operational area and sociocultural hydrocarbon thresholds in relation to native title claims, determinations and Indigenous Land Use Agreements 79
Figure 4-14: State-managed fisheries with a potential for Interaction with the Petroleum Activity 122
Figure 4-15: Vessel density map for the Operational Area 124
Figure 4-16: Oil and gas infrastructure within the Operational area and EMBA 126
Figure 4-17: Defence areas within the EMBA 128
Figure 5-1: Overview of Woodside's methodology to identify relevant persons 130
Figure 5-2: Overview of Woodside's consultation approach 132
Figure 6-1: Proportional mass balance plot representing the weathering of Cossack light crude spilled onto the water surface as a one-off release (50 m³ over one hour) and subject to a constant five knots (2.6 m/s) wind at 27°C water temperature and 25°C air temperature 207
Figure 6-2: Proportional mass balance plot representing the weathering of Cossack light crude spilled onto the water surface as a one-off release (50 m³ over one hour) and subject to variable wind at 27°C water temperature and 25°C air temperature 208
Figure 6-3: Proportional mass balance plot representing the weathering of marine diesel spilled onto the water surface as a one-off instantaneous release of 50 m³ and subject to a constant 5 kn (2.6 m/s) wind at 27°C water temperature and 25°C air temperature 209
Figure 6-4: Proportional mass balance plot representing the weathering of marine diesel spilled onto the water surface as a one-off release of 50 m³ and subject to variable wind at 27°C water temperature and 25°C air temperature 210
Figure 7-1: Offshore Chemical Notification Scheme ranking 289
Figure 7-2: Schematic for Offshore Seabird Management Plan to manage seabird impacts to acceptable and as low as reasonably practicable levels 294
Figure 7-3: Indicative three-yearly testing of arrangements schedule 319

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

1. INTRODUCTION

1.1 Overview

Woodside Energy Limited (Woodside), as titleholder under the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (Cth) (referred to as the Environment Regulations), proposes to undertake the following activities within title area(s) WA-9-L, WA-11-L and WA-16-L:

- light well intervention (LWI) activities on the Cossack-4H (CK4) and Lambert-3 (LH3), Wannea-7ST1 (WA7) and Wannea-8 (WA8) wells using a light well intervention vessel (LWIV). The wells are tied back to the Okha floating production, storage and offloading facility (FPSO).
- routine and non-routine support activities, including support vessel and helicopter operations.

These activities will hereafter be collectively referred to as the Petroleum Activity and form the scope of this Environment Plan (EP). The activities are described in Section 3. This EP has been prepared as part of the requirements under the Environment Regulations, as administered by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA).

1.2 Purpose of the Environment Plan

In accordance with the objectives of the Environment Regulations, the purpose of this EP is to demonstrate that:

- the potential environmental impacts and risks, planned (routine and non-routine) and unplanned, that may result from the Petroleum Activity are identified
- appropriate management controls are implemented to reduce impacts and risks to a level that is 'as low as reasonably practicable' (ALARP) and acceptable
- the Petroleum Activity is carried out in a manner consistent with the principles of ecologically sustainable development (ESD), as defined in Section 3A of the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act).

1.3 Environment Plan summary

Table 1-1 summarises the content of this EP, as required by section 35(7).

Table 1-1: Environment Plan summary

EP summary material requirement	Relevant section of this EP containing EP summary material
The location of the activity	Section 3.2
A description of the receiving environment	Section 4
A description of the activity	Section 3
Details of the environmental impacts and risks	Section 6
The control measures for the activity	Section 6
The arrangements for ongoing monitoring of the titleholder's environmental performance	Section 6.9
Response arrangements in the oil pollution emergency plan	Appendix G and Appendix H
Consultation already undertaken and plans for ongoing consultation	Section 5
Details of the titleholder's nominated liaison person for the activity	Section 1.5.1

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

1.4 Structure of the Environment Plan

The EP has been structured to reflect the process and requirements of the Environment Regulations, as outlined in Table 1-2.

Table 1-2: Process phases, applicable Environment Regulations and relevant section of the Environment Plan

Criteria for acceptance	Content requirements/relevant regulations	Elements	Section of EP
Section 34(a): Is appropriate for the nature and scale of the activity	Section 21: • Environmental assessment Section 22: • Implementation strategy for EP Section 24: • Other information in EP	The principle of 'nature and scale' is applicable throughout the EP	Section 3 Section 6 Section 6.9
Section 34(b): Demonstrates that the environmental impacts and risks of the activity will be reduced to ALARP Section 34(c): Demonstrates that the environmental impacts and risks of the activity will be of an acceptable level	Sections 21(1) to 21(7): • 21(1) Description of the activity • 21(2) and (3) Description of the environment • 21(4) Requirements • 21(5) and (6) Evaluation of environmental impacts and risks • 21(7) Environmental performance outcomes and standards Sections 24(a) to 24(b): • a statement of the titleholder's corporate environmental policy • a report on all consultations under section 25 of any relevant person by the titleholder	Set the context (activity and existing environment) Define 'acceptable' (the requirements, the corporate policy, relevant persons) Detail the impacts and risks Evaluate the nature and scale Detail the control measures – ALARP and acceptable	Section 3 Section 4 Section 5 Section 6 Appendix A Appendix B Appendix E
Section 34(d): Provides for appropriate environmental performance outcomes, environmental performance standards and measurement criteria	Section 21(7): • Environmental Performance Outcomes and standards	Environmental performance outcomes (EPOs) Environmental performance standards (EPSs) Measurement criteria (MCs)	Section 6
Section 34(e): Includes an appropriate implementation strategy and monitoring, recording and reporting arrangements	Section 22: • Implementation strategy for EP	Implementation strategy, including: • Environmental Management System • performance monitoring • Oil Pollution Emergency Plan and scientific monitoring • ongoing consultation	Section 6.9
Section 34(f): Does not involve the activity or part of the activity, other than arrangements for environmental monitoring or for	Sections 21(1) to 21(3): • 21(1) Description of the activity • 21(2) Description of the environment • 21(3) Without limiting paragraph 21(2)(b), relevant values and sensitivities may include any of the following:	No activity, or part of the activity, undertaken in any part of a declared World Heritage property	Section 3 Section 4

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Criteria for acceptance	Content requirements/relevant regulations	Elements	Section of EP
responding to an emergency, being undertaken in any part of a declared World Heritage property within the meaning of the EPBC Act	– (a) the world heritage values of a declared World Heritage property within the meaning of the EPBC Act – (b) the national heritage values of a National Heritage place within the meaning of that Act – (c) the ecological character of a declared Ramsar wetland – (d) the presence of a listed threatened species or listed threatened ecological community – (e) the presence of a listed migratory species – (f) any values and sensitivities that exist in, or in relation to, part or all of: ▪ (i) a Commonwealth marine area, or ▪ (ii) Commonwealth land		
Section 34(g): (i) the titleholder has carried out the consultations required by section 25 (ii) the measures (if any) that the titleholder has adopted, or proposes to adopt, because of the consultations are appropriate	Section 25: • Consultation with relevant authorities, persons and organisations, etc. Section 24(b): • a report on all consultations between the titleholder and any relevant person	Consultation undertaken in the preparation of this EP	Section 5 Appendix E
Section 34(h): Complies with the Act, this instrument and any other regulations made under the Act	Section 21(4)(a): • describe the requirements, including legislative requirements, that apply to activity and are relevant to the environmental management of the activity Section 23: • Details of the titleholder and nominated liaison Section 24(a): • a statement of the titleholder's corporate environmental policy Section 24(c): • details of all reportable incidents in relation to the proposed activity	All contents of the EP must comply with the *Offshore Petroleum and Greenhouse Gas Storage Act 2006* (Cth) (OPGGS Act) and the Environment Regulations	Section 1.5.1 Section 7.11 Appendix A Appendix B

1.5 Description of the titleholder

Woodside Energy Ltd is the titleholder for this activity, on behalf of the joint venture partners detailed in Table 1-3:

Table 1-3: Joint venture participants for relevant petroleum titles and pipeline license

Petroleum Titles / Pipeline License	Joint Venture Participants
WA-9-L, WA-11-L and WA-16-L[1]	BP Developments Australia Pty Ltd, Chevron Australia Pty Ltd, Woodside Energy (North West Shelf) Pty Ltd, Shell Australia Pty Ltd,

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Petroleum Titles / Pipeline License	Joint Venture Participants
	Japan Australia LNG (MIMI) Pty Ltd, CNOOC NWS Private Ltd and Jadestone Energy (CWLH) Pty Ltd,

[1] The Titleholders of these Titles are the registered holders of the Titles but have agreed to exercise their rights in the Titles through two separate Joint Ventures (one for Gas activities and one for Oil activities). The Oil Joint Venture Participants are Woodside Energy Ltd, Woodside Energy (North West Shelf) Pty Ltd and Jadestone Energy (CWLH) Pty Ltd and the Gas Joint Venture Participants are Woodside Energy Ltd, Woodside Energy (North West Shelf) Pty Ltd, BP Developments Australia Pty Ltd, Chevron Australia Pty Ltd, Japan Australia LNG (MIMI) Pty Ltd, Shell Australia Pty Ltd and CNOOC NWS Private Limited.

1.5.1 Details of titleholder and nominated liaison person

In accordance with section 23 of the Environment Regulations, details of the titleholder, liaison person and arrangements for notifying about changes are described below.

1.5.1.1 Titleholder

Woodside Energy Ltd

11 Mount Street

Perth, Western Australia

T: 08 9348 4000

Australian Company Number: 63 005 482 986

1.5.1.2 Nominated liaison person

Nicolas Wirtz

Corporate Affairs Manager

11 Mount Street

Perth, Western Australia

Telephone: 08 9348 4000

Email: feedback@woodside.com

1.5.2 Arrangements for notifying change

If the titleholder, titleholder's nominated liaison person, or the contact details for either change, NOPSEMA will be notified in writing within two weeks or as soon as practicable.

1.6 Woodside Management System

The Woodside Management System (Our WMS) defines the core mandatory activities that support safeguarding the business and enabling its people to achieve objectives, manage uncertainty and meet obligations to deliver value for the company and its stakeholders.

1.6.1 Woodside Management System purpose

Our WMS is a series of integrated business processes that contribute to value delivery. A process is defined as the core mandatory activities that are material to converting inputs to outputs to deliver value from the defined business area. A process must reflect relevant corporate drivers and may have associated tools that support its implementation. The Our WMS activities are divided into two categories: Deliver Value Chain, for activities directly involved in value delivery; and Enable Value Chain, for activities supporting the enterprise and value delivery (Figure 1-1). The Health, Safety and Environment (HSE) sub-category is included in the Enable Value Chain category. Given this, there is interdependence between processes across these activities.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

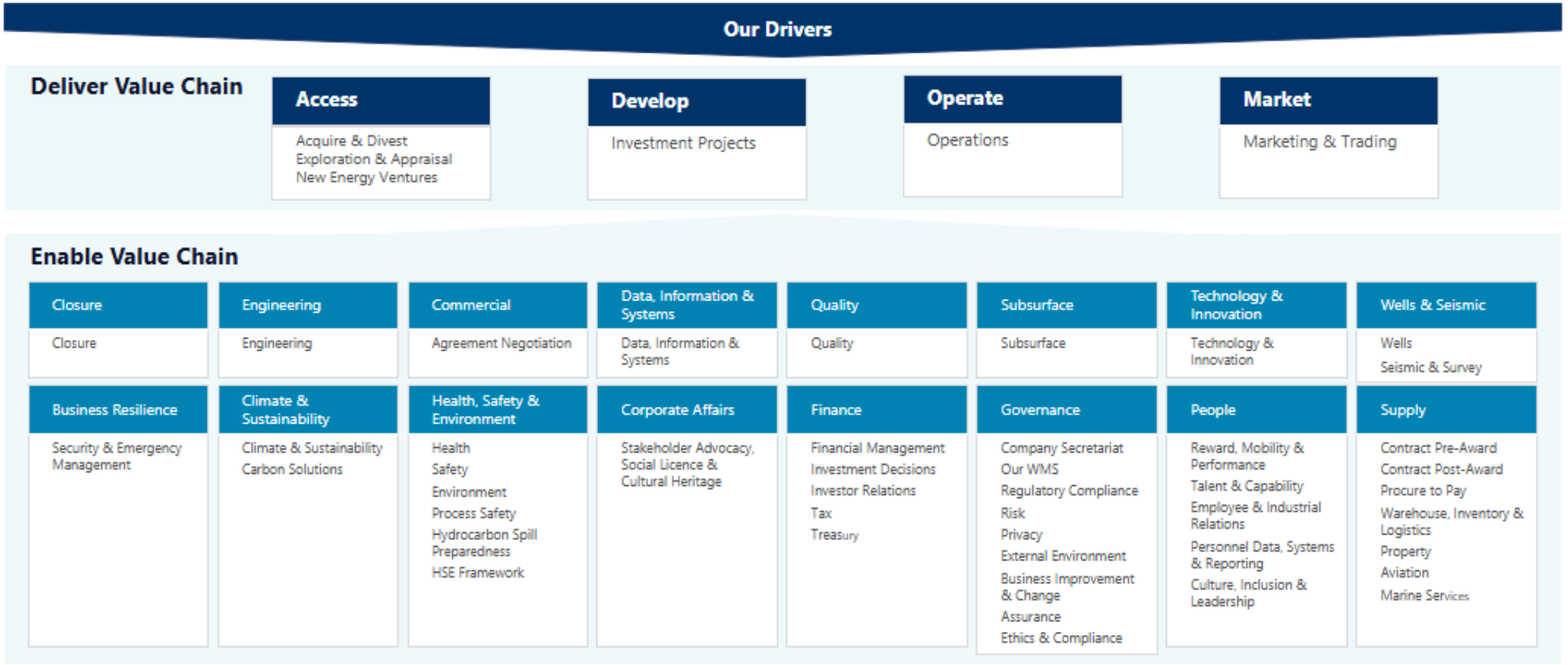


Figure 1-1: The Woodside Management System structure

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Our WMS content is structured in a hierarchy as illustrated in Figure 1-2. This hierarchy begins with the 'why' through Our Drivers, which are defined by the Board and Executive. It is followed by the 'what' with Our Expectations, which establish mandatory requirements for executing process activities to deliver value in accordance with the relevant Our Drivers. Finally, it includes the 'how' through Tools, which support the implementation, execution or understanding of Our Expectations. Additionally, there is non-WMS content that is subordinate to, but sits outside, Our WMS.

Adaptations of Our WMS tools may, as applicable and justified, be created for regional application.

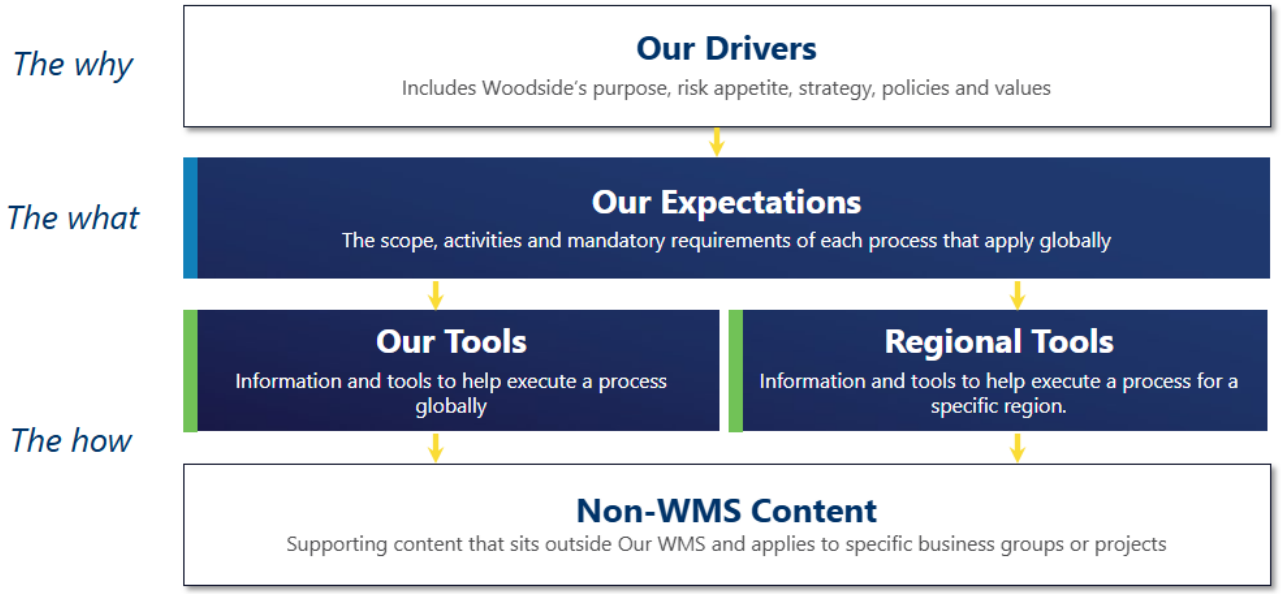


Figure 1-2: The Woodside Management System information structure and document hierarchy

1.6.2 Environment and Biodiversity Policy

In accordance with section 24(a) of the Environment Regulations, Woodside's Environment and Biodiversity Policy is provided in Appendix A of this EP.

Please note the Environment and Biodiversity Policy is reviewed regularly and is updated as required. The policy is made available on our website: https://www.woodside.com/who-we-are/corporate-governance-and-policies. This EP will be implemented in accordance with the current Environment and Biodiversity Policy as shown on our website.

1.7 Description of relevant requirements

In accordance with section 21(4) of the Environment Regulations, the requirements, including legislative, that apply to the activity and are relevant to managing the risks and impacts of the Petroleum Activity are detailed in Appendix B and summarised in the next paragraphs.

1.7.1 *Offshore Petroleum and Greenhouse Gas Storage Act 2006* (Cth)

The OPGGS Act legislates offshore petroleum activities beyond three nautical miles (NM) of the mainland (and islands) to the outer extent of the Australian Exclusive Economic Zone at 200 NM.

Under the OPGGS Act, the Environment Regulations apply to petroleum activities in Commonwealth Waters and are administered by NOPSEMA. The objective of the Environment Regulations is to ensure petroleum activities are performed in a manner:

- consistent with the principles of ESD
- by which the environmental impacts and risks of the activity will be reduced to ALARP
- by which the environmental impacts and risks of the activity will be of an acceptable level.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

This EP has been prepared in accordance with the relevant requirements of the OPGGS Act and the Environment Regulations.

1.7.2 *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)

The EPBC Act includes the objective to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places in Australia. These are defined under Part 3 of the EPBC Act as 'matters of national environmental significance' (MNES). The EPBC Act sets a regime that aims to ensure actions taken on (or impacting upon) Australian land or waters are consistent with the principles of ESD.

In relation to offshore petroleum activities in Commonwealth waters, the requirements of the EPBC Act are administered by NOPSEMA. The Streamlining Offshore Petroleum Environmental Approvals Program Report (NOPSEMA, 2014) requires any offshore petroleum activities, authorised by the OPGGS Act, to be conducted in accordance with an accepted EP whereby the definition of 'environment' covers all matters protected under Part 3 of the EPBC Act.

This EP will not be separately assessed under the EPBC Act as the Petroleum Activity falls within the class of actions approved under the NOPSEMA-endorsed program discussed above, and does not activate an exclusion provision requiring separate assessment of the Petroleum Activity under the EPBC Act.

1.7.2.1 Recovery plans and threat abatement plans

Under Section 139(1)(b) of the EPBC Act, the Environment Minister must not act inconsistently with a recovery plan for a listed threatened species or ecological community or a threat abatement plan for a species or community protected under the Act. Similarly, under section 268 of the EPBC Act:

> *'A Commonwealth agency must not take any action that contravenes a recovery plan or a threat abatement plan.'*

In respect to offshore petroleum activities in Commonwealth waters, these requirements are implemented by NOPSEMA. Specifically:

- NOPSEMA will not accept an EP that proposes activities that will result in unacceptable impacts to a listed threatened species or ecological community
- NOPSEMA will not accept an EP that is inconsistent with a recovery plan or threat abatement plan for a listed threatened species or ecological community
- NOPSEMA will have regard to any approved conservation advice in relation to a threatened species or ecological community before accepting an EP.

Section 6.8 contains an assessment of the Petroleum Activity against all relevant recovery plans and threat abatement plans.

1.7.2.2 Australian Marine Parks

Under the EPBC Act, Australian Marine Parks (AMPs) are recognised for conserving marine habitats and the species that live and rely on them. The Director of National Parks is responsible for managing AMPs (supported by Parks Australia) and is required to publish management plans for them. Under section 362 of the EPBC Act, other parts of the Commonwealth Government must not perform functions or exercise powers in relation to these parks that are inconsistent with management plans. Therefore, NOPSEMA is required to consider potential impacts from petroleum activities on AMPs.

Conservation objectives have been allocated to specific zones within AMPs based on the Australian International Union for Conservation of Nature (IUCN) reserve management principles outlined in Schedule 8 of the Environment Protection and Biodiversity Conservation Regulations 2025 (EPBC Regulations 2025). The principles for each zone determine what activities are acceptable within a protected area under the EPBC Act. The Operational area does not overlap any AMPs. AMPs that are overlapped by the environment that may be affected (EMBA) are presented in Section 4.7.1.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

1.7.2.3 World Heritage properties

Australian World Heritage properties are listed as MNES under the EPBC Act and must be assessed accordingly in EPs.

Schedule 5 of the EPBC Act establishes the Australian World Heritage management principles, which are designed to ensure World Heritage properties within Australia are managed in a way that maintains their values. The Operational area and EMBA do not overlap any World Heritage properties (Section 4.7.1).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

2. ENVIRONMENT PLAN PROCESS

2.1 Overview

This section outlines the process Woodside follows to prepare the EP once an activity has been defined as a Petroleum Activity. This includes a description of the environmental risk management methodology that is used to identify, analyse and evaluate risks to meet ALARP and acceptability requirements, and to develop EPOs and EPSs. This section also describes Woodside's risk management methodologies applicable to implementation strategies applied during the Petroleum Activity.

2.2 Environment Plan process

Figure 2-1 illustrates the EP development process. Each element is discussed in the next sections.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

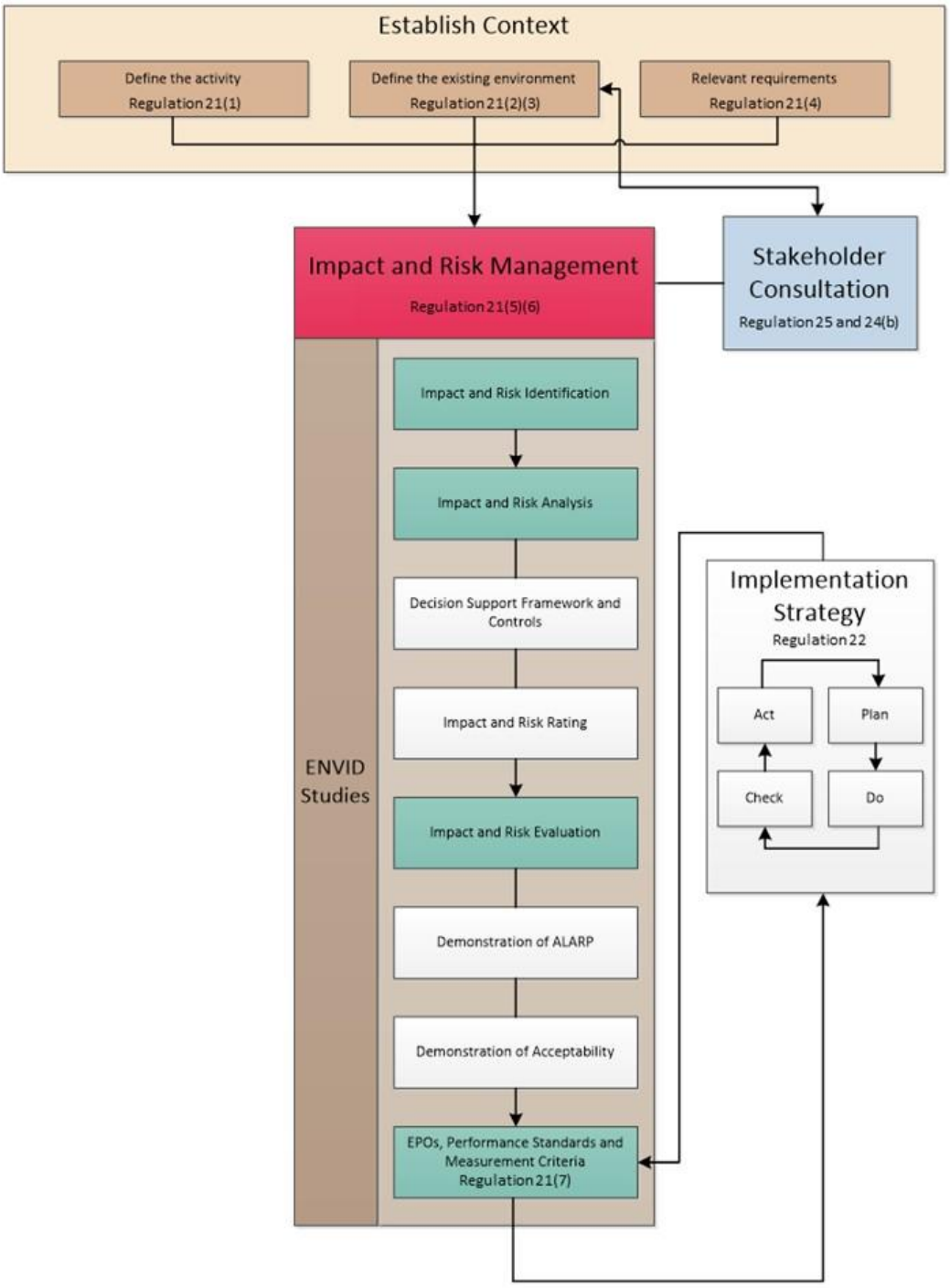


Figure 2-1: Environment Plan development process

2.3 Establish the context

Context is established by considering the proposed activities associated with a Petroleum Activity, and the environment in which it is planned to take place.

Describing the activity involves the evaluation of whether the activity meets the definition of a 'Petroleum Activity' as defined in the Environment Regulations. The activity is then described in relation to the location, what is to be undertaken and how—this allows for the identification of environmental aspects for each activity.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

2.3.1 Describe the activity

The EP describes the activity including the following:

- The location or locations of the activity;
- General details of the construction and layout of the facility used in undertaking the activity;
- An outline of the operational details of the activity and proposed timetables for undertaking the activity;
- Additional information relevant to consideration of environmental impacts and risks of the activity.

The 'what' and 'how' are described in the context of 'environmental aspects' to inform the risk and impact assessment for planned (routine and non-routine) and unplanned (accidents, incidents, emergency conditions) activities.

This activity is described in Section 3 and is referred to as the Petroleum Activity

2.3.2 Describe the existing environment

The values and sensitivities relevant to environment where the Petroleum Activity is proposed to be undertaken have been identified in Section 4.6, to the extent required to inform impact and risk assessment to environmental receptors from the Petroleum Activity.

A full description of relevant environmental values and sensitivities is contained within the Master Existing Environment document provided at Appendix I.

2.3.3 Environmental legislation and other requirements

Relevant legislation and other requirements that apply to the Petroleum Activity are presented in Section 1.7 and Appendix B. These requirements were considered when developing this EP.

2.3.4 Impact and risk management

2.3.4.1 Impact and risk identification and analysis

The first step of impact and risk management is to identify all credible sources of environmental impacts and risks, include those directly and indirectly associated with the Petroleum Activity and potential emergency and accidental events. This may include environment impacts and risk that are a consequence of the proposed activity but are not within Woodside's control. In this EP:

- planned (routine and non-routine) activities, including contingent activities, have the potential for inherent changes to the environment, are termed environmental 'impacts.''
- unplanned events, including potential emergency and accidental events which have the potential to result in a change to the environment, are termed environmental 'risks.''

An environmental impacts and risks identification and assessment workshop (ENVID) was undertaken by multidisciplinary teams comprising relevant operational, technical and environmental personnel with sufficient breadth of knowledge, training, and experience to reasonably assure that risks and impacts were identified, and their potential environmental consequences assessed. Impacts and risks were identified, during the workshop, for both planned (routine and non-routine) activities and unplanned (accidents/incidents/emergency conditions) events. During this process, risks identified as not applicable (not credible) were removed from the assessment.

During the ENVID, environmental impacts and risks were assessed, and controls were assigned to manage the impact or risk. The ENVID also helped to identify relevant stakeholders to consult when developing this EP (Section 5). The output of the ENVID, an environmental impacts and risk register, was then used as a basis to develop the risk and impact assessment section of this EP (Section 6).

The environmental impact and risk assessments presented in this EP has been informed by historic as well as more recent hazard and environmental risk identification studies (e.g. HAZID/ENVID) and consequence modelling studies for high consequence, low probability environmental risks. These studies have been reviewed and revalidated, as required, for the revision of this. Further, feedback from NOPSEMA to

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Woodside across Woodside's portfolio of environment plans has been considered and integrated, where relevant.

Impacts, risks and potential consequences were identified based on planned and potential interaction with the activity (based on the description in Section 4), the existing environment (Section 4) and the outcomes of Woodside's stakeholder engagement process (Section 6). The environment outputs of applicable risk and impact workshops and associated studies are referred to as ENVID in this EP.

Impacts and risks were evaluated and tabulated for each planned activity and unplanned events respectively. Environmental impacts and risks were recorded in an environmental impacts and risk register. The output of the workshop is used to present the risk assessment and form the basis of EPOs, EPSs, and MC. This information is presented in Section 6.9, following the format presented in Table 2-1.

Table 2-1: Example of layout of identification of risks and impacts in relation to risk sources

Impact evaluation summary													
Source of impact	***Environmental value potentially impacted***						***Evaluation***						
	Marine Sediment	Water Quality	Air Quality (incl Odour)	Ecosystems/ Habitat	Species	Socio-economic	Decision Type	Consequence/ Impact	Likelihood	Risk Rating	ALARP Tools	Acceptability	Outcome
Summary of source of impact/risk													

2.3.4.2 Decision support framework

To support the impact and risk assessment process and Woodside's determination of acceptability, Woodside's HSE risk management procedures include using a decision support framework based on principles set out in the Guidance on Risk Related Decision Making (Oil and Gas UK, 2014). Application of the decision support framework confirms:

- activities do not pose an unacceptable environmental risk
- appropriate focus is placed on activities where the impact or risk is anticipated to be acceptable and demonstrated to be ALARP
- appropriate effort is applied to manage risks and impacts based on the uncertainty of the risk, the complexity and the risk rating; as in, potential higher-order environmental impacts are subject to further evaluation and assessment.

The framework allows a decision type (A, B, or C) to be selected for each impact and risk, based on several criteria; the decision type is documented in the environmental impacts and risk register. Figure 2-2 summarises the framework, criteria and resulting level of assessment for each decision type, discussed further below.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

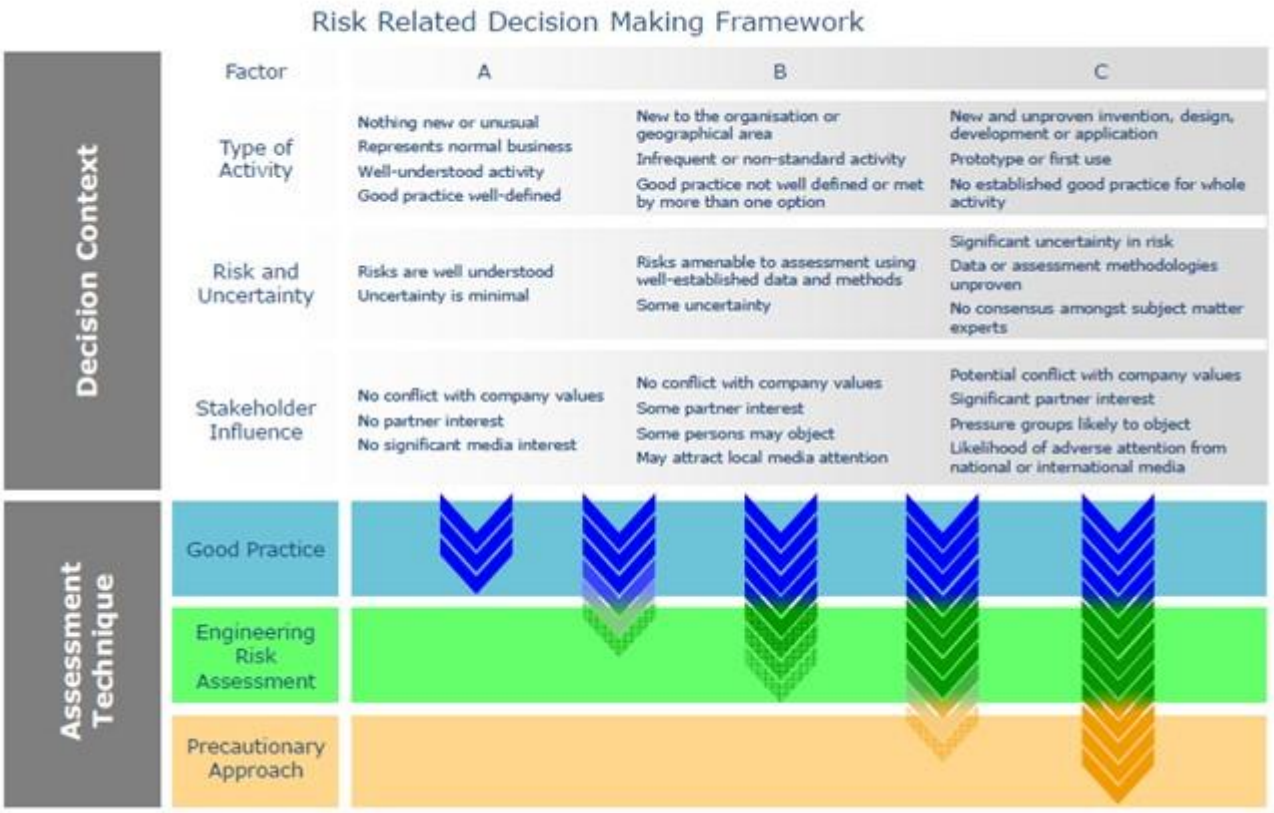


Figure 2-2: Risk-related decision-making framework

Source: Oil and Gas UK (2014)

2.3.4.2.1 Decision Type A

Decision Type A risks and impacts are well understood and established practice; they are generally recognised as good industry practice and are often embodied in legislation, codes and standards, and use professional judgement.

2.3.4.2.2 Decision Type B

Decision Type B risks and impacts typically involve greater uncertainty and complexity and are considered higher-order impacts and risks. These impacts and risks may deviate from established practice or have some lifecycle implications, and therefore require further engineering risk assessment to support the decision and ensure the risk is ALARP.

2.3.4.2.3 Decision Type C

Decision Type C risks and impacts typically have significant risks related to environmental performance. Such risks typically involve greater complexity and uncertainty, therefore requiring a precautionary approach. The risks may result in significant environmental impact, significant project risk or exposure, or may elicit negative stakeholder concerns. For these risks or impacts, in addition to Decision Type A and B tools, company and societal values need to be considered by undertaking broader internal and external stakeholder consultation as part of the risk assessment process.

2.3.4.3 Decision support framework tools

The below framework tools were applied, as appropriate, when assessing each impact and risk to help identify control measures based on the selected decision type described above:

- **Legislation, codes and standards (LCS):** identifies the requirements of legislation, codes and standards that are to be complied with for the activity.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- **Good industry practice (GP):** identifies further engineering control standards and guidelines Woodside may apply above that needed to meet the LCS.
- **Professional judgement (PJ):** uses relevant personnel with the knowledge and experience to identify alternative controls. Woodside applies the hierarchy of control as part of the risk assessment to identify any alternative measures to control the risk.
- **Risk-based analysis (RBA):** assesses the results of probabilistic analyses such as modelling, quantitative risk assessment and cost-benefit analysis to help select control measures during the risk assessment process.
- **Company values (CV):** identifies values identified in Woodside's code of conduct, policies and Our Values. Views, concerns and perceptions are to be considered from internal Woodside stakeholders directly affected by the planned impact or potential risk.
- **Societal values (SV):** identifies and addresses the views, concerns and perceptions of relevant stakeholders.

2.3.4.4 Decision calibration

To confirm the decision type and the control measures are suitable, the following tools may be used for calibration (i.e. checking):

- **LCS/verification of predictions:** verification of compliance with applicable LCS and GP
- **peer review:** independent peer review of PJs, supported by RBA, where appropriate
- **benchmarking:** where appropriate, benchmarking against a similar facility or activity type or situation that has been deemed to represent acceptable risk
- **internal stakeholder consultation:** consultation within Woodside to inform the decision and verify CV are met
- **external stakeholder consultation:** consultation to inform the decision and verify SV are considered.

Where appropriate, additional calibration tools may be selected specific to the decision type and the activity.

2.3.5 Control measures

Once impacts and risks have been identified, the potentially impacted receptors have been identified and understood, and the decision type has been selected, impact and risk reduction measures (i.e. controls) can be applied. Controls are prioritised and categorised in accordance with the hierarchy of controls listed below, where risk reduction measures at the top of the hierarchy take precedence over those further down:

- elimination of the impact or risk by removing the hazard[1]
- substitution of a hazard with a less hazardous one
- engineering controls, including design measures, to prevent or reduce the frequency, or detect or control, the impact or risk event (limiting the magnitude, intensity and duration), such as:
  1– prevention: design measures that reduce the likelihood of a hazardous event occurring
  2– detection: design measures that facilitate early detection of a hazardous event
  3– control: design measures that limit the extent/escalation potential of a hazardous event
  4– mitigation: design measures that protect the environment if a hazardous event occurs
  5– response equipment: design measures or safeguards that enable cleanup/response after a hazardous event
- procedures and administration, including management systems and work instructions to prevent or mitigate environmental exposure to hazards

[1] *A hazard has the potential to cause harm to the environment.*

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- emergency response and contingency planning, including methods to enable recovery from the impact of an event, such as protection barriers deployed near the sensitive receptor.

2.3.6 Impact and risk classification

Environmental impacts and risks are assessed to determine their potential impact consequence level or risk rating, which can then be evaluated, along with other criteria, against the ALARP and acceptability requirements under the Environment Regulations. The full process for impact and risk classification is described in the subsections below.

2.3.6.1 Impact classification

Using the Woodside Environment Risk and Impact Rating Tool as a guide, environmental impacts are assessed to determine the potential consequence level. The process for determining the consequence levels is described in Section 2.3.6.1.1.

2.3.6.1.1 Assign the consequence level

The consequence level (Severe, Major, Moderate, Minor, Localised and Low-Level, and No Lasting Effect) is determined through a classification framework that incorporates:

- significance[2] of the feature of area
- scale of the impact on the feature (e.g. species, population, habitat) or area (size)
- recoverability, defined as the ability of the feature or area to naturally recover from the impact within a nominal period.

2.3.6.1.2 Consequence level descriptions

Table 2-2 describes the possible environment, community and culture consequence levels for each identified impact and risk, assuming all controls (preventative and mitigative) are absent or have failed. Where multiple receptors have the potential to be impacted, the worst-case consequence level is carried into the final impact and risk assessment and evaluation.

[2] *For the purposes of describing the Woodside Environment Risk and Impact Rating Tool, references to significance in impact and risk classification, use significance as defined in the Woodside Environment Risk and Impact Rating Tool.*

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 2-2: Woodside impact and impact risk matrix (environment and community and culture) consequence descriptions

Environment	*Social and cultural*		*Consequence level*
Severe impact on a sensitive feature(s) or receiving environment, such as permanent impairment on a highly sensitive area or feature.	Severe, long-term impact to a community, social infrastructure or highly valued areas or items of international cultural and social significance.	***Severe***	***A***
Major impact on environmental feature(s) or area(s), such as impact on feature or area of national importance with limited ability to recover.	Major, long-term impact to a community, social infrastructure or highly valued areas/items of national cultural significance.	***Major***	***B***
Moderate impact on environmental feature(s) or area(s), such as impact on feature or area of heightened sensitivity with limited ability to recover.	Moderate, medium-term impact to a community, social infrastructure of highly valued areas or items of national cultural significance.	***Moderate***	***C***
Minor impact on environmental feature(s) or area(s) such as impact on feature of low significance with some ability to recover.	Minor, short-term impact to a community or areas/items of cultural significance.	***Minor***	***D***
Localised and low-level impact on environmental feature(s) or area(s) of low significance.	Slight, short-term impact to a community or areas/items of cultural significance.	***Localised and Low Level***	***E***
No lasting effect, localised impact not significant to environmental receptors.	Temporary localised impact not significant to areas/items of cultural significance.	***No Lasting Effect***	***F***

2.3.6.2 Risk classification

The risk rating process assigns a level of risk to each risk event, measured in terms of consequence (Section 2.3.6.1.1) and likelihood (Section 2.3.6.1.2). The assigned risk rating is determined with controls in place; therefore, the risk rating is determined after identifying the decision type and appropriate control measures. The risk ratings are assigned using the Woodside risk matrix (refer to Table 2-4).

2.3.6.2.1 Assign the likelihood Level

Likelihood is determined based on the chance of the selected worst-case consequence occurring, assuming reasonable effectiveness of preventative and mitigative controls (Table 2-3)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 2-3: Woodside risk matrix likelihood levels

	Likelihood description					
	Remote	***Highly unlikely***	***Unlikely***	***Possible***	***Likely***	***Highly likely***
Frequency	1 in 100,000–1,000,000 years	1 in 10,000–100,000 years	1 in 1,000–10,000 years	1 in 100–1,000 years	1 in 10–100 years	>1 in 10 years
Experience	Unheard of in the industry	Has occurred once or twice in the industry	Has occurred many times in the industry but not in the company.	Has occurred once or twice in the company.	Has occurred frequently in the company.	Has occurred frequently the location or activity.
Likelihood level	***0***	***1***	***2***	***3***	***4***	***5***

2.3.6.2.2 Determine the risk rating

The risk rating is derived from the consequence and likelihood levels determined above, in accordance with the Woodside Risk Matrix summarised in Table 2-4This risk rating is used as an input into the risk evaluation process and ultimately for prioritising further risk reduction measures. Once each risk is treated to ALARP, the risk rating articulates the ALARP baseline risk in the environmental impacts and risk register for the EP (Section 2.4).

Table 2-4: Woodside risk matrix determination of risk rating

Consequence level	Likelihood level					
	0	***1***	***2***	***3***	***4***	***5***
A	A0	A1	A2	A3	A4	A5
B	B0	B1	B2	B3	B4	B5
C	C0	C1	C2	C3	C4	C5
D	D0	D1	D2	D3	D4	D5
E	E0	E1	E2	E3	E4	E5
F	F0	F1	F2	F3	F4	F5

Risk rating
Severe
Very High
High
Moderate
Low

NOTE: Very High and Severe risks based on HS&E impacts are intolerable – Action Required

2.4 Impact and risk evaluation

In accordance with sections 34(a), 34(b), 34(c) and 21(5)(b) of the Environment Regulations, Woodside applies the following process to demonstrate ALARP and acceptability for environmental impacts and risks, appropriate to the nature and scale of each impact or risk.

2.4.1 Demonstration of 'as low as reasonably practicable'

The descriptions in Table 2-5 articulate how Woodside demonstrates that each impact and risk identified within this EP is ALARP.

Table 2-5: Summary of Woodside's criteria for 'as low as reasonably practicable' demonstration

Risk	Impact	Decision type
Low and moderate (C, D, E or F level consequence)	***No Lasting Effect, Localised and Low Level, or Minor***	***A***
Woodside demonstrates these impacts, risks and decision types are reduced to ALARP if: • identified controls meet legislative requirements, industry codes and standards, applicable company requirements and industry guidelines, or		

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Risk	Impact	Decision type
• further effort towards impact and risk reduction (beyond using opportunistic measures) is not reasonably practicable without sacrifices that are grossly disproportionate to the benefit gained.		
High, very high or severe (A or B level consequence)	***Moderate and above (C, B or A)***	***B and C***
Woodside demonstrates these higher order risks, impacts and decision types are reduced to ALARP where it can be shown GP and RBA have been employed, if legislative requirements are met, societal concerns are accounted for, and the alternative control measures are grossly disproportionate to the benefit gained.		

2.4.2 Demonstration of acceptability

The descriptions in Table 2-6 articulate how Woodside demonstrates that each impact and risk identified within this EP are acceptable.

Table 2-6: Summary of Woodside's criteria for acceptability

Risk	Impact	Decision type
Low and moderate (C, D, E or F level consequence)	***No Lasting Effect, Localised and Low Level, or Minor***	***A***
Woodside demonstrates these lower order impacts, risks and decision types are 'broadly acceptable' if they meet the ALARP requirements for lower order risks and impacts described above (Table 2-5).		
High, very high or severe (A or B level consequence)	***Moderate and above (C, B or A)***	***B and C***
Woodside demonstrates these higher order risks, impacts and decision types are 'acceptable if ALARP' if it can be demonstrated using GP and RBA, if legislative requirements are met and societal concerns are accounted for, and the alternative control measures are grossly disproportionate to the benefit gained. In undertaking this process for moderate and high risks, Woodside evaluates: • the principles of ESD as defined under the EPBC Act • the internal context – the proposed controls and consequence/risk level are consistent with Woodside policies, procedures and standards • the external context – consideration of the environment consequence and stakeholder acceptability are considered • other requirements – the proposed controls and consequence/risk level are consistent with national and international industry standards, laws and policies and consideration of applicable plans for management and conservation advice, conventions and significant impact guidelines (e.g. MNES). Additionally, very high and severe risks require 'escalated investigation' and mitigation. If after further investigation the risk remains in the very high or severe category, the risk requires appropriate business engagement with increasing involvement of senior management in accordance with Woodside's Risk Management Procedure to accept the risk. This includes due consideration of regulatory requirements.		

2.5 Recovery plan and threat abatement plan assessment

To demonstrate acceptability, a separate assessment is undertaken to demonstrate the EP is not inconsistent with any relevant recovery or threat abatement plans. This assessment follows the below process:

1. Identify relevant listed threatened species and ecological communities (Section 4.5).
2. Identify relevant recovery plans and threat abatement plans (Section 6.8).
3. List all objectives and (where relevant) the action areas of these plans, and assess whether these objectives and action areas apply to government, the titleholder and the Petroleum Activity (Section 6.8).
4. For those objectives and action areas applicable to the Petroleum Activity, identify the relevant actions of each plan, and evaluate whether impacts and risks resulting from the activity are clearly not inconsistent with that action (Section 6.8).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

2.6 Environmental performance objectives/outcomes, standards and measurement criteria

The Environment Regulations define environmental performance outcomes (EPOs) to mean: “a measurable level of performance required for the management of environmental aspects of the activity to ensure that environmental impacts and risks of the activity will be of an acceptable level”. As such, the process of defining an appropriate EPO, has relied on the required levels of performance set either:

- Legislation, such as the OPGGS Act
- regulator guidance notes, such as the Matters of National Environmental Significance – Significant Impact Guidelines (DoE, 2013), or
- specific agreements or expectations with other relevant persons, such as fishers or other marine users.

For each evaluated impact and risk, controls adopted during the ENVID and when demonstrating ALARP are paired with activity-specific EPOs, EPSs and MC. EPOs, EPSs and MC form the basis for monitoring and auditing. They allow Woodside’s environmental performance to be measured when implementing this EP to ensure impacts and risks will be managed to a level that is ALARP and acceptable. EPOs, EPSs and MC are defined for each identified credible impact and risk in Section 6.

2.7 Implement, monitor, review and report

An implementation strategy describes the specific measures and arrangements to be implemented for the duration of the Petroleum Activity. The strategy is based on the requirements of the Environment Regulations, and demonstrates:

- control measures are effective in reducing the environmental impacts and risks of the Petroleum Activity to ALARP and acceptable levels
- EPOs and EPSs set out in the EP are met through monitoring, recording, auditing, managing non-conformance and reviewing
- all environmental impacts and risks of the Petroleum Activity are periodically reviewed in accordance with Woodside’s risk management procedures
- roles and responsibilities are clearly defined, and personnel are competent and appropriately trained to implement the requirements set out in this EP, including in emergencies or potential emergencies
- arrangements are in place for oil pollution emergencies, to respond to and monitor impacts
- environmental reporting requirements are met, including ‘reportable incidents’
- appropriate consultation is undertaken throughout the Petroleum Activity.

The implementation strategy is presented in Section 6.9.

2.8 Stakeholder consultation

Woodside undertakes consultation when preparing EPs. The consultation, along with the process for ongoing engagement and consultation throughout the Petroleum Activity, is presented in Section 5. The full correspondence is provided in Appendix E.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

3. DESCRIPTION OF THE ACTIVITY

3.1 Overview

This section has been prepared in accordance with section 21(1) of the Environment Regulations and describes the activities to be undertaken as part of the Petroleum Activity under this EP. The description of the activity includes the location, general details of the Petroleum Activity, and information about supporting activities relevant for considering environmental risks and impacts.

The CK4, LH3, WA-7 and WA-8 wells are tied back to the Okha FPSO, which is designed to separate, process, store and offload oil, and export gas from the Cossack, Wanaea, Lambert and Hermes (CWLH) fields. The wells operate under the Okha FPSO Operations EP.

The Petroleum Activity includes LWI activities on the CK4, LH3, WA7 and WA8 wells.

The CK4 and LH3 wells are currently producing and require temporary well suspension with temporary plugs, xmas tree (XT) changeout and recommissioning. The CK4 well also requires tubing retrievable safety valve (TRSV) remediation after the XT changeout. Once the Petroleum Activity has been completed, the wells will operate under the accepted Okha FPSO Operations EP as part of ongoing production operations.

The WA7 and WA8 wells are currently shut-in and require temporary well suspension with temporary plugs. Once this has been completed these wells will remain suspended. On completion of the Petroleum Activity the wells will be managed under the accepted Okha FPSO Operations EP.

The Petroleum Activity will be undertaken using a LWIV using dynamic positioning (DP) to hold position over each well.

Any future decommissioning or well plug and abandonment will be the subject of a separate EP.

Table 3-1 outlines the activities included within the Petroleum Activity.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 3-1: Petroleum Activity overview

Item	Description
Petroleum titles	WA-9-L (CK4) WA-16-L (LH3) WA-11-L (WA7) WA-9-L (WA8)
Location	About 122 km north-west of Dampier (CK4) About 134 km north-west of Dampier (LH3) About 121 km north-west of Dampier (WA7) About 123 km north-west of Dampier (WA8)
Water depth	81 m (CK4) 128 m (LH3) 82 m (WA7) 83 m (WA8)
Subsea infrastructure	Wellheads, including subsea vertical xmas trees (XTs) Manifolds, located within ~100 m of the wells Production jumpers Gas lift jumpers
Vessels	Light well intervention vessel (LWIV) Support vessels Remotely operated vehicle (ROV)
Key activities	Connection to XT with subsea intervention system Suspension of well XT changeout –CK4 and LH3 only Tubing retrievable safety valve (TRSV) remediation – CK4 only Cold commissioning of the well –CK4 and LH3 only Operation of the LWIV, support vessels and helicopters

3.2 Location

The Petroleum Activity is in petroleum titles WA-9-L, WA-16-L and WA-11-L, in Commonwealth waters, about 138 km north-west of Dampier. The CK4 well is about 122 km north-west of Dampier and 94 km from the closest coastline. The LH3 well is about 134 km north-west of Dampier and 106 km from the closest coastline. The WA7 well is about 121 km north-west of Dampier and 94 km from the closest coastline. The WA8 well is about 123 km north-west of Dampier and 95 km from the closest coastline (Figure 3-1). Approximate location details for the Petroleum Activity are in Table 3-2.

Table 3-2: Approximate location details for the Petroleum Activity

Well	Water depth (approx. m lowest astronomical tide)	Latitude (WGS84)	Longitude (WGS84)	Petroleum title(s)
Cossack-4H (CK4)	81	19° 33′ 22.909″ S	116° 29′ 35.754″ E	WA-9-L
Lambert-3 (LH3)	128	19° 26′ 58.469″ S	116° 29′ 16.227″ E	WA-16-L
Wanaea-7ST1 (WA7)	82	19° 35′ 31.586″ S	116° 26′ 6.622″ E	WA-11-L
Wanaea-8 (WA8)	83	19° 34′ 40.796″ S	116° 26′ 59.438″ E	WA-9-L

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

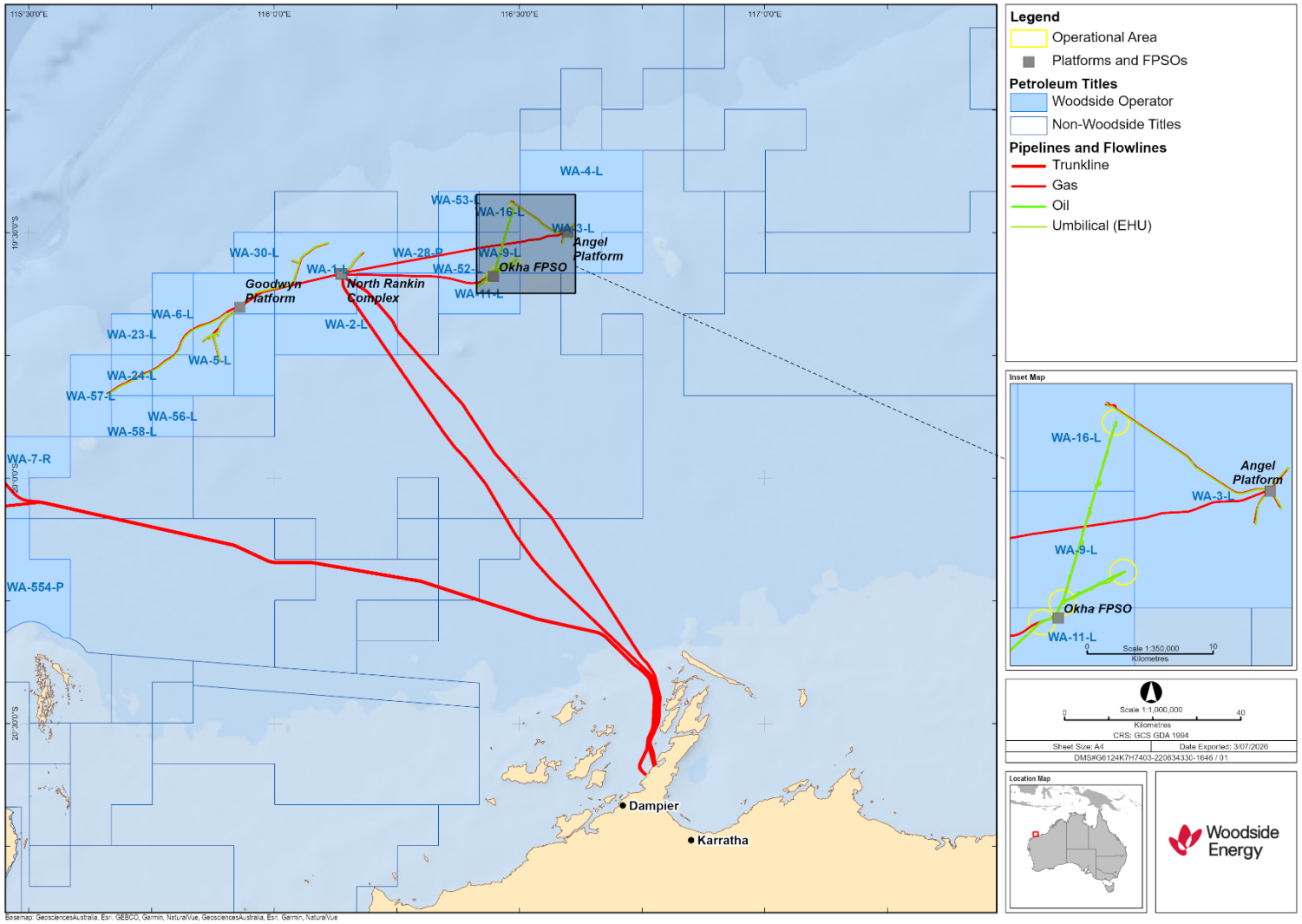


Figure 3-1: Location of the Petroleum Activity

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

3.3 Operational Area

An ‘Operational area’ is the spatial boundary of the Petroleum Activity, as described, risk-assessed and managed by this EP. For this EP, four Operational areas are defined as a 1 km radius of each well. The Operational area are shown in Figure 3-1 and are between about 2 km to 16 km from one another.

Where relevant in this EP, the Operational area may be distinguished as ‘Operational Area Part 1’ (CK4), ‘Operational Area Part 2’ (LH3), ‘Operational Area Part 3’ (WA7) and/or ‘Operational Area Part 4’ (WA8).

Vessel-related activities within the Operational area will comply with this EP. Vessels supporting the Petroleum Activity when outside the Operational area must adhere to applicable maritime regulations and other requirements. This EP applies to activities undertaken within the Operational area, as described in this section.

3.4 Timing

The Petroleum Activity may occur between Quarter 2 2027 and 2031. The Petroleum Activity duration at each well is presented in Table 3-3. Activities will take place 24 hours a day, seven days a week (Table 3-3). Activities may be undertaken as a single campaign or across separate campaigns depending on schedule, vessel availability, unforeseen circumstances, weather and operational requirements. The EP is intended to remain in force for up to five years from EP acceptance by the regulator.

Table 3-3: Summary of the timing of the Petroleum Activity

Well	Duration	Vessels
CK4	14 to 35 days	LWIV and up to three support vessels (24 hours a day, seven days a week)
LH3	14 to 21 days	
WA7	~15 days	
WA8	~15 days	

3.5 Subsea intervention activities

The Environmental Plan assesses a planned well intervention on wells CK-4, LH-3 WA-7 and WA-8 which will be carried out to improve well barrier integrity. Well intervention work will be carried out with appropriate barriers, i.e. a Light Well Intervention Well Control Package (LWI WCP) or equivalent and Wireline Pressure Containing Equipment. The objective of the intervention is to remove the blanking plug from the lower smart valve in the well. The objective of each well is:

- LH-3 – Conduct a XT changeout
- CK-4 – Remediate TRSV control line leak and conduct a XT changeout
- WA-7 & WA-8 – Install temporary plugs to suspend the wells

The intervention activities for each well are summarised in Table 3-4 . Well suspension and TRSV remediation steps are indicative and may change as detailed design progresses. Detailed design will confirm the exact wireline runs, wire-line retrievable safety valve and suspension configurations. Designing and installing well barriers will be completed in accordance with the NOPSEMA accepted well Operations Management Plan (WOMP) as required under the OPGGS (resource Management and Administration) Regulations 2025.

Table 3-4: LWI scope activity steps

Activity	CK4	LH3	WA7	WA8
1. Isolate the well from the FPSO and flowlines by closing valves on the adjacent manifold	✓	✓	✓	✓
2. Station the LWIV at the well	✓	✓	✓	✓
3. Recover the tree cap	✓	✓	✓	✓
4. Install LWI WCP (refer to Section 3.5.1)	✓	✓	✓	✓

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Activity	CK4	LH3	WA7	WA8
5. LWI suspend the well with temporary plugs	✓	✓	✓	✓
6. Recover LWI well control package (WCP) (refer to Section 3.5.1)	✓	✓	✓	✓
7. Disconnect the Production HFL from XT, recover XT and install new XT	✓	✓	-	-
8. Install LWI WCP (refer to Section 3.5.1)	✓	✓	-	-
9. De-suspend the well and recover the hold open sleeve	✓	✓	-	-
10. Test the TRSV line	✓	-	-	-
11. Remediate the TRSV (contingency): – Lock open the TRSV (deform flow tube). – Drift through the TRSV. – Run the shifting tool. – Run the blind box to move the TRSV communication sleeve. – Install the wire-line retrievable safety valve (WRSV) and lower section of the isolation valve carrier. – Install the upper section of the isolation valve carrier.	✓	-	-	-
12. Recover LWI WCP (refer to Section 3.5.1)	✓	✓	-	-
13. Install the tree cap	✓	✓	✓	✓
14. De-isolate and cold commission the wells	✓	✓	-	-

Local control of the XT from the LWIV may be required. Valve actuation of the XT will result in small releases of subsea control fluids to the marine environment (refer to Table 3-5).

The XTs may be placed on the seafloor during LWI activities. Equipment lay-down is temporary and may require the use of mud mats. All equipment temporarily laid down will be removed on completion of LWI.

Emissions and discharges during the LWI are detailed in Table 3-5.

Table 3-5: Emissions and discharges during the light well intervention

Activity	Typical emissions and discharge
XT cleaning / marine growth removal	500 L acid (sulphamic, citric) per well.
Valve functioning	0.5 to 5 L control fluid per valve actuation.
Wireline runs	250 to 300 L biogrease (lubricator) per well.
Tool string changeout	Up to 150 L Monoethylene glycol (MEG) component of MEG-water mix per wireline run (anticipated average of 10 wireline runs per well). ~5L residual well fluids released per wireline run.
Suspension	10 L suspension / preservation fluid.
Pressure / leak testing	>10 L chemical dye.
Flushing	Residual hydrocarbon or chemical (typically MEG) release volume depends on injection port size, component geometry and pumping rates (<10 L).
Cold commissioning/venting	During well intervention activities, surface returns of hydrocarbon gas from annular spaces will be cold vented in a controlled and safe manner via a choke manifold or through degassing of the stock tank returns. Volume of gas vented may be up to ~5000 m^3 for each well.
XT cap removal	Up to 1000 m^3 gas and 0.5 m^3 liquid hydrocarbons as well as approximately 10 L of other well fluids (e.g. control fluids) per well.
XT repair, replacement and recovery	During removal of XT, release of residual well fluids including control/preservation fluids. Dependent on equipment configuration, typically about 300 L per well.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Activity	Typical emissions and discharge
Release across guide base isolation valves from the manifold during XT replacement (CK4 and LH3 only)	The XT valves and manifold valves will be closed during the XT replacement. While these valves shall be tested to verify their integrity prior to removing the XT, leakage from the production and gas lift jumpers past the valves is credible due to their age and condition. Hydrocarbon released from the 6" production jumper and 2.5" gas lift jumper at CK4 could be up to ~4.20 m^3. Hydrocarbon released from 2.5" production jumper and 2.5" gas lift jumper at LH3 could be ~1 m^3. Should this occur the release is expected to occur gradually over an approximately 32-hour period following removal of the old XT.
Well choke / Production Choke Valve (PCV) change out (contingency)	Release of ~100L combination of well fluids and MEG. Risk of loss of subsea flowline containment during change-out (additional ~100 L).
Hydraulic flying lead (HFL) removal	During removal of the hydraulic flying lead from the XT, a small amount of fluid is expected to be released as poppets in the HFLs engage. There is potential continued release to the environment if poppets allow fluid to weep. These fluids may include water-based hydraulic fluid, hydrocarbons (liquid and/or gas), and chemical injection fluids such as scale inhibitor. Based on the estimated hydraulic flying lead volumes, the potential release volume is up to ~100 L of control fluid and ~15 L of scale inhibitor from each HFL.

3.5.1 Connection of integrated well control package

Intervention will begin with deployment of an integrated well control package (WCP) onto the well (XT) to allow access into the well. The WCP is not physically connected to the LWIV, other than via a control umbilical and a flush-return umbilical. In conjunction with subsea wireline pressure-containing equipment, this enables a contained envelope, known as the lubricator, to be maintained. Between wireline runs the lubricator contents will be flushed back to the LWIV via the flush-return umbilical to remove hydrocarbons from the lubricator. Fluids planned to be used to flush are a mix of drill water and a monoethylene glycol (MEG). Hydraulic control fluids are used to operate the WCP and XT. These systems operate in an open loop. The XT valves will be controlled by the LWIV via an umbilical and ROV, if needed.

The WCP, comprising of a lower and upper WCP, includes a series of independent barriers to seal the well in addition to the XT, to prevent loss of containment.

The WCP will be pressure tested following installation onto the XT to verify the integrity and functionality of the intervention system and associated well barriers. This includes conducting defined function and pressure tests on the WCP well control valves and exposed connections to confirm sealing performance against specified pressure levels. These valves are tested in accordance with Woodside pressure testing guidelines. Testing is performed on deck as part of pre-deployment testing, after deployment following installation onto the XT, and periodically during operations to ensure ongoing barrier integrity and maintain well containment under operating conditions. Wireline pressure-containing equipment, including a stuffing box and grease system, will be rigged up to provide well barriers and control pressure during wireline operations. The grease system comprises a readily biodegradable vegetable-based oil. During wireline operations, this biogrease will be used subsea on top of the lubricator in the pressure control equipment (PCE) to achieve a dynamic seal around the wire. Approximately 50 mL/min would be applied during operations, equating to around 25 L for a single run. The grease would be applied into the PCE with most travelling into the wellbore, though some is likely to be released to the marine environment.

Barrier pressure testing will be conducted upon connecting the WCP to the XT. After this, there will be a function test about every seven days and a barrier pressure test about every 14 days thereafter. Each test will result in 1,000 to 3,000 L of hydraulic/control fluids (e.g. HW443) being discharged, depending on the level of testing required. These tests may be standalone, or may be incorporated into operational procedures.

Pending return to production operations, XT valves will be shut, the WCP will be disconnected and retrieved to surface, and a tree cap will be installed. Well control will be handed back to the Okha FPSO where it will remain shut in until the well resumes production.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

3.5.2 Underwater acoustic positioning

Dynamic positioning (DP) of a vessel applies satellite navigation and radio transponders in conjunction with thrusters to maintain the position of the LWIV and support vessels at the required location. Information about the position of the LWIV is provided via a number of seabed transponders, which emit signals that are detected by receivers on the LWIV and used to calculate position.

An array of long baseline (LBL) transponders may be installed on the seabed. The LBL array provides accurate positioning by measuring ranges to three or more transponders deployed at known locations on the seabed and structures. Alternatively, ultra-short baseline transponders (USBL) may be installed on the seabed or mounted to the wellhead. Transmissions from USBL transponders are similar to LBL transponders.

An array of transponders is proposed within a radius of 500 m from the wells. Transmissions are not continuous but consist of short ‘chirps’ with a duration that ranges from 3 to 40 milliseconds. Transponders will not emit any sound when on standby and are planned to only actively emit sound for about six hours per well. When needed for general positioning, they will emit one chirp every five seconds (estimated to be needed for four hours at a time). When needed for precise positioning, they will emit one chirp every second, estimated to be needed for two hours at a time. Transmissions from USBL transponders are similar to LBL transponders.

Transponders may be deployed to the seabed either by a clump weight or mounted on a seabed frame. The standard clump weights used, made of cement or steel, will likely weigh about 80 kilograms (kg). A typical seabed frame is 1.5 m × 1.5 m × 1.5 m in dimension and weighs about 40 kg. After positioning, an ROV will remove the transponders, clump weights and seabed frames.

3.5.3 Marine growth removal

An ROV may remove excess marine growth on the tree cap using high-pressure water or brushes. Table 3-6 lists the removal techniques.

Table 3-6: Marine growth removal

Activity/equipment	Description
Water jetting	Uses high-pressure water to remove marine growth
Brush systems	Uses brushes attached to an ROV to physically remove marine growth
Acid (typically sulfamic acid or equivalent)	Chemically dissolves calcium deposits

3.6 Project vessels

The Petroleum Activity will occur from an LWIV. Specifications of a typical LWIV are presented in Table 3-7. Up to three support vessels may support the Petroleum Activity. Specifications of a typical support vessel are presented in Table 3-8.

Table 3-7: Indicative light well intervention vessel specifications

Attribute	Details
Type	LWIV
Station keeping	Dynamically positioned (DP2)
Length overall	120 m
Breadth	22 m
Draft	7.5 m
Accommodation	Berthing for 120 personnel
Fuel type	Marine diesel
Fuel capacity	Total inventory: 1,100 m³ Largest tank: 165 m³

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 3-8: Indicative support vessel specifications

Attribute	Details
Type	Support vessel
Station keeping	Dynamically positioned (DP2)
Length overall	90 m
Breadth	20 m
Draft	7.5 m
Accommodation	Berthing for 25 personnel
Fuel type	Marine diesel
Fuel capacity	Total inventory: 950 m³ Largest tank: 250 m³

3.7 Support operations

3.7.1 Helicopters

Helicopters are the primary means of transporting passengers and urgent freight to and from the Petroleum Activity. They are also the preferred means of evacuating personnel in an emergency. Helicopters are not expected to be refuelled offshore.

3.7.2 Remotely operated vehicle

ROVs and autonomous underwater vessels (AUV) may undertake activities such as visual surveys, transponder deployment and retrieval, cleaning and LWI support. An ROV and AUV is typically deployed from a support vessel using a crane or an A-frame.

3.7.3 Resupply

Support vessels are used to transport equipment and materials between the LWIV and port (e.g. Dampier, Onslow). If required, one of the vessels may remain at the LWIV to perform standby duties, while others will make regular trips to port for routine, non-routine, and emergency operations. These vessels may also be used to provide ROV operations to support LWI activities.

3.8 Contingency operations

The next sections present contingencies that may be needed, if operational or technical issues occur during the Petroleum Activity. These contingencies have been considered within the relevant impact assessment sections and do not represent significant additional risks or impacts, but may generate additional volumes of fluids being operationally discharged.

3.8.1 Well kill

If it is determined that sufficient barriers are not in place to allow removal of the tree cap on each well, the well may be bullhead killed prior to commencing intervention operations using a modified choke insert. Designing and installing well barriers will be completed in accordance with the NOPSEMA accepted WOMP as required under the OPGGS (resource Management and Administration) Regulations 2025. The likely steps for well kill via modified choke insert are as follows:

- Establish required barriers on the choke manifold
- Recover the choke insert with the LWIV crane
- Deploy a modified choke insert with downline
- Line up and kill the well via the downline using a pumping spread on the LWIV

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

The well kill fluid will be a weighted brine, which may also require additives to reduce reservoir permeability post well kill. Table 3-5 describes the expected discharges associated with this contingency activity.

3.8.2 Emergency shutdown and disconnect

An emergency shutdown may be implemented if the LWIV needs to rapidly disengage from the well. The emergency shutdown closes WCP valves (i.e. shutting in the well) and disconnects the umbilicals to break the conduit between the XT and the LWIV. Common examples of when this system may be initiated include when moving the LWIV outside of its operating circle, such as due to a failure of the DP system, or moving the LWIV to avoid a vessel collision, such as a third-party vessel on a collision course with the LWIV. The emergency shutdown aims to leave the wellhead and WCP/PCE in a secure condition but may result in the loss of small volumes of fluids/gases in the umbilical or upper PCE, around the disconnection points from the upper PCE (<50 L).

During a drift-off or drive-off, the LWIV may need to disconnect from the WCP. This will occur autonomously through breakaways in the umbilical connection and guidewires. Before reaching the watch circle limit, the operator will initiate an emergency shutdown to shut in the well. If the operator fails to initiate an emergency shutdown, this will happen autonomously when the umbilical separates. The disconnect aims to leave the wellhead and WCP/PCE in a secure condition but may result in the loss of small volumes of fluids/gases in the umbilical or upper PCE during the disconnection (<1 m^3).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

4. DESCRIPTION OF THE EXISTING ENVIRONMENT

4.1 Overview

In accordance with sections 21(2) and 21(3) of the Environment Regulations, this section describes the existing environment that may be affected by the Petroleum Activity (planned and unplanned), as described in Section 3, including details of the particular relevant values and sensitivities of the environment, which were used for the risk assessment.

The EMBA is the largest spatial extent where unplanned events could have an environmental or sociocultural consequence on the surrounding environment. For this EP, the EMBA is the potential spatial extent of surface and in-water hydrocarbons at concentrations above ecological impact thresholds, in the event of the worst-case credible spill. The ecological impact thresholds used to delineate the EMBA are defined in Table 4-1.

Woodside recognises hydrocarbons may be visible at lower concentrations than the ecological impact thresholds defined in Table 4-1. These visible hydrocarbons have the potential to cause sociocultural impacts. In respect of this, the EMBA also includes hydrocarbon thresholds where sociocultural impact could occur. Receptors relevant to the sociocultural hydrocarbon thresholds include cultural values and heritage, Commonwealth and state marine protected areas, National and Commonwealth Heritage listed places, areas of tourism and recreation, and commercial and traditional fisheries. For this EP, the sociocultural hydrocarbon thresholds for surface hydrocarbons encompass an area fully within the boundaries of the EMBA for ecological impacts. The EMBA and socioeconomic EMBA are shown in Figure 4-1 and described in Table 4-1.

The EMBA does not represent the predicted coverage of any one hydrocarbon spill nor depict a slick or plume at any specific time. Rather, the EMBA represents a composite of many theoretical paths, integrated over the full duration of the simulations under various metocean conditions.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 4-1: Hydrocarbon spill thresholds used to define EMBA for surface and in-water hydrocarbons

Hydrocarbon type	Ecological hydrocarbon thresholds[1]	Socio-cultural hydrocarbon thresholds[1]	Planning area for scientific monitoring
Surface	10 g/m² This represents the minimum oil thickness (0.01 mm) at which ecological impacts (e.g. to birds and marine mammals) are expected to occur.	1 g/m² This represents a wider area where a visible sheen may be present on the surface and, therefore, the concentration at which socio-cultural impacts to the visual amenity of the marine environment may occur. However, it is below concentrations at which ecological impacts are expected to occur. This low exposure value also establishes the planning area for operational and scientific monitoring.	
Dissolved	10 ppb The biological effects of hydrocarbons are driven by the fraction of hydrocarbons that are dissolved and therefore bioavailable to aquatic organisms. Toxicity studies show 10 ppb is protective of more than 95% of species for acute exposures, while still capturing the onset of effects in the most sensitive species and life stages (French-McCay 2026; Negri et al. 2021; Bejarano et al. 2017). As dissolved hydrocarbons are within the water column and not visible, impacts to socio-cultural receptors are associated with ecological impacts. Therefore, dissolved hydrocarbons at this threshold also represent the level at which socio-cultural impacts may occur. See Section 6.7.1.		10 ppb This low concentration value establishes the planning area for scientific monitoring within which further analysis can be undertaken to inform monitoring priorities. In the event of a spill, DNP will be notified of AMPs which may be contacted by hydrocarbons at this threshold (Table 7-7).
Entrained	1000 ppb Entrained hydrocarbons have limited bioavailability as toxic effects are driven by the small soluble fraction (typically less than 1% of the oil mass) that dissolves into the water column (French-McCay 2026). As entrained hydrocarbons are within the water column and not visible, impacts to socio-cultural receptors are associated with ecological impacts. Therefore, entrained hydrocarbons at this threshold also represent the level at which socio-cultural impacts may occur. See Section 6.7.1.		
Shoreline	100 g/m² This represents the threshold that could impact the survival and reproductive capacity of benthic epifaunal invertebrates living in intertidal habitat.	10 g/m² This represents the volume where hydrocarbons may be visible on the shoreline but is below concentrations at which ecological impacts are expected to occur. This low exposure value also establishes the planning area for scientific monitoring.	

[1] *Further details, including the source of the thresholds used to define the EMBA in this table, are provided in Section 6.7.1*

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

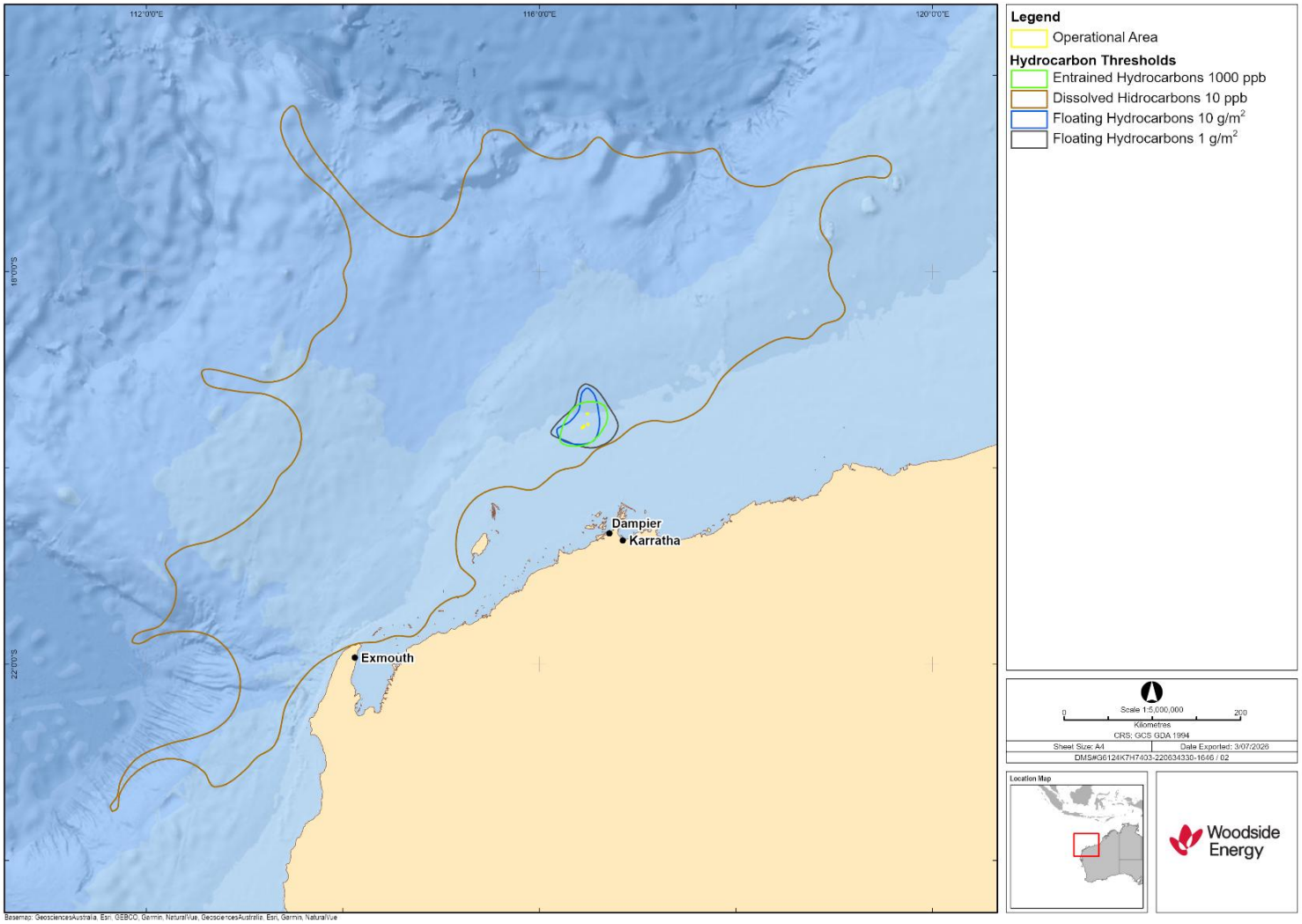


Figure 4-1: Environment that may be affected by the Petroleum Activity

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

4.2 Regional context

The Operational area are in Commonwealth waters within the North-west Marine Region (NWMR), as defined under the Integrated Marine and Coastal Regionalisation of Australia (v4.0) (Department of Sustainability, Environment, Water Population and Communities [DSEWPaC], 2012a), in water depths of about 80 to 128 m. Within the NWMR, the Operational area lie within the NWS Province (Figure 4-2). The EMBA partially overlaps with additional provincial bioregions of the NWMR, including the Northwest Transition, Northwest Province, Central Western Shelf Transition and Central Western Transition.

Woodside's Master Existing Environment (Appendix I) summarises the characteristics of the relevant marine bioregions.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

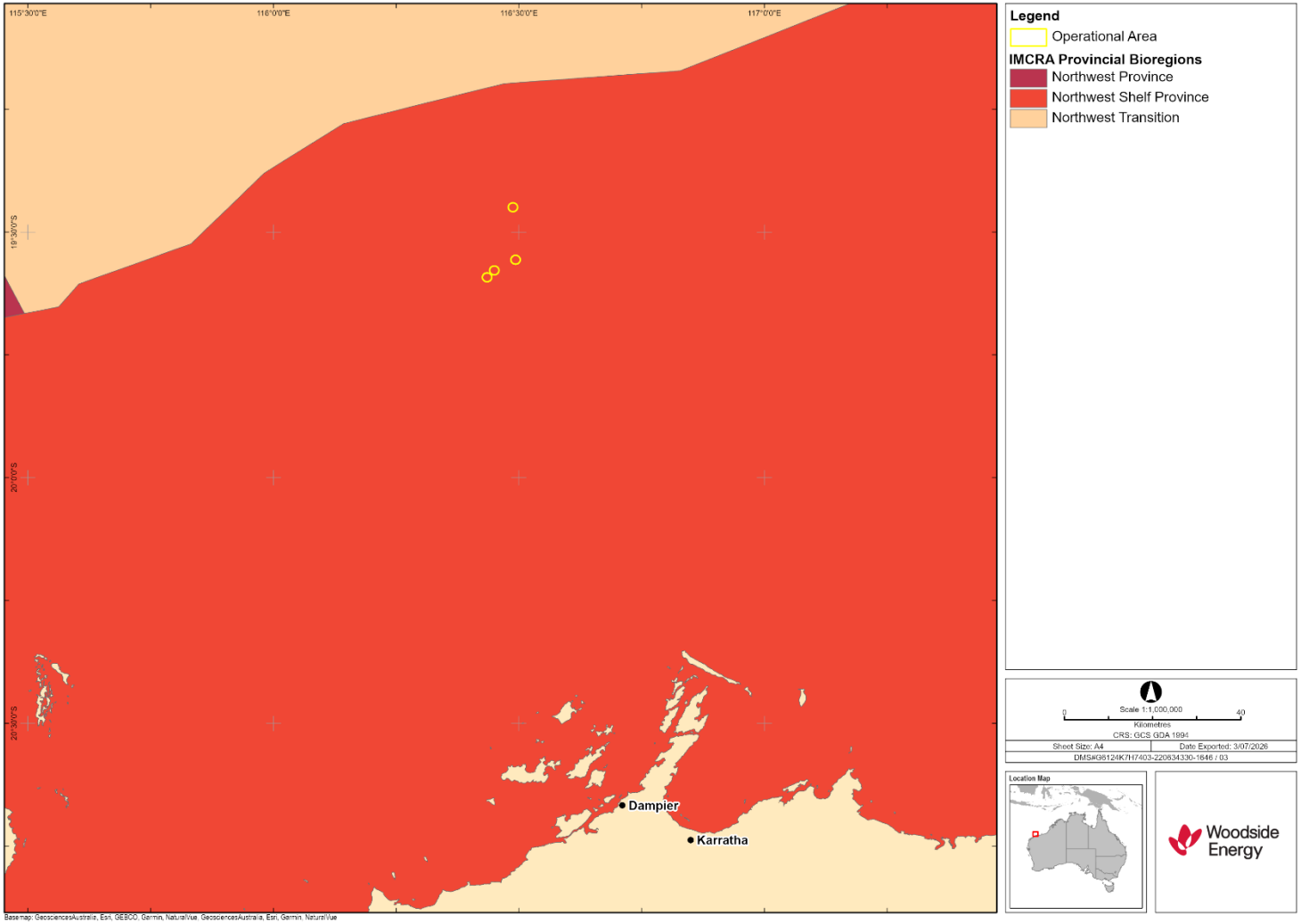


Figure 4-2: Location of the Operational area and relevant marine bioregions

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

4.3 Matters of national environmental significance (EPBC Act)

Table 4-2 summarises the MNES overlapping the Operational area and EMBA, according to Protected Matters Search Tool (PMST) results (Appendix C). It should be noted the EPBC Act PMST is a general database that identifies areas in which protected species have the potential to occur. The PMST conducts searches to determine the presence or absence of MNES based on a conservative grid-based search. Marine areas >30 km from the coast use 32 km × 32 km grid cells to determine the spatial overlap with listed MNES. Accordingly, the PMST report (Appendix C) can indicate the presence of MNES that do not actually intersect with the Operational area or EMBA. To accurately consider any impacts from the Petroleum Activity on MNES, shapefiles (provided by Department of Climate Change, Energy, the Environment and Water [DCCEEW]) have been assessed using geographic information system software to determine the actual presence and distance to MNES.

More information about these MNES is provided throughout this section and described in detail in Woodside's Master Existing Environment (Appendix I).

Table 4-2: Summary of relevant matters of national environmental significance identified by the EPBC Act Protected Matters Search Tool as potentially occurring within the Operational area and EMBA

MNES	Number of MNES in Operational area	Number of MNES in EMBA
World Heritage properties	0	1
National Heritage places	0	1
Wetlands of International Importance (Ramsar)	0	0
Commonwealth Marine Area	1	4
Listed threatened ecological communities	0	0
Listed threatened species	23	44
Listed migratory species	39	64

4.4 Physical environment

The Operational area are in Commonwealth waters within the NWS Province, in water depths of about 81 m to 128 m (refer to Table 3-2). The bathymetry within the Operational area is generally flat, which is consistent with the broader NWS Province shelf region (Baker et al., 2008). Operational Area Part 2 (LH3) overlaps the 'Ancient Coastline at 125 m Depth Contour' key ecological feature (KEF); refer to Section 4.7. Figure 4-3 shows the bathymetry of the Operational area and immediately adjacent areas.

The Ancient Coastline at 125 m Depth Contour KEF is a distinctive geomorphic feature, with seafloor features combining both soft sediment and hard substrates, including outcrops, terraces, continental slopes and escarpments.

The seabed in the NWS Province has a gentle (0.05º) seaward gradient, extending to a relatively steep outer slope about 200 to 300 km offshore in water depths of around 200 m (Dix, et al., 2005). The continental slope then descends more rapidly from the shelf edge to depths greater than 1,000 m to the north-west (James, et al., 2005).

Woodside's Master Existing Environment (Appendix I) summarises the physical characteristics of the environment within the EMBA.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

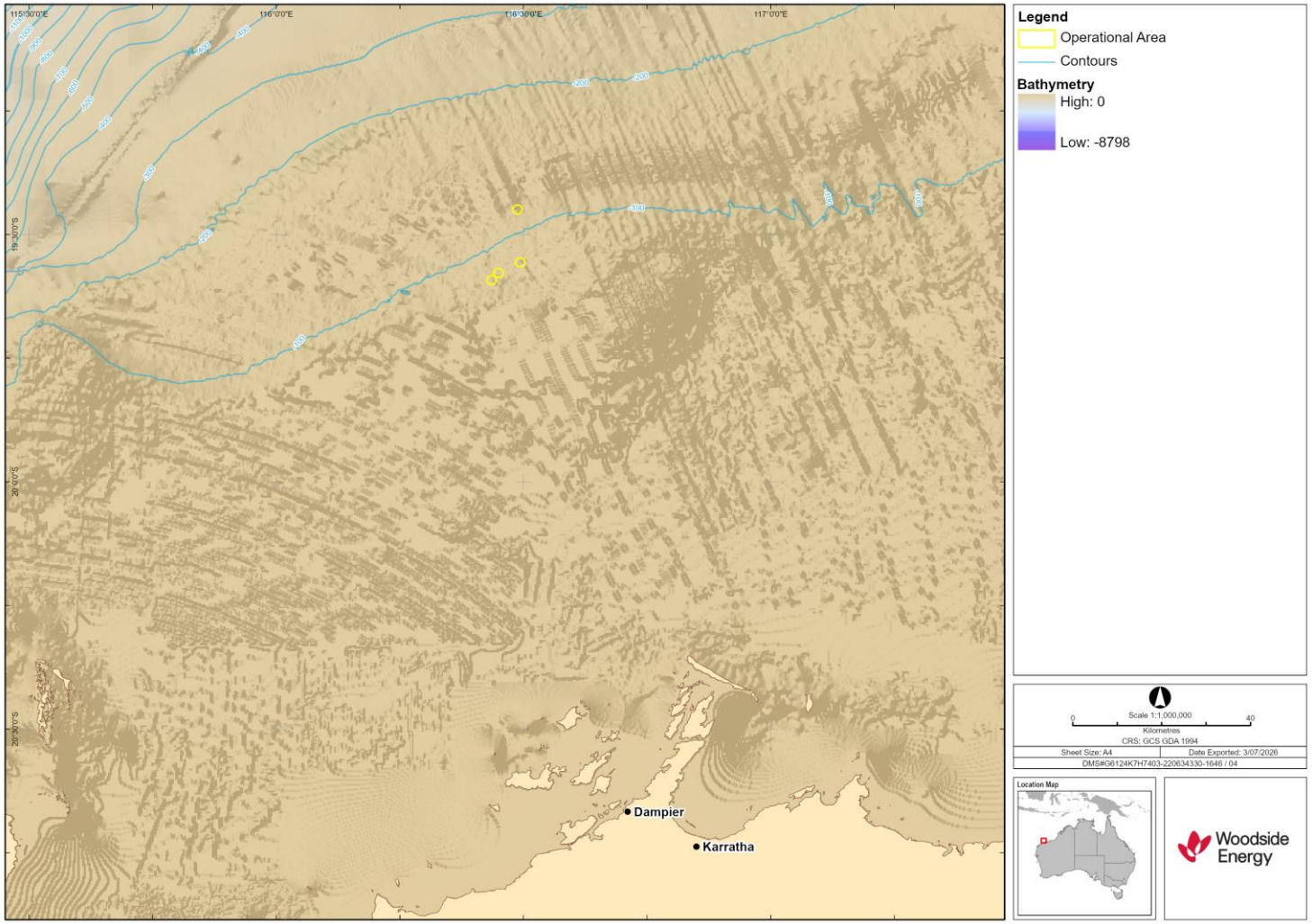


Figure 4-3: Bathymetry of the Operational area

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

4.5 Habitats and biological communities

Sediments in the Operational area are broadly consistent with those in the NWS Province and can be inferred from Woodside sampling programs undertaken at Glomar Shoals (about 7 km east of the Operational area) and the Angel facility (about 15 km east of the Operational area).

The sediments in the Operational area are expected to comprise primarily fine sands, very fine sands and silt with large proportions of shell fragments (BMT, 2021; Australian Institute of Marine Science (AIMS), 2014; BMT, 2015; Brewer, et al., 2007). Similarly, surveys conducted in 2014 as part of the Lambert Deep baseline investigations, a development associated with the Angel facility, found the sediments surveyed were classified as sub-littoral sediments. These sediments were predominantly coarse silt and some shell fragments with borrows, mounds, polychaetes and occasional hydroids, interspersed with areas of muddy sand and occasional polychaetes and sparse epibiota (Jacobs, 2014). A reconnaissance survey of the pipeline route linking the Angel platform to North Rankin Complex (which runs through the Operational area) indicated occasional outcrops of cemented substrate occur in localised depressions, and identified a plateau-like structure up to 4 m higher than the flat, unconsolidated soft sediment seabed habitat of the south-west section of the proposed pipeline route (Sinclair Knight Merz, 2006). This indicates the potential for sparse outcrops of hard substrate within the Operational area, which otherwise is predominantly composed of a flat, unconsolidated soft sediment seabed habitat.

The Operational Area Part 2 (LH3) partially overlap the Ancient Coastline at 125 m Depth Contour KEF. Although several areas with sensitive habitat and features are present within this KEF, most of the seabed within the Operational area is likely expansive areas of featureless sandy substrate.

Habitats and ecological communities within the EMBA are briefly described and identified in Table 4-3. A full description of the habitats and ecological communities is contained within the Master Existing Environment document (Appendix I).

Table 4-3: Habitats and communities within the environment that may be affected (distance calculated from Operational area)

Habitat/community	Key locations within the EMBA
Seabed characteristics	
NWS Province	• Overlapping the Operational area
Key Ecological Features	• Ancient Coastline at 125 m Depth Contour KEF overlapping Operational Area Part 2 (LH3) • Various. The KEFs within the EMBA as described in Table 4-15
Reefs, banks and shoals	• Glomar Shoals (7 km east of the Operational area) • Rankin Bank (98 km south-west of the Operational area) • Wilcox Shoal (85 km south of the Operational area)
Marine primary producers	
Coral	• Montebello Islands Group (130 km south-west of the Operational area) • Ningaloo Coast (about 345 km southwest of the Operational area)
Seagrass beds and macroalgae	• Exmouth Gulf (about 332 km southwest of the Operational area) • Ningaloo Reef (about 345 km southwest of the Operational area)
Mangroves	• Montebello Islands Group (130 km south-west of the Operational area) • Ningaloo Reef (about 345 km southwest of the Operational area)
Other communities and habitats	
Plankton	• Plankton is expected throughout the Operational area and EMBA and is expected to be representative of plankton within the wider NWMR, as detailed in Woodside's Master Existing Environment (refer to Section 2.3.2)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Habitat/community	Key locations within the EMBA
Pelagic and demersal fish populations	• Pelagic and demersal fish are expected throughout the Operational area and EMBA and are expected to be representative of pelagic and demersal fish within the wider NWMR, as detailed in Woodside's Master Existing Environment (refer to Section 2.3.2).
Epifauna and infauna	• Epifauna and infauna are expected throughout the Operational area and EMBA and are expected to be representative of epifauna and infauna present the wider NWMR, as detailed in Woodside's Master Existing Environment (refer to Section 2.3.2).

4.6 Protected species

A total of 70 EPBC Act listed species considered to be MNES were identified as potentially occurring within the EMBA, of which a subset of 45 species was identified as potentially occurring within the Operational area. The full list of marine species identified from the PMST reports is provided in Appendix C. Species identified in the PMST that are not known to inhabit shorelines, nor rely on the marine environment for their diet, were not assessed. One conservation-dependent species has also been identified with a potential to occur within the Operational area and EMBA.

Key species identified as potentially occurring within the Operational area and EMBA and biologically important areas (BIAs) or habitat critical to their survival (habitat critical) that overlap the Operational area and EMBA, are described in the next sections. Key threatened and migratory species and associated biologically important behaviours in the EMBA are further described in Woodside's Master Existing Environment (refer to Section 2.3.2).

4.6.1 Fish, sharks and rays

A total of 14 EPBC Act listed threatened and migratory fish species have been identified to potentially occur within the EMBA, of which 12 occur in the Operational area (Table 4-4). All EPBC Act listed species identified in the PMST search is listed in Appendix C.

The Operational area overlap the foraging BIA for whale sharks, northward from Ningaloo along the 200 m isobath (Figure 4-4 and Table 4-4). A high-density foraging area is 357 km south-west of the Operational area and within the EMBA.

BIAs are further described in Woodside's Master Existing Environment (Appendix I).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 4-4: Threatened and migratory fish, shark and ray species predicted to occur in the Operational area and EMBA

Species name	Common name	EPBC Act (as per PMST report Appendix C)		Potential for interaction	
		Threatened status	***Migratory status***	***Operational area***	***EMBA***
Anoxypristis cuspidata	Narrow sawfish	NA	Migratory	Species or species habitat known to occur in area	Species or species habitat known to occur in area
Carcharhinus longimanus	Oceanic whitetip shark	N/A	Migratory	Species or species habitat likely to occur in area	Species or species habitat likely to occur in area
Carcharias taurus (west coast population)	Grey nurse shark (west coast population)[3]	Vulnerable	N/A	Species or species habitat likely to occur in area	Congregation or aggregation known to occur within area
Carcharodon carcharias	Great white shark	Vulnerable	Migratory	Species or species habitat may occur in area	Species or species habitat known to occur in area
Isurus oxyrinchus	Shortfin mako	N/A	Migratory	Species or species habitat likely to occur in area	Species or species habitat likely to occur in area
Isurus paucus	Longfin mako	N/A	Migratory	Species or species habitat likely to occur in area	Species or species habitat likely to occur in area
Mobula alfredi	Reef manta ray	N/A	Migratory	Species or species habitat likely to occur in area	Species or species habitat known to occur in area
Mobula birostris	Giant manta ray	N/A	Migratory	Species or species habitat likely to occur in area	Species or species habitat known to occur in area
Pristis clavata	Dwarf sawfish, Queensland sawfish	Vulnerable	Migratory	N/A	Species or species habitat known to occur in area
Pristis pristis	Largetooth sawfish	Endangered	Migratory	Species or species habitat may occur in area	Species or species habitat likely to occur in area
Pristis zijsron	Green sawfish, dindagubba, narrowsnout sawfish	Vulnerable	Migratory	Species or species habitat known to occur in area	Species or species habitat known to occur in area

[3] *The grey nurse shark is also identified as a migratory species, but this classification does not apply to the west coast population species.*

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species name	Common name	EPBC Act (as per PMST report Appendix C)		Potential for interaction	
		Threatened status	***Migratory status***	***Operational area***	***EMBA***
Rhincodon typus	Whale shark	Vulnerable	Migratory	Foraging, feeding or related behaviour known to occur in area	Foraging, feeding or related behaviour known to occur in area
Sphyrna lewini	Scalloped hammerhead	Conservation dependent	N/A	Species or species habitat likely to occur in area	Species or species habitat known to occur in area
Lamna nasus	Porbeagle, mackerel shark	N/A	Migratory	N/A	Species or species habitat may occur in area

Table 4-5: Fish, shark and ray biologically important areas (BIAs) in the EMBA

Species	BIA type	Approx. distance and direction of BIA from Operational area (km)
Whale shark	Foraging (northward from Ningaloo along 200 m isobath)	Overlapping
	Foraging (high density in Ningaloo Marine Park and adjacent to Commonwealth waters)	357 km south-west

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

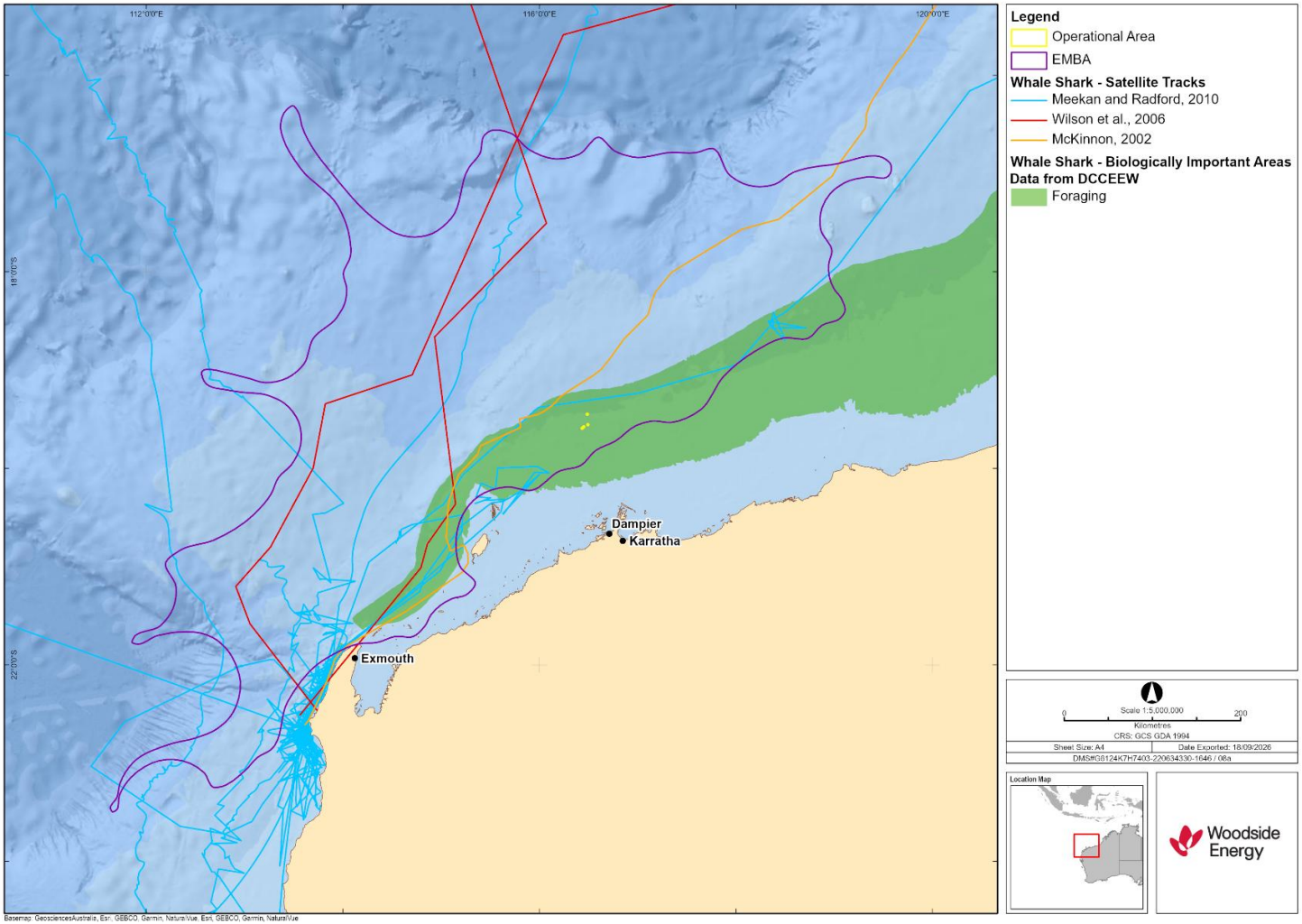


Figure 4-4: Whale shark BIAs overlapping the EMBA and tagged whale shark satellite tracks

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

4.6.1.1 Whale sharks

Whale sharks (*Rhindocon typus*) are planktivorous sharks feeding on a variety of planktonic organisms, including krill, jellyfish and crab larvae (Last & Stevens, 2009).

Whale sharks form seasonal aggregations at Ningaloo Reef between March and July (Threatened Species Scientific Committee (TSSC), 2015). However, seasonal aggregation can be variable, with whale sharks recorded at Ningaloo year-round (Norman, et al., 2017).

The annual migration of whale sharks occurs along the 200 m isobath of the WA coast between July and November (TSSC, 2015). Timing of their migration to and from Ningaloo coincides with the coral mass spawning period, when there is an abundance of food (krill, planktonic larvae and schools of small fish) in the waters adjacent to Ningaloo Reef (DCCEEW, 2026a). Whale sharks remain within a few kilometres of the shore while at the Ningaloo Reef in water depths between 30 and 50 m (Wilson, et al., 2006). After the aggregation period, their distribution is largely unknown. Satellite tracking (Figure 4-4) has shown the sharks may follow three migration routes from Ningaloo (Wilson, et al., 2006; Meekan & Radford, 2010):

- north-west, into the Indian Ocean
- directly north, towards Sumatra and Java
- north-east, passing through the NWS and travelling along the shelf break and continental slope.

Anecdotal evidence from sightings data collected from Woodside's offshore facilities indicate whale sharks are on the NWS in the months of April, July, August, September and October, corresponding with the whale shark's seasonal migration to and from Ningaloo Reef. However, the numbers of individual whale sharks that transit through the Operational area is expected to be low, based on the number of whale sharks aggregating at Ningaloo and on the migration paths the sharks may follow.

While whale sharks may traverse the vicinity of the Operational area, their presence would be of a relatively short duration and not in significant numbers, given the main aggregations are recorded in coastal waters, particularly the Ningaloo Reef edge (Department of Parks and Wildlife, 2013; Marine Parks and Reserves Authority, 2005).

4.6.2 Marine reptiles

A total of seven EPBC Act listed threatened and migratory marine reptile species have been identified to potentially occur within the EMBA and Operational area (Table 4-6). A full list of EPBC Act listed species identified in the PMST search is provided in Appendix C.

BIAs that overlap the EMBA are presented in Figure 4-4 and Table 4-4. Habitat critical overlapping the EMBA is presented in Figure 4-6 and Table 4-8. The Operational area does not overlap any marine turtle BIAs.

BIAs are further described in Woodside's Master Existing Environment (Appendix I).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 4-6: Threatened and migratory marine reptile species predicted to occur in the Operational area and EMBA

Species name	Common name	EPBC Act (Cth) (as per PMST report Appendix C)		Potential for interaction	
		Threatened status	*Migratory status*	*Operational area*	*EMBA*
Aipysurus apraefrontalis	Short-nosed sea snake	Critically endangered	N/A	Species or species habitat known to occur in area	Species or species habitat known to occur in area
Aipysurus foliosquama	Leaf-scaled sea snake	Critically endangered	N/A	Species or species habitat likely to occur in area	Species or species habitat known to occur in area
Caretta caretta	Loggerhead turtle	Endangered	Migratory	Species or species habitat likely to occur in area	Breeding known to occur in area
Chelonia mydas	Green turtle	Vulnerable	Migratory	Species or species habitat likely to occur in area	Breeding known to occur in area
Dermochelys coriacea	Leatherback turtle	Endangered	Migratory	Species or species habitat likely to occur in area	Species or species habitat known to occur in area
Eretmochelys imbricata	Hawksbill turtle	Vulnerable	Migratory	Species or species habitat likely to occur in area	Breeding known to occur in area
Natator depressus	Flatback turtle	Vulnerable	Migratory	Congregation or aggregation known to occur in area	Breeding known to occur in area

Table 4-7: Marine turtle BIAs in the EMBA

Species	BIA type	Approx. distance and direction of BIA from Operational area (km)
Flatback turtle	Reproduction (Internesting buffer) (Dampier Archipelago, Montebello Islands)	18 km south (Dampier Archipelago)
	Reproduction (mating) (Montebello Islands, coral reef habitat west of the Montebello group)	130 km south-west (Montebello Islands)
	Reproduction (nesting) (Montebello Islands)	130 km south-west
	Reproduction (internesting) (coral reef habitat west of Montebello Islands)	143 km south-west
	Foraging (Montebello Islands, coral reef habitat west of Montebello Islands)	130 km south-west (Montebello Islands)
	Aggregation (coral reef habitat west of the Montebello Islands)	143 km south-west

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species	BIA type	Approx. distance and direction of BIA from Operational area (km)
Green turtle	Aggregation (coral reef habitat west of the Montebello Islands)	143 km south-west
	Foraging (Montebello Islands, coral reef habitat west of the Montebello Islands)	130 km south-west (Montebello Islands)
	Reproduction (internesting) (Montebello Islands, coral reef habitat west of the Montebello Islands)	124 km south-west (Montebello Islands)
	Reproduction (internesting buffer) (Montebello Islands, Barrow Island, North West Cape, North and South Muiron Island)	105 km south-west (Montebello Islands)
	Reproduction (mating) (Montebello Islands, coral reef habitat west of the Montebello Islands)	124 km south-west (Montebello Islands)
	Reproduction (nesting) (Montebello Islands)	124 km south-west
Hawksbill turtle	Reproduction (internesting buffer) (Montebello Islands, Barrow Island, Lowendal Island Group, Thevenard Island, Ningaloo and Jurabi coasts)	124 km south-west
	Reproduction (mating) (Montebello Islands)	130 km south-west
	Reproduction (nesting) (Montebello Islands)	130 km south-west
	Foraging (Montebello Islands)	130 km south-west
Loggerhead turtle	Reproduction (internesting buffer) (Montebello Islands, North and South Muiron Islands, Ningaloo and Jurabi coasts)	117 km south-west (Montebello Islands)
	Reproduction (nesting) (Ningaloo and Jurabi coasts)	399 km south-west

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 4-8: Habitat critical to the survival of the marine turtles predicted to occur within EMBA

Species	Location of habitat critical	Approx. distance and direction from Operational area (km)
Flatback turtle, Pilbara stock (F-Pil))	Nesting (Montebello Islands, Barrow Islands, Dampier Archipelago)	34 km south (Dampier Archipelago)
Green turtle, NWS stock (G-NWS)	Nesting (Montebello Islands, Barrow Island, coastal islands from Cape Preston to Locker Island, Thevenard Island, Exmouth Gulf and Ningaloo Coast)	112 km south-west (Montebello Islands)
Hawksbill turtle, Western Australia (WA) stock (H-WA)	Nesting (Cape Preston to mouth of Exmouth Gulf, including Montebello Islands and Lowendal Islands)	112 km south-west (Montebello Islands)
Loggerhead turtle, WA stock (LH-WA)	Nesting (Ningaloo Coast)	326 km south-west

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

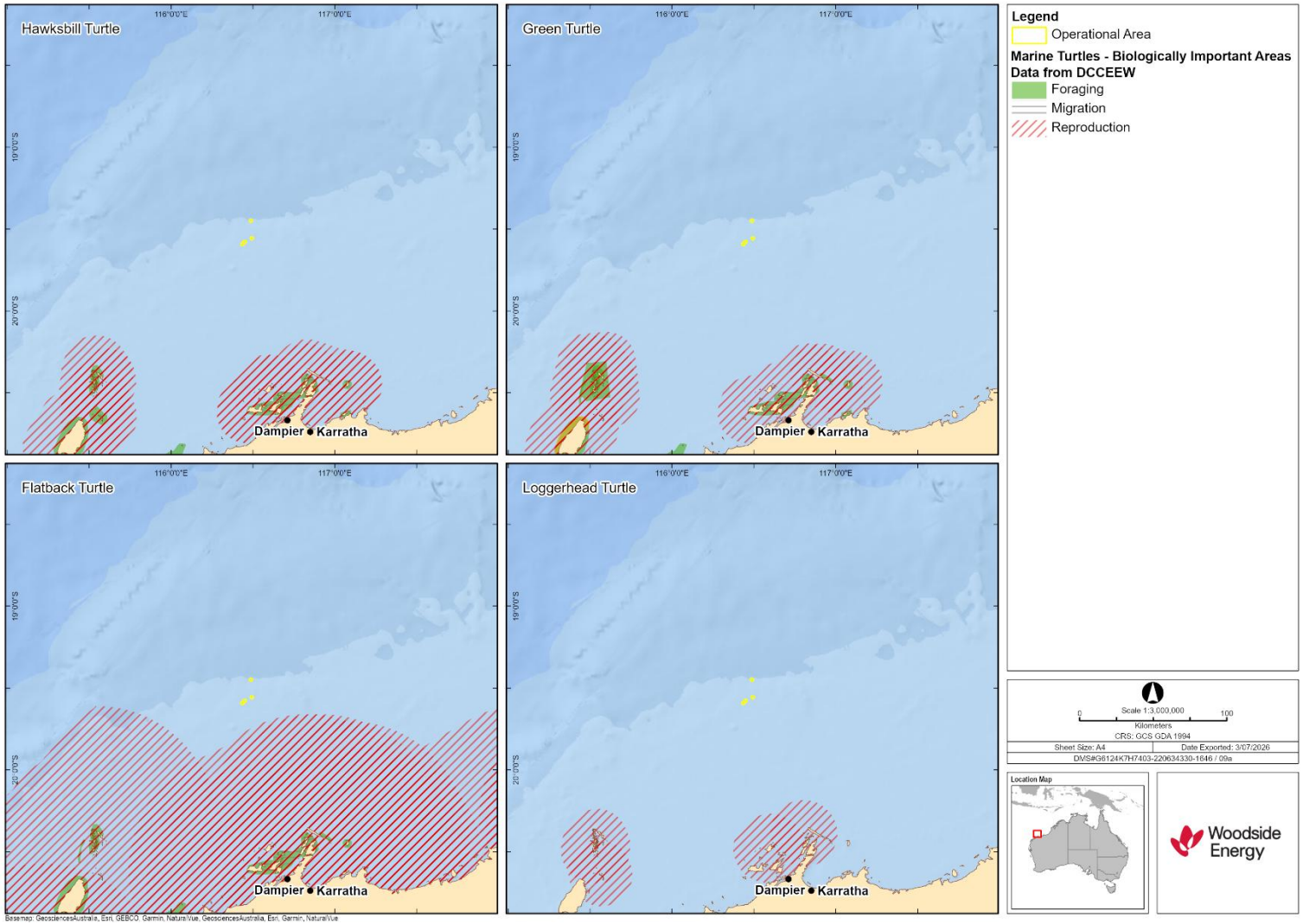


Figure 4-5: Marine turtles BIAs near the EMBA

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

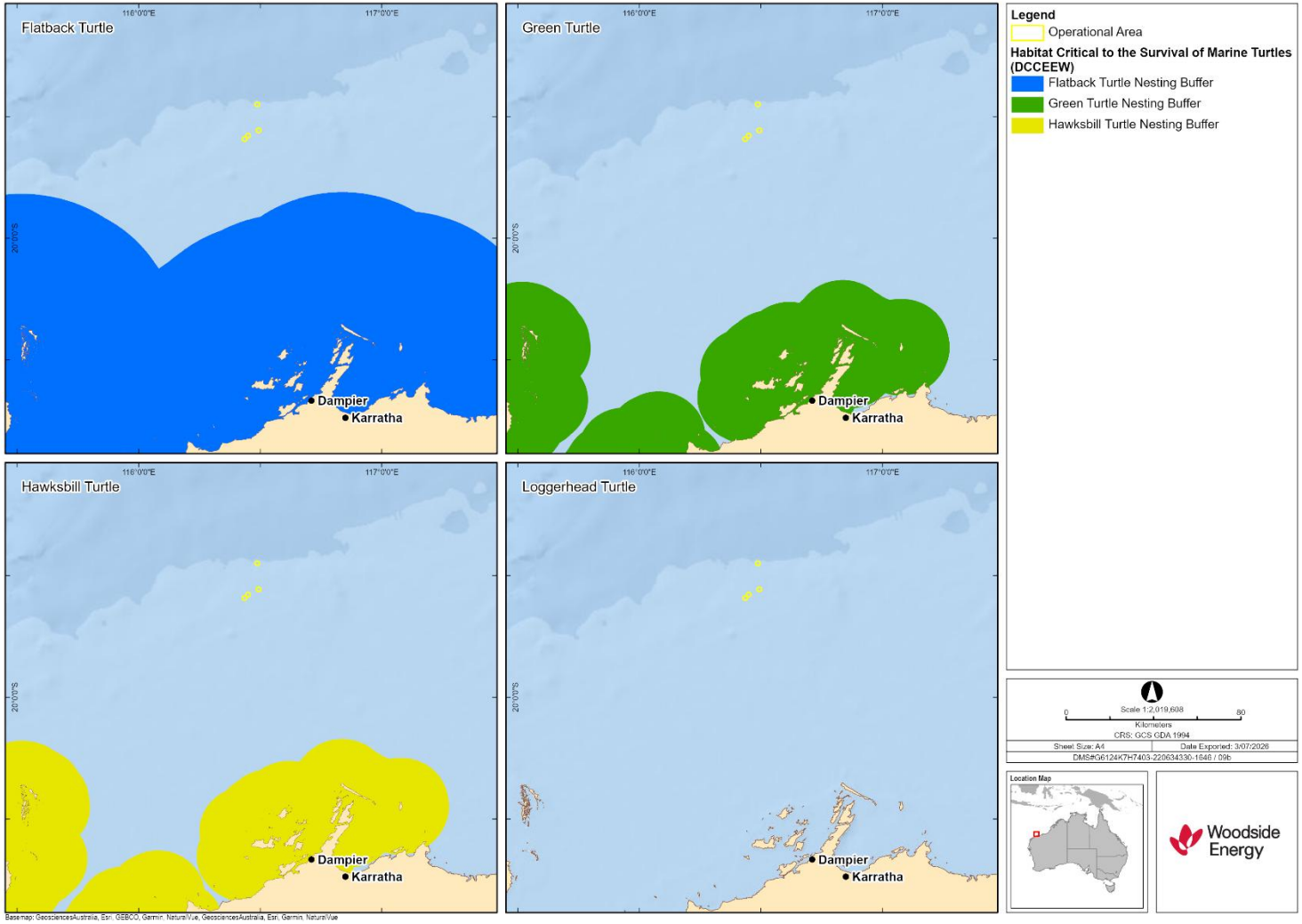


Figure 4-6: Habitat critical to the survival of marine turtles near the Operational area

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

4.6.3 Marine mammals

A total of 14 EPBC Act listed threatened and migratory marine mammal species have been identified to potentially occur within the EMBA, of which nine occur in the Operational area (Table 4-9). A full list of EPBC Act listed species identified in the PMST search is provided in Appendix C.

BIAs that overlap the EMBA are presented in Table 4-10, Figure 4-7, Figure 4-8 and Figure 4-9. The Operational area are within 50 km of the migration BIA for humpback whales and pygmy blue whales (Table 4-10, Figure 4-7, and Figure 4-8). Whilst the PMST report for the EMBA (Appendix C) identified the humpback whale resting area BIA, this has been determined to be outside of the EMBA (Figure 4-7).

BIAs are further described in Woodside's Master Existing Environment (Appendix I).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 4-9: Threatened and migratory marine mammal species predicted to occur in the Operational area and EMBA

Species name	Common name	EPBC Act (Cth) (as per PMST report Appendix C)		Potential for interaction	
		Threatened status	*Migratory status*	*Operational area*	*EMBA*
Balaenoptera borealis	Sei whale	Vulnerable	Migratory	Species or species habitat likely to occur in area	Foraging, feeding or related behaviour likely to occur in area
Balaenoptera edeni	Bryde's whale	N/A	Migratory	Species or species habitat likely to occur in area	Species or species habitat likely to occur in area
Balaenoptera musculus	Blue whale	Endangered	Migratory	Species or species habitat likely to occur in area	Migration route known to occur in area
Balaenoptera physalus	Fin whale	Vulnerable	Migratory	Species or species habitat likely to occur in area	Foraging, feeding or related behaviour likely to occur in area
Balaenoptera omurai	Omura's whale	N/A	Migratory	Species or species habitat likely to occur in area	Species or species habitat likely to occur in area.
Megaptera novaeangliae	Humpback whale	N/A	Migratory	Breeding known to occur in area	Breeding known to occur in area
Orcaella heinsohni	Australian snubfin dolphin	Vulnerable	Migratory	N/A	Species or species habitat likely to occur in area
Orcinus orca	Killer whale	N/A	Migratory	Species or species habitat may occur in area	Species or species habitat may occur in area
Physeter macrocephalus	Sperm whale	N/A	Migratory	Species or species habitat may occur in area	Species or species habitat may occur in area
Sousa sahulensis	Australian humpback dolphin	Vulnerable	Migratory	N/A	Species or species habitat known to occur in area
Tursiops aduncus	Spotted bottlenose dolphin (Arafura/Timor Sea populations)	N/A	Migratory	Species or species habitat may occur in area	Species or species habitat known to occur in area
Dugong dugon	Dugong	N/A	Migratory	N/A	Breeding known to occur in area

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species name	Common name	EPBC Act (Cth) (as per PMST report Appendix C)		Potential for interaction	
		Threatened status	*Migratory status*	*Operational area*	*EMBA*
Eubalaena australis	Southern right whale	Endangered	Migratory	N/A	Species or species habitat likely to occur in area
Balaenoptera bonaerensis	Antarctic minke whale, dark-shoulder minke whale	N/A	Migratory	N/A	Species or species habitat likely to occur in area

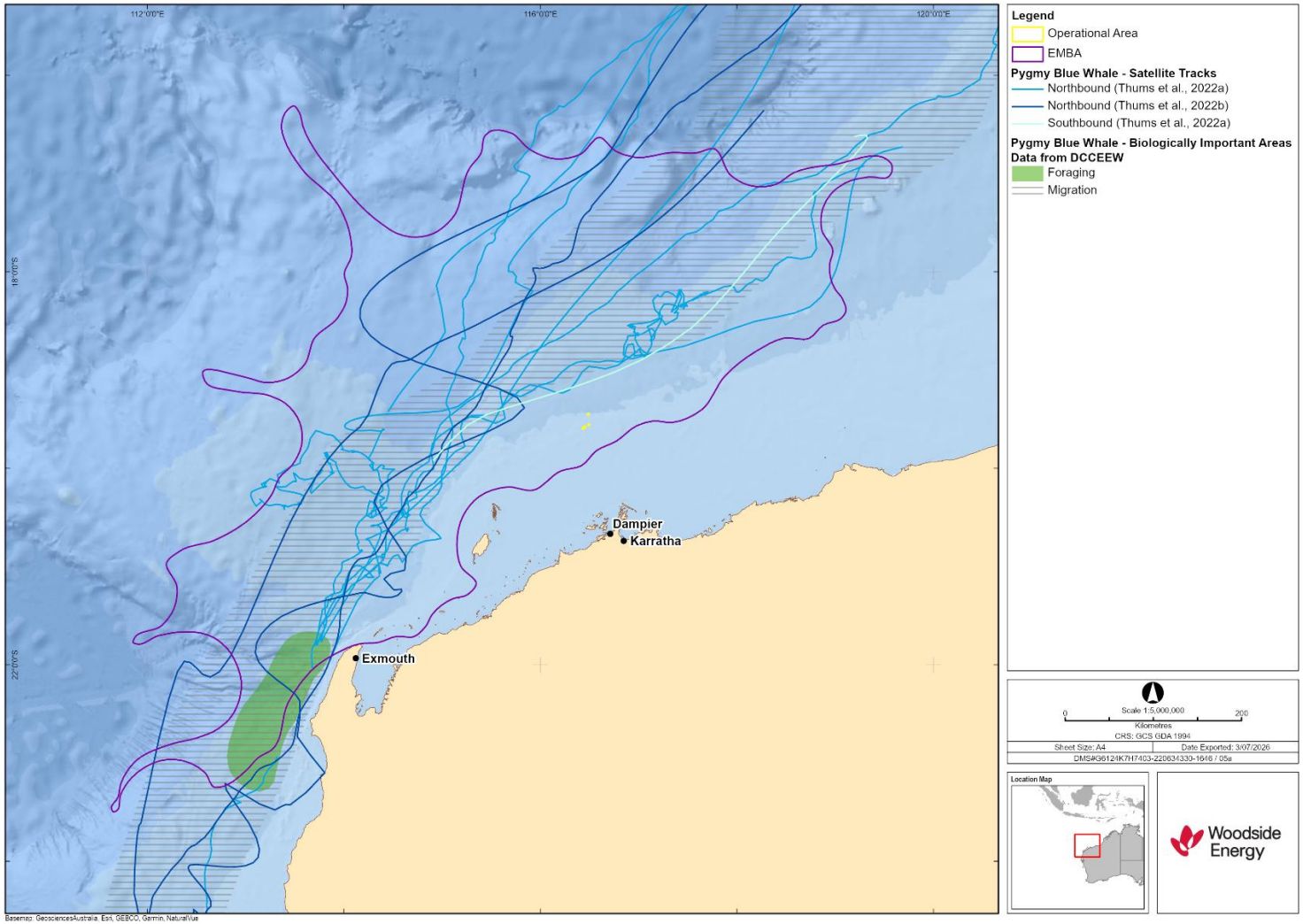
Table 4-10: Marine mammal BIAs in the EMBA

Species	BIA type	Approx. distance and direction from Operational area (km)
Humpback whale	Migration (north and south) (100 km offshore in the Kimberley Region, Houtman Abrolhos Islands, West Coast – Bunbury to Lancefield including Rottnest Island)	34 km south
Pygmy blue whale	Migration (Augusta to Derby along the shelf edge)	43 km north
	Foraging (Ningaloo)	366 km south-west
Dugong	Reproduction (breeding, calving and nursing) (Exmouth Gulf and Ningaloo Reef)	353 km south-west
	Foraging (Exmouth Gulf and Ningaloo Reef at high density seagrass beds)	353 km south-west
Southern right whale	Reproduction (Exmouth Gulf and Ningaloo Reef)	390 km south-west
	Migration (Exmouth Gulf and Ningaloo Reef)	390 km south-west

Table 4-11: Habitat critical to the survival of the marine mammals predicted to occur within the EMBA

Species	BIA type	Approx. distance and direction from Operational area (km)
Southern right whale	Reproduction (Exmouth Gulf and Ningaloo Reef)	400 km south-west

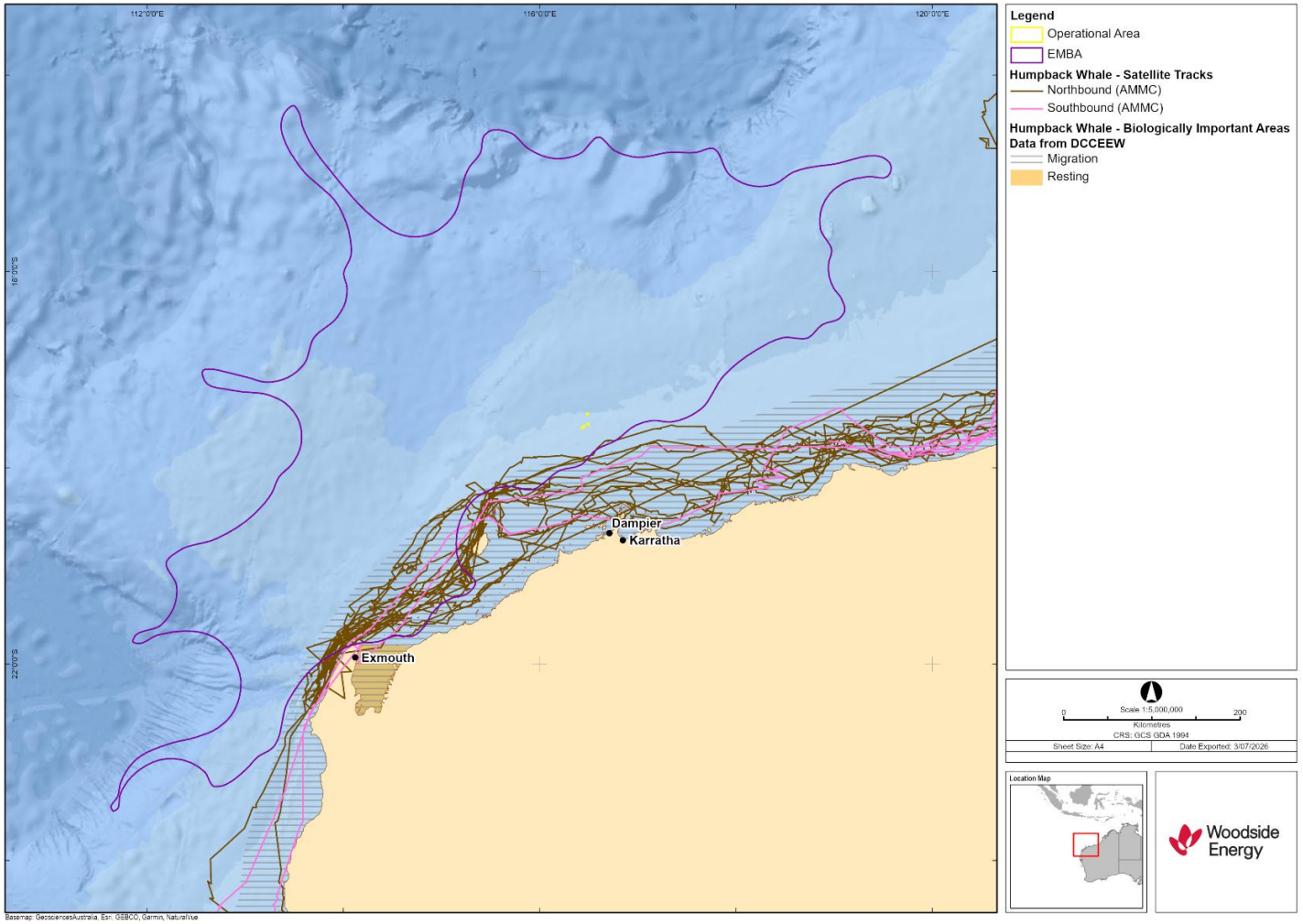
This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.



Source: DCCEEW (2026b)

Figure 4-7: Pygmy blue whale BIAs near the EMBA and tagged whale tracks for northbound and southbound migration

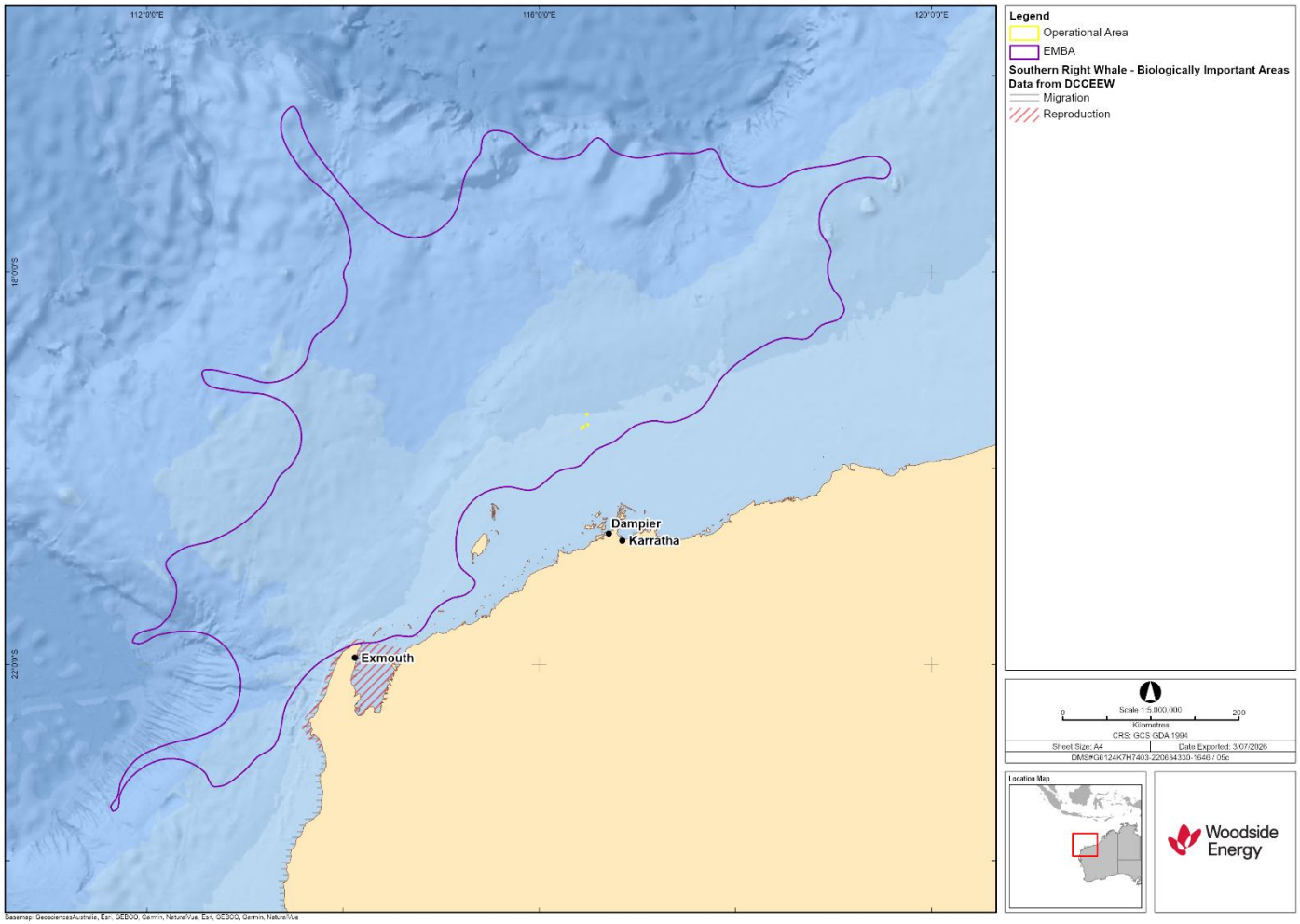
This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.



Source: DCCEEW (2026b)

Figure 4-8: Humpback whale BIAs and tagged tracks overlapping the EMBA

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.



Source: DCCEEW (2026b)

Figure 4-9: Southern right whale BIAs near the EMBA

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

4.6.4 Seabirds and migratory shorebirds

A total of 35 EPBC Act listed threatened seabirds and migratory shorebird species have been identified to potentially occur within the EMBA, of which 17 occur in the Operational area (Table 4-12). A full list of EPBC Act listed species identified in the PMST search is provided in Appendix C.

BIAs that overlap the EMBA are presented in Table 4-12 and Figure 4-10. Operational Area Part 1 (CK4) overlaps a reproduction BIA for wedge-tailed shearwaters (Table 4-12, Figure 4-10).

BIAs of seabirds and migratory shorebirds in the EMBA are further described Woodside's Master Existing Environment (Appendix I).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 4-12: Threatened and migratory seabird and migratory shorebird species predicted to occur in the Operational area and EMBA

Species name	Common name	EPBC Act (Cth) (as per PMST report Appendix C)		Potential for interaction	
		Threatened status	*Migratory status*	*Operational area*	*EMBA*
Actitis hypoleucos	Common sandpiper	N/A	Migratory	Species or species habitat may occur in area	Species or species habitat known to occur in area
Anous stolidus	Common noddy	N/A	Migratory	Species or species habitat may occur in area	Species or species habitat likely to occur in area
Apus pacificus	Fork-tailed swift	N/A	Migratory	N/A	Species or species habitat likely to occur in area
Ardenna carneipes	Flesh-footed shearwater, fleshy-footed shearwater	N/A	Migratory	N/A	Species or species habitat likely to occur in area
Ardenna pacifica	Wedge-tailed shearwater	N/A	Migratory	Breeding known to occur in area[4]	Breeding known to occur in area
Calidris acuminata	Sharp-tailed sandpiper	Vulnerable	Migratory	Species or species habitat may occur in area	Species or species habitat likely to occur in area
Calidris canutus	Red knot, knot	Vulnerable	Migratory	Species or species habitat may occur in area	Species or species habitat may occur in area
Calidris ferruginea	Curlew sandpiper	Critically endangered	Migratory	Species or species habitat may occur in area	Species or species habitat known to occur in area
Calidris melanotos	Pectoral sandpiper	N/A	Migratory	Species or species habitat may occur in area	Species or species habitat may occur in area
Calonectris leucomelas	Streaked shearwater	N/A	Migratory	Species or species habitat likely to occur in area	Species or species habitat likely to occur in area
Charadrius leschenaultii	Greater sand plover, large sand plover	Vulnerable	Migratory	N/A	Species or species habitat likely to occur in area
Charadrius veredus	Oriental plover, oriental dotterel	N/A	Migratory	N/A	Species or species habitat may occur in area

[4] *The wedge-tailed shearwater was not captured in the PMST but a breeding BIA overlaps the Operational Areas (LH3); therefore, the wedge-tailed shearwater may interact with the Petroleum Activity.*

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species name	Common name	EPBC Act (Cth) (as per PMST report Appendix C)		Potential for interaction	
		Threatened status	***Migratory status***	***Operational area***	***EMBA***
Fregata ariel	Lesser frigatebird, least frigatebird	N/A	Migratory	Species or species habitat likely to occur in area	Species or species habitat known to occur in area
Fregata minor	Great frigatebird, greater frigatebird	N/A	Migratory	Species or species habitat may occur in area	Species or species habitat may occur in area
Glareola maldivarum	Oriental pratincole	N/A	Migratory	N/A	Species or species habitat may occur in area
Hydroprogne caspia	Caspian tern	N/A	Migratory	N/A	Breeding known to occur in area
Limosa lapponica	Bar-tailed godwit	N/A	Migratory	N/A	Species or species habitat known to occur in area
Limosa lapponica menzbieri	Northern Siberian bar-tailed godwit, Russkoye bar-tailed godwit	Endangered	N/A	N/A	Species or species habitat known to occur in area
Macronectes giganteus	Southern giant-petrel, southern giant petrel	Endangered	Migratory	N/A	Species or species habitat may occur in area
Onychoprion anaethetus	Bridled tern	N/A	Migratory	N/A	Breeding known to occur in area
Pandion haliaetus	Osprey	N/A	Migratory	Species or species habitat may occur in area	Breeding known to occur in area
Phaethon lepturus	White-tailed tropicbird	N/A	Migratory	Species or species habitat likely to occur in area	Species or species habitat known to occur in area
Phaethon rubricauda	Red-tailed tropicbird	N/A	Migratory	Species or species habitat likely to occur in area	Species or species habitat likely to occur in area
Numenius madagascariensis	Eastern curlew, far eastern curlew	Critically endangered	Migratory	Species or species habitat may occur in area	Species or species habitat known to occur in area
Phaethon lepturus fulvus	Christmas Island white-tailed tropicbird, golden bosunbird	Endangered	Migratory	Species or species habitat may occur in area	Species or species habitat may occur in area

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species name	Common name	EPBC Act (Cth) (as per PMST report Appendix C)		Potential for interaction	
		Threatened status	***Migratory status***	***Operational area***	***EMBA***
Phaethon rubricauda westralis	Red-tailed tropicbird (Indian Ocean), Indian Ocean red-tailed tropicbird	Endangered	Migratory	Species or species habitat likely to occur in area	Species or species habitat likely to occur in area
Pterodroma mollis	Soft-plumaged petrel	Vulnerable	N/A	N/A	Species or species habitat may occur in area
Rostratula australis	Australian painted snipe	Endangered	N/A	N/A	Species or species habitat may occur in area
Sternula albifrons	Little tern	Vulnerable	Migratory	N/A	Breeding known to occur in area
Sternula nereis nereis	Australian fairy tern	Vulnerable	Migratory	Species or species habitat may occur in area	Breeding known to occur in area
Sterna dougallii	Roseate tern	N/A	Migratory	N/A	Breeding known to occur in area.
Thalasseus bergii	Greater crested tern	N/A	Migratory	N/A	Breeding known to occur in area
Thalassarche carteri	Indian yellow-nosed albatross	Vulnerable	Migratory	N/A	Species or species habitat may occur in area
Thalassarche impavida	Campbell albatross, Campbell black-browed albatross	Vulnerable	Migratory	N/A	Species or species habitat may occur in area
Tringa nebularia	Common greenshank, greenshank	Endangered	Migratory	N/A	Species or species habitat likely to occur in area

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 4-13: Seabird and shorebird BIAs in the Operational area and EMBA

Species	BIA type	Approx. distance and direction from Operational area (km)
Wedge-tailed shearwater	Reproduction (breeding) and foraging (Kimberley, Pilbara and Gascoyne coasts and islands, including Ashmore Reef)	Overlapping
Roseate tern	Reproduction (breeding) (Montebello Islands, Lowendal Islands, south Ningaloo)	115 km south-west (Montebello Islands)
Australian fairy tern	Reproduction (breeding) (Montebello Islands, Barrow Island, Lowendal Islands, Thevenard Island, Ningaloo)	124 km south-west (Montebello Islands)
Lesser crested tern	Reproduction (breeding) (Montebello Islands, Barrow Island, Lowendal Islands, Thevenard Island)	126 km south-west (Montebello Islands)
White-tailed tropicbird	Reproduction (breeding) (Rowley shoals)	325 km south-east

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

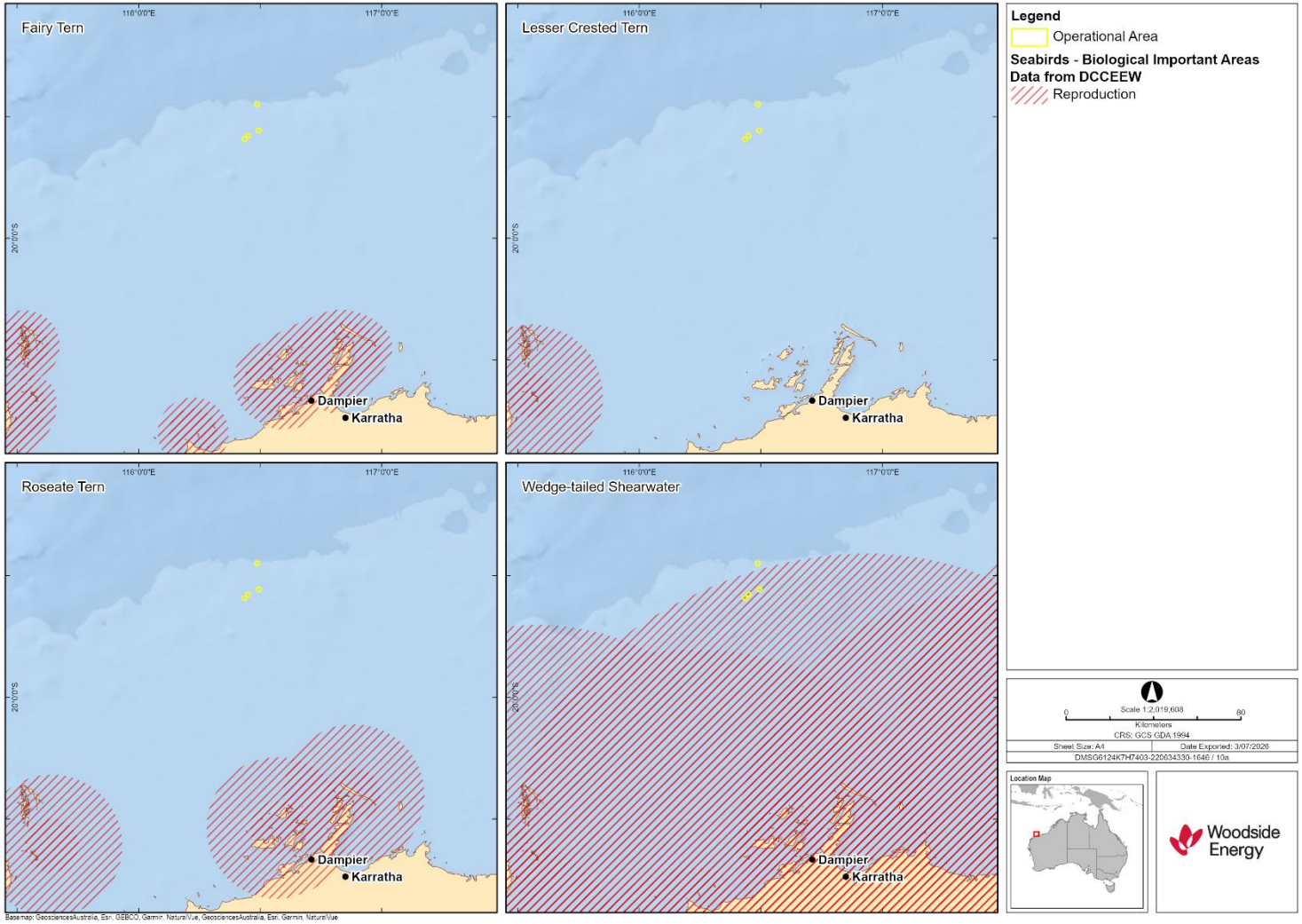


Figure 4-10: Seabird breeding BIAs in proximity to the Operational area

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

4.6.4.1 Wedge-tailed shearwater

The wedge-tailed shearwater (*Arena pacific*) is a pelagic, marine seabird known from tropical and subtropical waters (DCCEEW, 2025e). Its distribution is widespread across the Indian and Pacific oceans, with most pairs breeding in Australia, mostly on islands in WA between Rottnest Island in the south to Ashmore Reef in the north (DCCEEW, 2025e).

Adults are absent from their breeding colonies during the interbreeding period and return from their tropical Indian Ocean over-wintering grounds from late June onwards to re-excavate their burrows (Pendoley Environmental, 2019). This species is highly synchronous in timing of breeding; all eggs within a colony are laid within a 10-day period (Pendoley Environmental, 2019). Once hatched, adults leave the burrows to forage locally during the day, returning at night to feed chicks until they are ready to fledge (Nicholson, 2002). Due to the high synchronicity in egg laying, fledging is restricted to the first two weeks of April (Nicholson, 2002).

This species is seen in north-west WA from June to April (Department of Biodiversity, Conservation and Attractions, 2017). The breeding season in the Pilbara region occurs between November and April (Department of Biodiversity, Conservation and Attractions, 2017). Breeding behaviours are typically nocturnal in wedge tailed shearwaters, with adults returning to and departing the colony, and fledglings departing the colony at night. In the lead up to fledging, chicks also leave their burrows to exercise their wings. This species forages relatively close to breeding islands and its diet consists of squid, fish and crustaceans (DSEWPaC, 2012b), tracking studies found that foraging activities at sea were more frequent during the day compared to night (Catry, et al., 2009; Weimerskirch, et al., 2020).

Studies indicate wedge-tailed shearwaters breeding on the Muiron Islands (north) undertake extensive foraging trips during the incubation period (1,200 to 1,400 km) and shorter trips during chick rearing (<300 km) (Cannell, et al., 2019). Longer foraging trips took individuals north-west, offshore towards oceanic seamounts. Conversely, the shorter trips tended to include waters west and north-west of the Muiron Islands (Cannell, et al., 2019). In addition to the Muiron Islands, this dual foraging strategy, whereby parents alternate or mix short and long trips, have been recorded in wedge-tailed shearwaters breeding in the east of Australia (Peck & Congdon, 2005), and New Caledonia (Weimerskirch, et al., 2005). However, divergent foraging strategies have been detected between colonies, which is linked to the proximity of colonies to high productivity waters (Peck & Congdon, 2005; Weimerskirch, et al., 2005).

The Operational Area Part 1 (CK4) overlaps with the reproduction (breeding) BIA for this species, extending from the Montebello Islands (~130 km south-west of the Operational area), and may overlap with foraging wedge-tailed shearwaters during incubation.

4.6.5 Seasonal sensitivities for protected species

Seasonal sensitivities for protected migratory species identified as potentially occurring within the Operational area are identified in Table 4-14. Seasonal sensitivities for species in the wider NWMR are described in Woodside's Master Existing Environment (Appendix I).

Table 4-14: Key seasonal sensitivities for protected migratory species identified as occurring in the Operational area

Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Fish, sharks and rays												
Whale shark – foraging (northward from Ningaloo)[1]												
Mammals												
Pygmy blue whale – northern migration[2]												
Pygmy blue whale – southern migration[3]												
Humpback whale – northern migration[4]												

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Humpback whale – southern migration[5]												
Omura's whale[6]												
Fin whale[7]												
Marine reptiles[8]												
Flatback turtle (Pilbara genetic stock) - nesting												
Flatback turtle (Pilbara genetic stock) - hatching												
Green turtle (NWS genetic stock) – nesting												
Green turtle (NWS genetic stock) – hatching												
Hawksbill turtle (WA genetic stock) – nesting												
Hawksbill turtle (WA genetic stock) – hatching												
Loggerhead turtle (WA stock) – nesting												
Loggerhead turtle (WA stock) – hatching												
Seabirds and shorebirds												
Wedge-tailed shearwater (breeding/foraging)[9] *Fledgling emergence (first two weeks of April)				*								
Red knot – non-breeding season (NWMR)[10]												
Common sandpiper – non-breeding season[11]												
Sharp-tailed sandpiper – non-breeding season[11]												
Curlew sandpiper – non-breeding season[11]												
Streaked shearwater – non-breeding season[11]												
Lesser frigatebird – non-breeding season[11]												
Great frigatebird – non-breeding season[11]												
Eastern curlew – non-breeding[11]												
Roseate tern – breeding[11]												
Australia fairy tern - breeding[12]												

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
White-tailed and red-tailed tropicbird – breeding[11] Largest breeding populations on Christmas Island												
	Species may be in the Operational area											
	Peak period; presence of animals is reliable and predictable each year											

References for species seasonal sensitivities:

1. *DCCEEW (2026a), TSSC (2015), Norman, et al. (2017).*
2. *DCCEEW (2026a), DSEWPaC (2012b), McCauley, et al. (2018), Commonwealth of Australia (2015a), Thums, et al. (2022).*
3. *DSEWPaC (2012b), McCauley & Jenner (2010), McCauley, et al. (2018), Commonwealth of Australia (2018), Thums, et al. (2022).*
4. *DCCEEW (2026a), TSSC (2015), DSEWPaC (2012b), Salgado Kent, et al. (2012).*
5. *TSSC (2015), Commonwealth of Australia (2015a), McCauley, et al. (2018), Thums, et al. (2022), McCauley & Jenner (2010).*
6. *Cerchio, et al. (2019).*
7. *Aulich, et al. (2022).*
8. *Commonwealth of Australia (2017).*
9. *Pendoley Environmental (2019), Nicholson (2002), DCCEEW (2026a).*
10. *DCCEEW (2026a).*
11. *DCCEEW (2026a).*
12. *Dunlop (2018).*

4.7 Key ecological features

One KEF overlaps the Operational area (Part 2 only). KEFs within the Operational area and EMBA are identified in Table 4-15 and described in the Master Existing Environment document (Appendix I).

Figure 4-11 shows the spatial overlap with KEFs and the Operational area.

Table 4-15: Key ecological features within the Operational area and EMBA

Key ecological feature	Distance (minimum) and direction from Operational area to KEF (km)
Ancient Coastline at 125 m Depth Contour	Operational Area Part 2 (LH3) only
Glomar Shoals	7 km east
Continental Slope Demersal Fish Communities	105 km east
Canyons Linking the Cuvier Abyssal Plain and the Cape Range Peninsula	286 km south-west
Commonwealth Waters Adjacent to Ningaloo Reef	344 km south-west
Exmouth Plateau	225 km west
Mermaid Reef and Commonwealth waters surrounding Rowley Shoals	315 km north-east

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

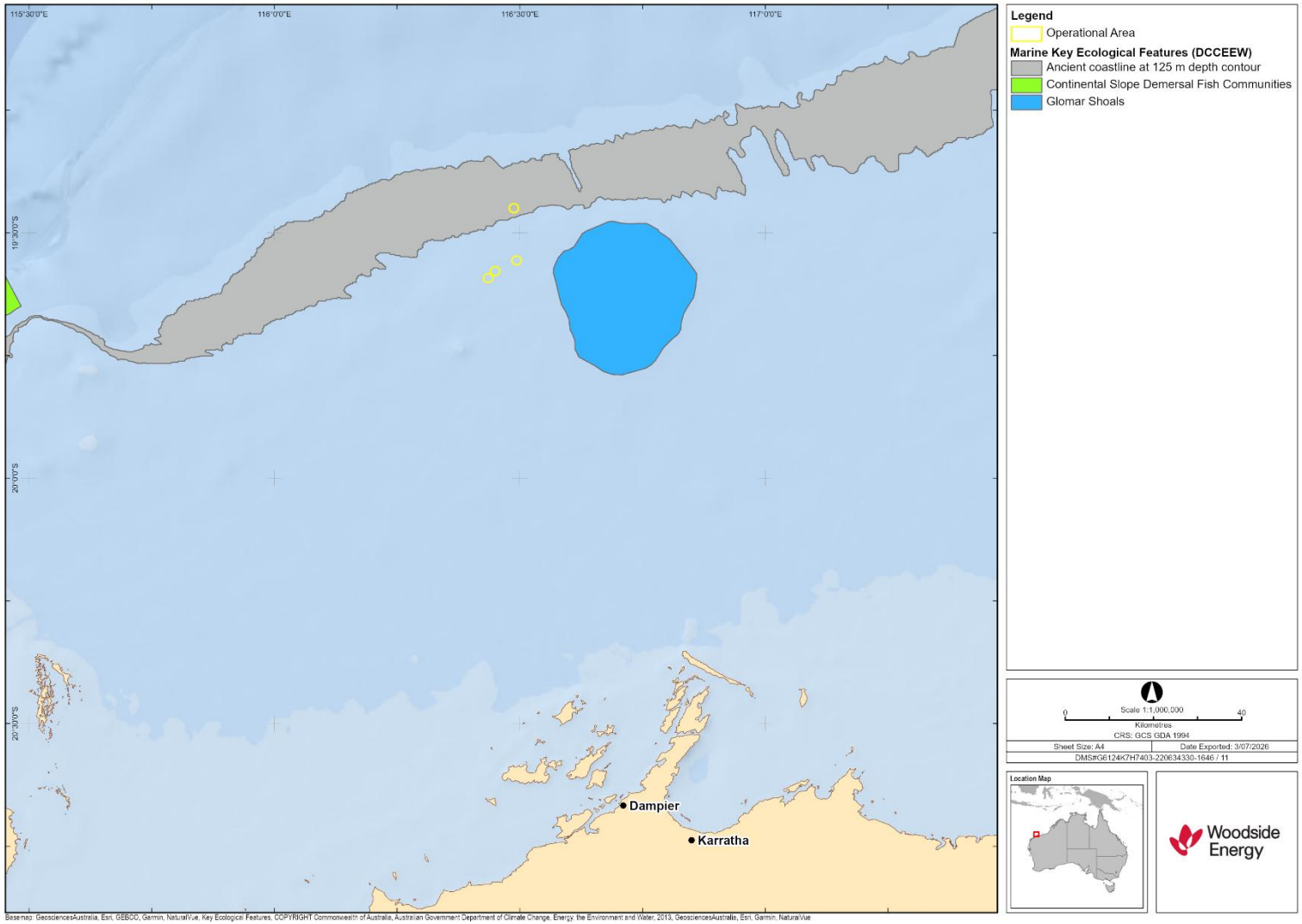


Figure 4-11: Key ecological features overlapping the Operational area

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

4.7.1 Ancient Coastline at 125 Depth Contour

The Ancient Coastline at 125 m Depth Contour KEF is recognised for its biodiversity values (unique sea-floor feature with ecological properties of regional significance), which apply to the benthic and pelagic habitats within the feature (DSEWPaC, 2012a).

Parts of the KEF, particularly where it exists as a rocky escarpment, are thought to provide biologically important habitats in areas otherwise dominated by soft sediments (DSEWPaC, 2012a). The escarpment-type features may also facilitate mixing within the water column due to upwelling, providing a nutrient-rich environment. Little is known about fauna associated with the hard substrate of the escarpment, but it is likely to include sponges, corals, crinoids, molluscs, echinoderms and other benthic invertebrates representative of hard substrate fauna in the NWS bioregion (DSEWPaC, 2012a).

Although the KEF adds extra habitat types to a representative system, the habitat types are not unique to the coastline as they are widespread on the upper shelf (Falkner, et al., 2009).

4.8 Protected places

No protected places overlap the Operational area. Protected places within the EMBA are identified in Table 4-16 and presented in Figure 4-12. Woodside's Master Existing Environment (Appendix I) outlines the values and sensitivities of protected places and other sensitive areas in the EMBA. Whilst the PMST search (Appendix C) identifies the Carnarvon Canyon AMP, Montebello State Marine Park and Jurabi Coastal Park to be within the EMBA, these have been determined to be outside of the EMBA (Figure 4-12).

Table 4-16: Established protected places and other sensitive areas overlapping the EMBA

	Distance and direction from Operational area to protected place or sensitive area (km)	IUCN category* or relevant park zone overlapping the Operational area or EMBA
AMPs		
NWMR		
Montebello AMP	77 km south-west	VI
Gascoyne AMP	349 km south-west	VI
Ningaloo AMP	334 km south-west	IV
Argo-Rowley Terrace AMP	199 km north	VI
Mermaid Reef AMP	412 km north-east	II
State Marine Parks and nature reserves		
Marine Parks		
Ningaloo	360 km south-west	II
Rowley Shoals	325 km north-east	Ia
Marine Management Areas		
Barrow Island	148 km south-west	VI
Muiron Islands	313 km south-west	VI
Nature Reserves		
Airlie Island	242 km south-west	Ia
Bessieres Island	283 km south-west	Ia
Locker Island	300 km south-west	Ia
Muiron Islands	317 km south-west	Ia
Round Island	296 km south-west	Ia

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

	Distance and direction from Operational area to protected place or sensitive area (km)	IUCN category* or relevant park zone overlapping the Operational area or EMBA
Serrurier Island	291 km south-west	Ia
Thevenard Island	263 km south-west	Ia

**Conservation objectives for IUCN categories include:*

Ia: Strict Nature Reserve

Ib: Wilderness Area

II: national Park

III: Natural Monument or Feature

IV: Habitat/Species Management Area

V: Protected Landscape

VI: Protected area with sustainable use of natural resources – allow human use but prohibits large scale development.

IUCN categories for the marine park are provided and, in brackets, the IUCN categories for specific zones within each Marine Park as assigned under the North-west Marine Parks Network Management Plan 2018 and South-west Marine Parks Network Management Plan 2018.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

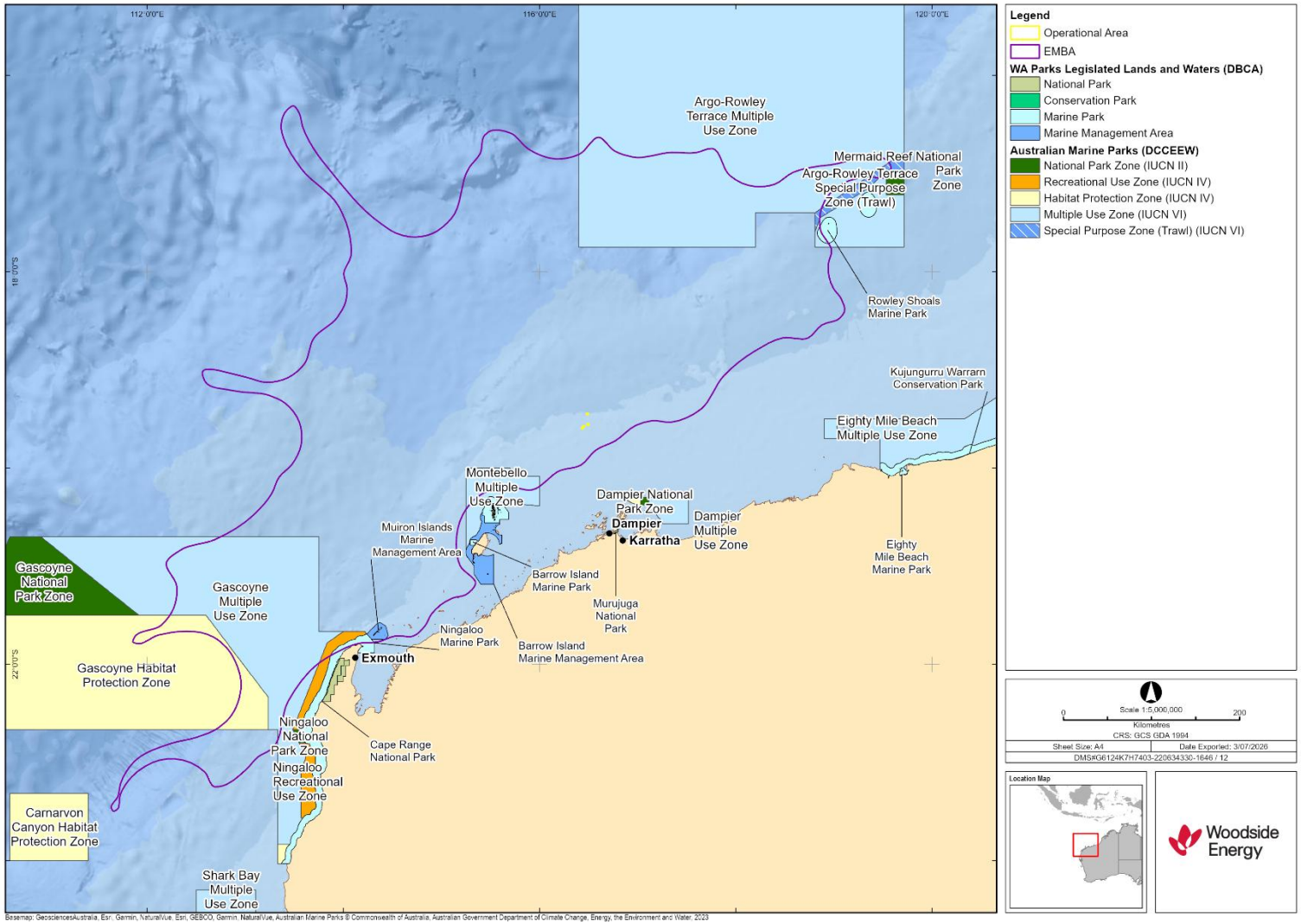


Figure 4-12: Protected areas overlapping the EMBA

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

4.9 Socioeconomic environment

4.9.1 Cultural values and heritage

Woodside recognises the 'environment' for the purpose of the evaluation required under the Environment Regulations includes:

- the heritage value of places
- the social, economic and cultural features of the broader environment.

In this section, the heritage value of places within the Operational area and EMBA and the cultural features of these areas are described. Cultural values and heritage as they relate to the wider NWMR are described in the Master Existing Environment document (Appendix I).

4.9.1.1 Native Title

For the Petroleum Activity in this EP, there are one native title claims or determinations, overlapping the EMBA and 14 that are coastally adjacent. Table 4-17 lists these; however, it does not differentiate between claims and determinations, as it is acknowledged that rights and interest may exist within either of these.

There are no ILUAs overlapping the EMBA and 26 that are coastally adjacent (Table 4-17).

Figure 4-13 shows the relevant native title claims or determinations and ILUAs relevant to the EMBA. Further description of how Woodside considers native tile rights and interest is provided in Appendix E.

4.9.1.2 Coastally adjacent Indigenous groups

To identify cultural features and heritage values which may exist outside of a native title claim, determination and ILUA areas, Woodside considers native title claims, determinations and ILUAs coastally adjacent to the EMBA to be an instructive means of identifying potentially relevant Indigenous groups to be consulted (see Section 5.3.4).

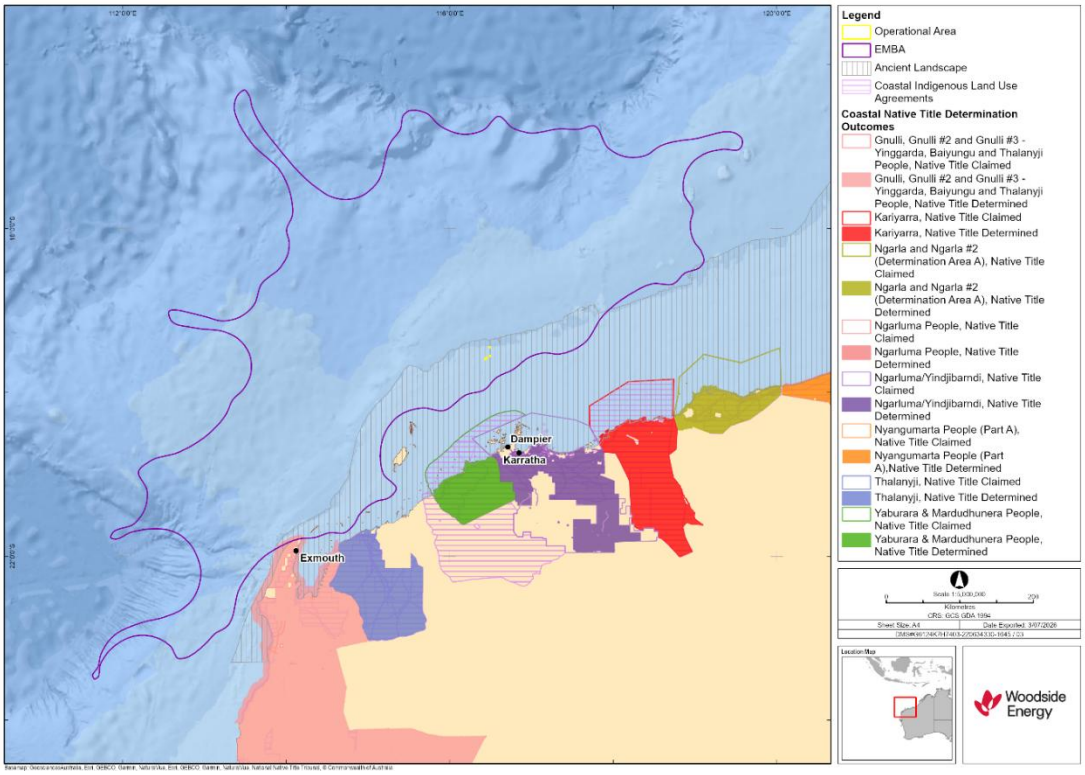


Figure 4-13: Operational area and sociocultural hydrocarbon thresholds in relation to native title claims, determinations and Indigenous Land Use Agreements

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 4-17: Summary of native title claims, determinations and Indigenous Land Use Agreements which overlap or are coastally adjacent to the EMBA

Claim, determination or ILUA	Registered Native Title Body Corporate	Overlap with EMBA	Coastally adjacent to the EMBA
Claim/Determination			
Gnulli Gnulli #2 and Gnulli #3 Yinggarda, Baiyungu and Thalanyji People	Nganhurra Thanardi Garrbu Aboriginal Corporation, Yinggarda Aboriginal Corporation	Yes	No
Karajarri People (Area A)	Karajarri Traditional Lands Association	No	Yes
Karajarri People (Area B)	Karajarri Traditional Lands Association	No	Yes
Kariyarra	Kariyarra Aboriginal Corporation	No	Yes
Ngarla and Ngarla #2 (Determination Area A)	Wanparta Aboriginal Corporation	No	Yes
Ngarla Overlap Proceeding	Wanparta Aboriginal Corporation	No	Yes
Ngarla People (Mount Goldsworthy Lease Proceeding)	Wanparta Aboriginal Corporation	No	Yes
Ngarluma People	Ngarluma Aboriginal Corporation	No	Yes
Ngarluma/Yindjibarndi	Ngarluma Aboriginal Corporation, Yindjibarndi Aboriginal Corporation	No	Yes
Nyangumarta People (Part A)	Nyamgumarta Warrarn Aboriginal Corporation	No	Yes
Nyangumarta-Karajarri Overlap Proceeding (Yawinya)	Nyangumarta Karajarri Aboriginal Corporation	No	Yes
Thalanyji	Buurabalayji Thalanyji Aboriginal Corporation	No	Yes
Yaburara & Mardudhunera People	Wirrawandi Aboriginal Corporation	No	Yes
Nhuwala Claim Group	Yamatji Marlpa Aboriginal Corporation	No	Yes
Nhuwala /Thalanyji People	Buurabalayji Thalanyji Aboriginal Corporation	No	Yes
ILUA			
Alinta-Kariyarra Electricity Infrastructure ILUA	No associated corporation	No	Yes
Anketell Port, Infrastructure Corridor and Industrial Estates Agreement	Ngarluma Aboriginal Corporation	No	Yes
Cape Preston Project Deed (YM Mardie ILUA)	Wirrawandi Aboriginal Corporation	No	Yes
Cape Preston West Export Facility	Wirrawandi Aboriginal Corporation	No	Yes
FMG - Kariyarra Land Access ILUA	No associated corporation	No	Yes

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Gingerah Energy Project ILUA	Karajarri Traditional Lands Association	No	Yes
Great Sandy Desert Project ILUA – Infrastructure	Karajarri Traditional Lands Association	No	Yes
Kariyarra and State ILUA	Kariyarra Aboriginal Corporation, Yamatji Marlpa Aboriginal Corporation	No	Yes
Karajarri Traditional Lands Association KSCS Eighty Mile Beach ILUA	Karajarri Traditional Lands Association	No	Yes
KM & YM Indigenous Land Use Agreement 2018	Robe River Kuruma Aboriginal Corporation, Wirrawandi Aboriginal Corporation, Yamatji Marlpa Aboriginal Corporation	No	Yes
Kuruma Marthudunera and Yaburara and Coastal Mardudhunera Indigenous Land Use Agreement	No associated corporation	No	Yes
Macedon ILUA	Buurabalayji Thalanyji Aboriginal Corporation	No	Yes
Nganhurra Thanardi Garrbu Aboriginal Corporation Conservation Estate ILUA	Nganhurra Thanardi Garrbu Aboriginal Corporation	No	Yes
Ngarla Pastoral ILUA	Wanparta Aboriginal Corporation	No	Yes
Ngarla PBC KSCS ILUA	Wanparta Aboriginal Corporation	No	Yes
Ningaloo Conservation Estate ILUA	Nganhurra Thanardi Garrbu Aboriginal Corporation	No	Yes
NKAC KSCS Eighty Mile Beach ILUA	Nyangumarta Karajarri Aboriginal Corporation	No	Yes
Nyangumarta Karajarri and Anna Plains Station ILUA	Nyangumarta Karajarri Aboriginal Corporation	No	Yes
Nyangumarta Karajarri and Mandora Station ILUA	Nyangumarta Karajarri Aboriginal Corporation	No	Yes
Nyangumarta PBC KSCS ILUA	Nyangumarta Warrarn Aboriginal Corporation	No	Yes
Nyangumarta Warrarn Aboriginal Corporation & Mandora Pastoral Lease ILUA	Nyangumarta Warrarn Aboriginal Corporation	No	Yes
Nyangumarta Warrarn Aboriginal Corporation & Wallal Downs Pastoral Lease ILUA	Nyangumarta Warrarn Aboriginal Corporation	No	Yes
Onslow Iron Project Haulage Road ILUA	Buurabalayji Thalanyji Aboriginal Corporation	No	Yes
RTIO Kuruma Marthudunera People ILUA	Robe River Kuruma Aboriginal Corporation	No	Yes
RTIO Ngarluma Indigenous Land Use Agreement (Body Corporate Agreement)	Ngarluma Aboriginal Corporation	No	Yes
Thalanyji and Minderoo Pastoral ILUA	Buurabalayji Thalanyji Aboriginal Corporation	No	Yes

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

4.9.1.3 Marine Parks

Woodside assesses cultural values within marine park management plans where the Operational area or EMBA overlaps a Marine Park.

Woodside considers these management plans to determine whether cultural features and heritage values have been identified, and whether there are specified Traditional Custodians or representative bodies to contact regarding potential cultural features and heritage values. The cultural features and heritage values determined to be relevant are outlined in Table 4-19.

No marine parks overlap the Operational area. However, the EMBA overlaps multiple Commonwealth and State marine parks (refer to Section 4.8). Where these plans specify identifiable representative bodies who may hold knowledge of heritage values or cultural features – including but not limited to Registered Native Title Bodies Corporate – these bodies are consulted (Section 5 and Appendix E). Consultation with these groups may identify heritage values and cultural features beyond those addressed in the marine park management plans. Identifiable representative bodies were specified for the marine parks overlapped by the EMBA (Table 4-18).

The Management Plan for the Ningaloo Marine Park and Muiron Islands Marine Management Area 2005–2015: Management Plan Number 52 (Marine Parks and Reserves Authority, 2005) (relating to the Muiron Islands Marine Management Area and Ningaloo Marine Park) notes the aesthetic values of the seascape as a cultural value and that “Panoramic vistas of turquoise lagoon waters, reefs, beaches, breaking surf and the blue open ocean beyond the reef line are major attractions of the reserves.” In particular, the plan notes that “Inappropriate structures along the coastline, on the islands and in the surrounding waters have the potential to degrade the aesthetic values of the reserves. Coastal developments and maritime infrastructure projects must therefore be planned with careful consideration of this issue.”

As the Petroleum Activity described in this EP does not include the addition of any structures within these parks, no impact on the aesthetic values of these parks is anticipated.

Table 4-18: Summary of the Operational area’ and EMBA overlap with Commonwealth and State marine park management plan areas

Marine Park Management Plan	Operational area overlap	EMBA overlap	Specified bodies
Commonwealth Marine Park Management Plan			
Montebello AMP	No	Yes	Yamatji Marlpa Aboriginal Corporation
Gascoyne AMP	No	Yes	Yamatji Marlpa Aboriginal Corporation
Ningaloo AMP	No	Yes	Nganhurra Thanardi Garrbu Aboriginal Corporation Yamatji Marlpa Aboriginal Corporation
Argo-Rowley Terrace AMP	No	Yes	No identifiable body specified
Mermaid Reef AMP	No	Yes	No identifiable body specified
State Marine Park Management Plan			
Ningaloo	No	Yes	Nganhurra Thanardi Garrbu Aboriginal Corporation
Rowley Shoals	No	Yes	No identifiable body specified
Muiron Islands Marine Management Area	No	Yes	No Identifiable Body Specified
National Park Management Plan			
Cape Range National Park	No	Yes	No Identifiable Body Specified

4.9.1.4 Indigenous protected areas

Indigenous Protected Areas are areas of land and sea managed by Indigenous groups as protected areas for conserving biodiversity through voluntary agreements with the Australian Government.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

No Indigenous Protected Areas overlap the Operational Area or EMBA.

4.9.1.5 Sea Country values

Sea Country values of marine ecosystems are further described in Woodside's Master Existing Environment document (Appendix I). An impact to marine ecosystems has the potential to impact cultural values where the impact is detectable within Sea Country. Potential impacts to these cultural values are assessed in Section 6.

Woodside initiates consultation on cultural values of Sea Country where Traditional Custodians or representative institutions are identified, or self-identify, as relevant persons.

Cultural features or heritage values related to marine species within the Operational area or EMBA raised by Traditional Custodians when preparing the EP are outlined in Table 4-20. Values identified in publicly available literature are summarised in Table 4-19.

4.9.1.5.1 Desktop assessment of Sea Country values

Publicly available sources were assessed for any records of previously identified Sea Country values or cultural features that may overlap with the EMBA or Operational area. Where cultural features or Sea Country values were identified, these are summarised in Table 4-19 according to the Indigenous groups (where identified or inferable) who hold these values.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 4-19: Cultural features and heritage values identified in publicly available literature

Indigenous group	Features and values	Source	Potential for overlap	
			Operational Area	EMBA
Gnulli (Baiyungu, Thalanyji, Yinggarda)	Feature: resources including marine animals.	FCA (2019)	Possible (unspecified)	Possible (unspecified)
	Value: Traditional Knowledge Value: Access to Country Traditional knowledge holds that ancestors live on the land and in the water. Therefore, Indigenous people have obligations to access and care for these places (e.g., keeping them clean).		Possible (unspecified) No access restrictions beyond Operational Area	Possible (unspecified) No access restrictions beyond OA
	Feature: Archaeological Sites Heritage sites in the Ningaloo region include shell middens, artefact scatters, skeletal material/burial sites, camps, meeting places, hunting places and water sources.	DBCA (2020)	No	Unlikely (Shoreline accumulation only)
	Feature: resources including gajalbu (emu), • Bundgurdi (kangaroo) • Bardurra (bush turkey) • Majun (marine turtles) • Turtle eggs • Bundgurdi (kangaroo), • Fish • Shellfish • Plants		Possible (marine turtles, fish, shellfish) No (all other values)	Possible (marine turtles, fish, shellfish) No (all other values)
	Feature: resources including Mangrove crabs	Morse (1993)	No (mangrove crabs)	Possible (all)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Indigenous group	Features and values	Source	Potential for overlap	
			Operational Area	EMBA
	Gastropods Shellfish Turtle		Possible (all other values)	
Kariyarra	Value: traditional knowledge recalls that a salt water serpent lives in the sea and brings fish to shore.	Zaunmayr (2016)	Possible (unspecified)	Possible (unspecified)
Murujuga Aboriginal Corporation representing Ngarda-Ngarli people (Mardudhunera, Ngarluma, Wong-Goo-Tt-Oo, Yaburara and Yindjibarndi) (MAC)	Value: Mermaid Sound Value: Murujuga (Dampier Peninsula) "all living things in Mermaid Sound are connected and important…Mermaid Sound and Dampier Archipelago (Murujuga) is considered one place where the entire environment and all ecosystems hold both cultural and environmental value".	Woodside (2023)	No	No
	The following fauna, communities and habitats were identified as being culturally important: • Dolphins • Whales, and particularly Humpback whales • Dugongs • Fish • Sea snakes • Turtles • Squid • Corals • Seagrass • Mangroves		No (Fish, Dolphins, Whales, turtles, sea snakes) No (all other values)	Possible (all)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Indigenous group	Features and values	Source	Potential for overlap	
			Operational Area	EMBA
	• Microalgal communities • Subtidal soft-bottom communities • Intertidal sand and mudflat communities • Rocky shores			
Ngarluma	Value: Manggan (creative beings) used supernatural force to shape the hills, rivers, seas and landforms.		Possible (unspecified)	Possible (unspecified)
Ngarluma and Yindjibarndi	Value: Creation Spirits "In our Law it is said that in the beginning the sky was very low. When the creation spirits got up from the ground, they lifted the sky and the world out of the sea"	Rijavec (2004)	Possible (unspecified)	Possible (unspecified)
	Value: Submerged Landscape "sea as an inseparable extension of the land"	Ward et al. (2022)	Possible	Possible
	Value: Songlines Features: Rock Art …the well-known Seven Sisters Dreaming story traces a songline that originates on one of the Dampier Archipelago's islands and finishes at the Three Sisters in NSW's Blue Mountains.	Australian Broadcasting Corporation (2017)	Possible (unspecified) No	Possible (unspecified) Possible (submerged)
	Value Mackerel Islands Value: Songlines		No	Possible
	Value: Built heritage		No	No
	Value: Sea Country Value: Rights and responsibilities over sea country "Sea country is valued for Indigenous cultural identity, health and wellbeing."	Australian Marine Parks (2018)	Possible	Possible
	Value: Songlines		Possible (unspecified)	Possible (unspecified)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Indigenous group	Features and values	Source	Potential for overlap	
			Operational Area	EMBA
	It is recognised that spiritual corridors extend from terrestrial areas into nearshore and offshore waters, a number of marine animals are totems for Indigenous people, and that songlines pass through marine parks.			
	Feature: Submerged Fish Traps …evidence from Traditional Owners that submerged fish traps are present along drowned waterways throughout the archipelago.	Leach (2021)	No	Possible (submerged)
	Value: Archaeological sites Feature: Shell midden sites on coast		No	Possible (submerged)
	Value: Barrow Island and Montebello Islands Feature: Submerged Archaeological Sites	Dortch et al. (2019)	No	Possible (submerged)
	Value: Murujuga Cultural Landscape		No	Possible
	Value: Archaeological Sites/ Material Feature: Cape Range and Montebello Islands *...rock art, shell middens, tools, stone artefacts that continue to demonstrate the use of the islands well before the inundation of the last Ice Age.*	McDonald et al. 2022	No	Possible (submerged)
Nyangumarta and Karajarri	Feature: Resources including Pirrala (Threadfin Salmon), Ulu (Bluebone Groper), Yilany (Mangrove Jack), Wangkaja (Mudcrab), Janga (Oyster) and Riji/Jakuli (Pearl Shell)	Karajarri Traditional Lands Association (2014)	Unlikely (Species found in shallower waters)	Possible (all)
	Feature: Saltwater habitats, including ▪ Wintirri (sandy beaches, dunes and cliffs), ▪ Wangku (rocky headlands), ▪ Puntu (intertidal mudflats/freshwater seepages),		Possible (deep sea only)	Possible (reef, sandy beaches and deep sea only)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Indigenous group	Features and values	Source	Potential for overlap	
			Operational Area	EMBA
	▪ Parnany (reefs) and ▪ Wankurru (deep sea)			
	Value: management of access to coastal areas prevents degradation to landscapes, cultural sites and biodiversity values		No	Possible (unspecified)
	Value: Caring for Country including maintaining cultural sites in coastal and inland areas		Unlikely	Possible (unspecified)
	Value: Areas of Parnany (reef), Wirntirri (sea grass) and Wurrja (seaweed) along the Karajarri coastline		No	No (location specific)
	Value: Fish traps and middens along the Karajarri coast		No	No (location specific)
	Value: Connection to Country and Sea Country (responsibility to look after, the sea and coastline within the claim area)	FCA (2000)	Possible (unspecified)	Possible (unspecified)
	Feature/Value: 'The Pukarrikarrajanka Dreaming', and spiritual beings continue to inhabit specific places including area Eighty Mile Beach Marine Park.	Department of Parks and Wildlife (2014)	No	Unlikely (location specific)
	Features: Reefs, coastal creeks, mangroves and intertidal flats Fish traps and shell middens		No (all)	Possible (all)
	Value: Stories, Songlines and sites are embedded within the Eighty Mile Beach and Cape Keraudren areas		No	No
	Value: Cultural obligation to protect and educate visitors on Eighty Mile Beach		No	No
	Feature/Value: Resource collection at thalu sites. Eighty Mile Beach contains important cultural sites including special sites known as 'increase sites'		No	No
	Value: Customary use of the area includes camping, nature appreciation, fishing, hunting and other harvesting activities.		No	Possible
	Fish [hunting]		Unlikely due to distance to OA	Possible

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Indigenous group	Features and values	Source	Potential for overlap	
			Operational Area	EMBA
	Turtle [hunting]			
	Interest: Water		Yes	Yes
	Feature: Archaeological sites at Eighty Mile Beach	Yu (1999)	No	No
	Value: Strong spiritual relationship to water; connection to Sea Country		No	Possible
	Value: Dreamtime stories associated with water sources and their significance		Unlikely	Possible (unspecified)
	Feature: Coast old shell middens, fish traps and fishing.	Weir (2011)	No	Poss Possible (fish traps/ fishing)
	Value: two rocks (unspecified) on the coast associated with cultural stories and lessons about tide and reef safety.	Yamatji Marlpa Aboriginal Corporation (2016)	Unlikely	Possible (unspecified)
	Feature: Eighty Mile Beach important place for the movement of the Karajarri people in the claim area including coastal areas for ritual and economic purposes.	WC08/4 (2009)	No	No
	Value: Eighty Mile Beach (strong connection to the place and surrounding waters)	Nyangumarta Warrarn Aboriginal Corporation and Yamatji Marlpa Aboriginal Corporation (2022)	No	Yes
	Feature: The coastline dotted with sites of special significance; several of these sites are associated with The Dreaming (Pukarrikarra).		No	Possible
	Value: Nyangumarta population live by the sea and use it for cultural and recreational purposes - fresh fish such as whiskered salmon, black tipped reef shark, saw fish, stingrays and oysters.		Unlikely due to distance	Possible
Nyangumarta, Karajarri and Ngarla	Value/s: ▪ Turtles ▪ Saltwater Fish ▪ Dugong ▪ Crabs ▪ Oysters	Director of National Parks (2018)	No (dugong) Possible (all other values)	Possible (all values)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Indigenous group	Features and values	Source	Potential for overlap	
			Operational Area	EMBA
	Value/s: Sea Country is culturally significant and important to their identity.		Possible (unspecified)	Possible (unspecified)
Nhuwala Claim Group	Values: *1. Hunting, gathering and fishing in the area;* *2. Moving about, living, residing, erecting temporary shelters and camping on and within the area;* *3. Conducting and engaging in cultural activities, rituals, teaching and meetings on and within the area;* *4. Visiting, maintaining and protecting places of importance within the area;* *5. Being accompanied onto the area by others;* *6. Maintaining and protecting significant objects located within the area;* *7. Taking resources from the area, including fauna, flora, soil, sand, stone, flint, clay, gravel, ochre and water;* *8. Using the resources of the area for food, shelter, cultural, religious, ceremonial, ritual, healing and decorative purposes and for the manufacture of items including tools, weapons and clothing;* *9. Trading in the resources of the area and goods manufactured using those traditional resources.*	NNTT (2025)	No (based on Claim area)	No (based on Claim area)
Unspecified	Feature: the ocean can include sacred sites and Songlines.	Smyth (2008)	Possible (unspecified)	Possible (unspecified)
	Value: people have kin relationships to important animals, plants tides and currents.		Possible (unspecified)	Possible (unspecified)
	Feature: archaeological sites in submerged landscapes.	Crabtree et al. (2021)	Possible	Possible
	Value: Sea Country has customary law defining ownership and management rights and responsibilities.	Muller (2008)	Possible (unspecified)	Possible (unspecified)
	Value: knowledge of Sea Country	Kearney et al (2023)	Possible (unspecified)	Possible (unspecified)
	Value: connection to Sea Country		Possible (unspecified)	Possible (unspecified)
	Value: care for Sea Country		Possible (unspecified)	Possible (unspecified)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Indigenous group	Features and values	Source	Potential for overlap	
			Operational Area	EMBA
	Value: the extent of Sea Country is determined by the travels of dreaming ancestors. This is recorded and conveyed through songlines.		Possible (unspecified)	Possible (unspecified)
	Feature; archaeological sites indicate that islands were occupied prior to sea level rise.	DBCA (2020)	Possible	Possible (submerged)
	Value: Sea Country includes values, places, resources, stories and cultural obligations.	Smyth (2007)	Possible (unspecified)	Possible (unspecified)
	Value: activities relating to resources included: ▪ dugong hunting (1) ▪ turtle hunting (2) ▪ turtle egg collecting (3) ▪ seabird egg collecting (4) ▪ spearing fish (5) ▪ reef trapping fish (6) ▪ herding fish (7) ▪ line fishing (8) ▪ collecting fish in stone fish traps (9) ▪ poisoning fish (10) ▪ gathering shellfish and other marine resources (11)		Unlikely (Due to distance to OA)	Possible (activities and fauna present)
	Value: people have kinship relationships with every plant and animal.	Juluwarlu Aboriginal Corporation (2004)	Possible (unspecified)	Possible (unspecified)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Indigenous group	Features and values	Source	Potential for overlap	
			Operational Area	EMBA
	Value: certain species, including fish and seafood, must not be eaten during initiation rituals due to their sacredness to the creation being Barrimirndi. Breaking this law may lead to cyclones.		Unlikely (activities and fauna present but not consumed)	Possible (activities and fauna present)
	Feature: tangible and intangible heritage.	Macfarlane and McConnell (2017)	Possible (submerged)	Possible (submerged)
	Feature: archaeological evidence of varied occupation and adaptation.		Possible (submerged)	Possible (submerged)
	Value: a distinct way of life centred around the use of limited water and coastal resources.		Possible (unspecified)	Possible (unspecified)
	Feature: Potential for UCH in bonaparte basin (Kimberly and Arnhem Land)	Norman et al. (2024)	No	No
	Value: Sea Country The terms 'Sea Country' or 'Saltwater Country' refer to coastal, island and marine environments that together make up the traditional estates of maritime Indigenous groups in Australia (Smyth 1997): The ocean, or saltwater country, is not additional to a clan estate on land, it is inseparable from it. As on land, saltwater country contains evidence of the Dreamtime events by which all geographic features, animals, plants and people were created. It contains sacred sites, often related to these creation events, and it contains tracks, or Songlines along which mythological beings travelled during the Dreamtime or creation period. The sea, like the land, is integral to the identity of each clan, and clan members have a kin relationship to the important marine animals, plants, tides and currents.	Dermot (2008)	Yes	Yes
	Value: Responsibility for managing Sea Country	Australian Marine Parks (2018)	Possible (unspecified)	Possible (unspecified)
	Value: Management of Sea Country Aboriginal people of north-western Australia have been sustainably using and managing their sea country for tens of thousands of years, in some cases since before rising sea levels created these marine environments.		Possible (unspecified)	Possible (unspecified)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Indigenous group	Features and values	Source	Potential for overlap	
			Operational Area	EMBA
	Value: Traditional Fishing and Hunting Fishing, hunting and the maintenance of culture and heritage through ritual, stories and traditional knowledge continue as important uses of nearshore and adjacent areas.		No	Possible (unspecified)
	Value: Sea Country		Yes	Yes
	Value: Totemic Species		Possible (unspecified)	Possible (unspecified)
	Value: Access to Sea Country Value: Marine resources Value: Rights to hunt, fish and gather Three native title determinations have been made over sea country within the Kimberley Marine Park. These determinations recognise in law that native title exists over sea country and preserve continuing rights to access sea country to hunt, fish, gather and use the resources of the waters for personal, domestic, communal, cultural and spiritual needs.		Unlikely (unspecified)	Unlikely (unspecified)
	Value: Ashmore Reef Traditional Indonesian fishers have also visited and used the northern coast of Australia and its islands and reefs since at least the early eighteenth century. Evidence of this, for example grave sites, is found within the Ashmore Reef Marine Park.		No	No

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

4.9.1.5.2 Indigenous archaeological heritage assessment

Indigenous archaeological heritage in relation to the NWMR is described in Woodside's Master Existing Environment document (Appendix I).

The Department of Planning, Lands and Heritage Aboriginal Heritage Inquiry system was searched, which showed one Registered Aboriginal Sites and no Lodged Aboriginal Sites for the EMBA (Appendix E). The exact location, access and traditional practices for some of these sites may not be disclosed and if required, such as in the event of a major oil spill, would involve prioritising further consultation with key contacts within Department of Planning, Lands and Heritage and relevant local Indigenous communities.

4.9.1.5.3 Submerged cultural heritage values

More information about Indigenous archaeological heritage in relation to the Ancient Landscape in the NWMR is described in Woodside's Master Existing Environment (Appendix I).

An assessment of the potential impacts on archaeological material by the proposed activity is discussed in Sections 6.6.2 and 6.9.

4.9.1.5.4 Feedback received via consultation to inform Existing Environment Description

Indigenous Peoples cultural values are communally held. This is reflected in Vision 3 of Dhawura Ngilan that 'Aboriginal and Torres Strait Islander heritage is managed…according to community ownership' (Heritage Chairs of Australia and New Zealand., 2020). Dhawura Ngilan also specifically notes that 'Aboriginal and Torres Strait Islander…intangible knowledge systems, which are held in songlines and language, are endangered. This knowledge is held by Elders and the community…' Through consultation with relevant persons, Registered Native Title Bodies Corporate have identified or raised topics relating to environmental values of cultural interest. These include a broad interest in the marine fauna, including whales and turtles Appendix E.

During consultation, BTAC advised it has a cultural obligation to care for the environmental values of Sea Country. During consultation specific to another Woodside EP, BTAC raised the importance of archaeological sites on nearshore islands. Given the EMBA for this activity extends to nearshore areas coastally adjacent to BTAC native title lands, these values may be relevant in the event of an unplanned hydrocarbon spill.

Feedback received on potential cultural features and heritage values during consultation are described in Table 4-20.

Woodside has committed to ongoing engagement to further understand these values. Should feedback be received (including any relevant new information on cultural values), it will be assessed and, where appropriate, Woodside will apply its management of change (MOC) and revision process (refer to Section 7.8).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 4-20: Summary of feedback received via consultation to describe the existing environment

Relevant Indigenous group / individuals	Consultation context	Description of value / feature / interest	Potential for overlap	
			Operational Area	EMBA
Buurabalayji Thalanyji Aboriginal Corporation	Raised during the course of consultation for another EP	Value: Connection to Sea Country *Enduring deep connection to sea country north of Onslow, extending out to Islands off the Pilbara coast such as the Montebello islands, Barrow Island and the Mackerel Islands*	Possible (unspecified)	Possible (unspecified)
Karajarri Traditional Lands Association	Consultation for this EP	*No values raised*	-	-
Kariyarra Aboriginal Corporation	Raised during the course of consultation for another EP	Value: Turtles	Possible	Possible
		Value: Access to Sea Country (1) Accessing Sea Country for fishing, trapping, crabbing catching turtle, hunting dugong, using stingray barbs for spears and collecting shellfish. (2) Visiting offshore islands at low tide	No (all)	Possible (all)
		Value: Marine species resources Resource species of cultural interest to Kariyarra people include marine mammals, fish, molloscs including bivalves, gastropods and cephalopods.	Possible	Possible
		Value: The existence of intangible cultural heritage including the Yinta (associated with Sea Country). *Yinta are significant cultural/spiritual sites, often a pool or water source but possibly a hill or other feature. These are, at least generally, associated with creation beings and are a core part of cultural rights to land in determining who can use or speak for an area.*	Possible (unspecified)	Possible (unspecified)
		Interest: Coastal Landforms (Cultural interest)	No	Possible
		Interest: Coastal Native Vegetation (Cultural interest)	No	Possible
		Feature: Cultural interest in cultural heritage sites associated with the coast and the ocean.	Possible (unspecified)	Possible (unspecified)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Relevant Indigenous group / individuals	Consultation context	Description of value / feature / interest	Potential for overlap	
			Operational Area	EMBA
		Value: Traditional fishing and gathering rights in the ocean	Possible (unspecified)	Possible (unspecified)
		Value: Cultural interest in intangible cultural heritage associated with the coast and the ocean. (1) Presence of mythic snakes	Possible (unspecified)	Possible (unspecified)
		Value: Intergenerational Knowledge *In addition to their immediate value as sustenance, the gathering and preparation of these resources are informed by cultural knowledge, and an inability to use these resources may result in a loss of ability to transfer that knowledge to future generations. Direct impact to communities using these resources will inherently occur when the resource disappears, is displaced or suffers a reduction in population. Therefore, these communities may be impacted where there is an impact at the species/population level. Impacts to resource collection would be limited to temporary exclusion in areas where there are hydrocarbons present, including shoreline accumulation. Relevant cultural authorities will be engaged in the event of a spill that may affect them...*	Possible (unspecified)	Possible (unspecified)
		Value: Cultural obligations to care for Country, including Sea Country. Value: Secret Habitat Totems associated with Sea Country	Possible (unspecified)	Possible (unspecified)
		Interest: Assertion of sea rights in native title claim area Interpreted as general connection to country, assertion of rights to access country and cultural obligation to care for environmental values of sea country (1) Having duties to look after and protect all KACs Sea Country.	No (based on distance to NT determined area)	Possible
		Value: Marine resources Concern raised about the potential for diseases due to adverse event [hydrocarbon spill]	Possible (unspecified)	Possible (unspecified)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Relevant Indigenous group / individuals	Consultation context	Description of value / feature / interest	Potential for overlap	
			Operational Area	EMBA
		Value: Responsibility to care for Sea Country Value Marine Resources *the most important thing is the preservation of sea life and coastal areas. The ocean provides critical food sources to their community and Kariyarra Traditional Owners are coastal people so they have a strong connection to the area and a responsibility to preserve the area for future generations.*	Possible (unspecified)	Possible (unspecified)
		Value: Nearshore Islands Islands off Port Hedland - Little Turtle, North turtle and Bedout	No (location specific)	No (location specific)
	Consultation for this EP	Value: River systems are important to the food chain.	No	No
		Value: Marine Resources: ▪ Shellfish ▪ Cockles ▪ Oysters ▪ Clam shells, ▪ Concha shells (Nanku) ▪ Mullets	Possible (all)	Possible (all)
		▪ Sea cow (dugong)	No	
Murujuga Aboriginal Corporation	Raised during the course of consultation for another EP	Value: Mermaid Sound (1) The ecosystem health of Mermaid Sound	No	No
		Value: Whales (1) Whales and other species of totemic importance need to be protected, including their populations, biodiversity, and migration patterns. (2) A whale Thalu is an increase at the totemic site that brings whales into the beach.	Possible (all)	Possible (all)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Relevant Indigenous group / individuals	Consultation context	Description of value / feature / interest	Potential for overlap	
			Operational Area	EMBA
		Value: Dolphins There are cultural ceremonies associated with communicating with dolphins	Possible	Possible
		Value: Dugongs Dugongs are a food source associated with seagrasses near Gidley Island	No	Possible
		Value: Fish Specific mentions of fish included There are Thalu ceremonies associated with increasing fish stocks	Possible	Possible
		Value: Sea Snakes Sea snakes were specifically mentioned as culturally important species	Possible	Possible
		Value: Turtles (1) Flatback, green, hawksbill, loggerhead and leatherback turtles; Songline The Songline associated with the turtle comes from Fortescue to Withnell Bay. This song is sung by four or five tribes for day and night without consuming food or water. (2) Flatback, green, hawksbill, loggerhead and leatherback turtles: They are culturally important species that moves through Mermaid Sound. Turtles are most often seen in shallower areas and where there are seagrasses. (3) Most beaches are nesting sites for turtles, including those on Gidley and Legendre Islands... which also identifies Rosemary Island as the most important hawksbill turtle nesting site in Western Australia.	Possible (turtles) No (1,2,3)	Possible (turtles, 3) No (1,2)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Relevant Indigenous group / individuals	Consultation context	Description of value / feature / interest	Potential for overlap	
			Operational Area	EMBA
		Feature: Coral *Concerned about coral bleaching because corals are important. Beautiful colours. They also attract a lot of other things.* *Fish carry coral spawn like bees pollinate flowers. If fish were looked after, the corals would get brighter and brighter (by transmitting nutrients and performing other ecosystem services, fish can be symbiotic with corals).* Locations identified during consultation include Withnell Bay; Conzinc Bay; south west of Legendre Island.	No	Possible (specific locations not possible)
		Feature: Seagrass (1) Seagrasses provide protection for animals. (2) Locations identified during consultation include Conzinc Island; between Angel and Gidley Islands.	No	Possible (specific locations not possible)
		Feature: Mangroves (1) Mangroves would have provided shelter, crabbing, digging for shellfish, could be turtle nurseries. Locations identified during consultation include Conzinc Bay north end; Flying Foam Passage; Searipple Passage; north-east bay of West Lewis Island.	No	Possible (specific locations not possible)
		Feature: Macroalgal communities Are important primary production sites, habitats, and food sources (not explicitly identified by elders).	No	Possible
		Feature: Subtidal soft-bottom communities Support invertebrate diversity (not explicitly identified by elders).	No	Possible

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Relevant Indigenous group / individuals	Consultation context	Description of value / feature / interest	Potential for overlap	
			Operational Area	EMBA
		Feature: Intertidal sand and mudflat communities Important primary production sites, support invertebrate diversity and provide food for shorebirds (not explicitly identified by elders).	No	Possible
		Feature: Rocky shores Habitats for intertidal organisms and provide food for shorebirds (not explicitly identified by elders).	No	Possible
		Feature: Other areas of Mermaid Sound of importance (including Conzinc Bay) (1) Fish traps: There are known fish traps in Conzinc Bay, and others would have or do exist in coastal areas of islands, such as Angel and Gidley Islands. People still use the Conzinc Bay fish traps regularly for catching mangrove jack, trevally and other fish.	No	No
		Value: Squid (1) Squidding (harvesting of squid from the ocean) around Conzinc Bay	No (based on specific location)	No (based on specific location)
		Value: Appropriate cultural authority for Murujuga.	No	Possible
		Interest: Management of onshore heritage sites	No	No
		Interest: Submerged Heritage Engage with researchers on options to identify potential submerged heritage.	Possible	Possible
		Value: Songlines The potential impact on Jinna (Songlines) due to the lack of broader-scale bathymetric information for the submerged landscape	Possible (unspecified)	Possible (unspecified)
		Value/s: Stingrays	Possible	Possible
		Value/s: Sharks	Possible	Possible
		Value/s: Crustaceans	Possible	Possible
		Value/s: Octopus	Possible	Possible

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Relevant Indigenous group / individuals	Consultation context	Description of value / feature / interest	Potential for overlap	
			Operational Area	EMBA
		Value/s: Sea stars	Possible	Possible
		Value/s: Sea urchins	Possible	Possible
		Value/s: Sponges	Possible	Possible
		Value/s: Molluscs	Possible	Possible
		Value/s: Submerged Landscape *Potential impact to Aboriginal heritage, due to the submerged coastline at initial occupation of the region, landscape features that would have defined the first travel routes used to move through Country.*	Possible	Possible
		Murujuga seasonal calendar: *Any change to the feeding, breeding or migratory behaviour of culturally significant species would impact significantly on subsistence, cultural and ceremonial activities.*	Possible (unspecified)	Possible (unspecified)
	Consultation for this EP	Value: Marine Ecosystems and Species *The deviation of marine mammal migration paths, for example may have no significant impact environmentally, but must also consider the sighting of whales at a particular point in the landscape/seascape as part of a seasonal calendar that triggers the end of one season and the beginning of another. The alteration of species abundance due to impact to marine ecosystems or adjusting the preferential conditions for certain species may have significant impact on the normal ceremonial, social and subsistence activities of traditional owners and custodians*	Likely	Likely
Nganhurra Thanardi Garrbu Aboriginal Corporation representing Baiyungu and Thalanyji people	Raised during the course of consultation for another EP	Value: Whales and Whale Sharks	Possible	Possible
		Feature: Marine parks	No	Possible
Ngarluma Aboriginal Corporation	Raised during the course of consultation for another EP	Interest: Management of onshore heritage sites	No	No
		Interest: Submerged Heritage	Possible	Possible
Nhuwala Claim Group	Consultation for this EP	No values raised	-	-

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Relevant Indigenous group / individuals	Consultation context	Description of value / feature / interest	Potential for overlap	
			Operational Area	EMBA
Nhuwala /Thalanyji People	Consultation for this EP	No values raised	-	-
Nyangumarta Karajarri Aboriginal Corporation	Consultation for this EP	No values raised	-	-
Nyangumarta Warrarn Aboriginal Corporation	Consultation for this EP	Value: Eighty Mile Beach Priority is to protect Eighty Mile Beach due to its cultural and ecological value to the Nyangumarta Custodians.	No	No
		Value: Migrating Birds	Possible	Possible
		Value: Whales	Possible	Possible
		Value: Turtles	Possible	Possible
Robe River Kuruma Aboriginal Corporation	Raised during the course of consultation for another EP	Feature: Coastline	No	Possible
		Feature: Underwater heritage	Unlikely	Possible
Wanparta Aboriginal Corporation	Raised during the course of consultation for another EP	Value: Connection to Sea Country *The Ngarla People have a deep spiritual connection to Sea Country*	Possible	Possible
		Feature: Nearshore Islands (particularly Solitary Island/ Jarrkunpungu) Value: Intangible Cultural Heritage (Dreaming Stories) *(1) Wanparta stated that they are linked to the dreaming stories through the interconnecting islands*	No (all)	Possible (all)
		Value: Cultural Obligation to look after Sea Country Values *Extremely important to Ngarla people, and they feel a responsibility to look after the ocean and lore.*	Possible (unspecified)	Possible (unspecified)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Relevant Indigenous group / individuals	Consultation context	Description of value / feature / interest	Potential for overlap	
			Operational Area	EMBA
		Feature: Sea (Fresh and Salt Water) Value: Intangible Cultural Heritage (Dreaming Stories) *Comments that we are a sea people connected through both fresh and salt water with Dreamtime stories that do connect through the sea.*	Possible	Possible
		Feature: Sea (Ocean/Water) *(1) Wanparta noted that they feel a sense of responsibility to keep looking after the ocean. They noted that they are very connected to the health of the ocean, they have a sense of responsibility to look after the ocean (Law and culture). If impacted, this would impact future generations and how Law is practiced*	Possible (all)	Possible (all)
		Value: Marine Species The emblems and totems reflected on the Wanparta Aboriginal Corporation logo. The animals depicted on the logo are totemic species and include the (1) Kestrel, (2) Octopus, (3) Spiny Brim and (4) Sting Ray.	No (1) Possible (all other values)	No (1) Possible (all other values)
		Value: Sea life health Wanparta noted that water and sea life is important to the Ngarla people. It was said that a healthy marine life = an important food source = healthy people	Possible (unspecified)	Possible (unspecified)
		Value: Fish Wanparta are concerned with maintaining fish stock post operations.	Possible	Possible
		Value: Ethnohistorical evidence on islands Wanparta noted that there is ethnohistorical evidence of Ngarla occupation on islands.	Possible (unspecified)	Possible (unspecified)
	Consultation for this EP	Value/s: Coastline The coastline is extremely important to Ngarla, both from a spiritual perspective and as a way of living	No	Possible

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Relevant Indigenous group / individuals	Consultation context	Description of value / feature / interest	Potential for overlap	
			Operational Area	EMBA
		Value/s: Caring for Sea Country *The best way to protect Ngarla country and work with Wanparta is to engage the Ngarla rangers* *Ngarla are responsible for caring for now and into the future* *By caring for Ngarla country, the spirits look after the Ngarla People.*	Possible (unspecified)	Possible (unspecified)
Wirrawandi Aboriginal Corporation	Raised during the course of consultation for another EP	Value: Whales (General interest around management of impacts to whales)	Possible	Possible
		Value: Turtles (General interest around management) Wirrawandi asked whether turtle monitoring programs are still in place	Possible	Possible
		Feature: Rock art Wirrawandi asked whether air emissions from activities impacts rock art & what Woodside does to minimise impacts to rock art. Wirrawandi also asked for more community information on rock art.	No	Possible
		Interest: Submerged heritage *(1) Wirrawandi asked where sites of underwater heritage have been recently found* *(2) Wirrawandi asked about impacts to the seabed from planned activities, and what is considered in relation to submerged cultural heritage, particularly given the recent finding of artefacts.*	Possible	Possible
Wong-Goo-Tt-Oo	Consultation for this EP	*No values raised*	-	-
Yindjibarndi Aboriginal Corporation	Consultation for this EP	*No values raised*	-	-
Yinggarda Aboriginal Corporation	Raised during the course of consultation for another EP	Value: Turtles	Possible	Possible
		Value: Whales	Possible	Possible
		Value: Coastal Fishing Local communities enjoy fishing along the coast, including for (1) Shark Bay Mullet that is an important resource.	No	Unlikely (based on location)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Relevant Indigenous group / individuals	Consultation context	Description of value / feature / interest	Potential for overlap	
			Operational Area	EMBA
		Value: Ecosystem Health Plants, animals and the environment are inexorably linked to their culture	Likely	Likely
		Value: Dugongs	No	Possible
		Feature: Seagrass Important food source for dugongs (Shark Bay)	No	Possible
		Value: Whales 1) potential impact to migration patterns of whales; (2) and potential collisions with vessels	Possible	Possible
Native Title Representative Bodies				
Yamatji Marlpa Aboriginal Corporation	Consultation for this EP	*No values raised*	-	-
Kimberly Land Council	Consultation for this EP	*No values raised*	-	-
Self-identified Indigenous Groups				
Ngarluma Yindjibarndi Foundation Ltd (NYFL)	Consultation for this EP	*No values raised*	-	-
Other Indigenous Groups				
Save Our Songlines (SOS)	Consultation for this EP	*No values raised*	-	-
	Raised specific to Petroleum activity Raised in context of general	Value: Songlines, dreaming and energy lines (unspecified)	Possible (unspecified)	Possible (unspecified)
		Value: Whales – including migratory patterns	Possible	Possible
		Value: Turtles – including migration patterns	Possible	Possible

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Relevant Indigenous group / individuals	Consultation context	Description of value / feature / interest	Potential for overlap	
			Operational Area	EMBA
	Scarborough Project activities	Interest: Dugongs - unspecified	No	Possible
		Interest: Plankton - unspecified	Possible	Possible
		Interest: Seagrass - unspecified	No	Possible
		Interest: where saltwater and freshwater meet	No	Possible
	Raised in Concise Statement and Affidavit[3] in context of Scarborough seismic activities	Value: Caring for Country	Possible (unspecified)	Possible (unspecified)
		Feature: Whales *"As the biggest animal on earth, the whale has the greatest heart connection to songlines, people and animals and carries the songlines around the ocean, connecting places."* *"Whale Dreaming story has a strong connection to the heart centre in each person, this story helps people to open up and to realise, understand and raise awareness of the environment and everything humans are connected to."* *"Because each animal uses songlines for migration, breeding and feeding, the disruption or distortion to the songlines causes the animals to become disoriented, confused or lost."*	Possible (whales) Possible (songlines, unspecified)	Possible (whales) Possible (songlines, unspecified)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Relevant Indigenous group / individuals	Consultation context	Description of value / feature / interest	Potential for overlap	
			Operational Area	EMBA
		Interest: Whales Interest: Pygmy Blue whales *“Potential impacts on marine species and natural environment, relevant to the natural environment, relevant to the Applicant's interests, including but not limited to* *ii. behavioural changes (leaving or avoiding the area where the Activity occurs) to turtles, pelagic fish (such as tuna and billfish), sharks, pygmy blue whales* *iii. whales' sonar communications systems, particularly between mothers and calves, from sound and vibrations emitted by the Activity* *v. potential impacts on water quality and consequent potential impacts on marine fauna such as whales, dugongs, sharks, rays, and seabirds from the risk of unplanned chemical discharges (non-hydrocarbon); and* *vi. vehicle collision and/or entanglement with marine fauna"*	Possible (whales)	Possible (whales)
		Interest: Turtles *"Other animals, such as turtles, dolphins, dugongs, and krill follow the whale's songlines, because they're all connected together - the whale creates a path for the other animals like 'grading a road'."* *“Potential impacts on marine species and natural environment, relevant to the natural environment, relevant to the Applicant's interests, including but not limited to:* *ii. behavioural changes (leaving or avoiding the area where the Activity occurs) to turtles, pelagic fish (such as tuna and billfish), sharks, pygmy blue whales* *v. potential impacts on water quality and consequent potential impacts on marine fauna such as whales, dugongs, sharks, rays, and seabirds from the risk of unplanned chemical discharges (non-hydrocarbon); and* *vi. vehicle collision and/or entanglement with marine fauna"*	Possible (turtles)	Possible (turtles)
		Interest: Dugongs *“Potential impacts on marine species and natural environment, relevant to the natural environment, relevant to the Applicant's interests, including but not limited to:* *v. potential impacts on water quality and consequent potential impacts on marine fauna such as whales, dugongs, sharks, rays, and seabirds from the risk of unplanned chemical discharges (non-hydrocarbon)”*	No (dugong)	Possible (dugong)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Relevant Indigenous group / individuals	Consultation context	Description of value / feature / interest	Potential for overlap	
			Operational Area	EMBA
		Interest: Pelagic fish *"Potential impacts on marine species and natural environment, relevant to the natural environment, relevant to the Applicant's interests, including but not limited to:* *ii. behavioural changes (leaving or avoiding the area where the Activity occurs) to turtles, pelagic fish (such as tuna and billfish), sharks, pygmy blue whales"*	Possible (fish)	Possible (fish)
		Interest: Sharks *"Potential impacts on marine species and natural environment, relevant to the natural environment, relevant to the Applicant's interests, including but not limited to:* *ii. behavioural changes (leaving or avoiding the area where the Activity occurs) to turtles, pelagic fish (such as tuna and billfish), sharks, pygmy blue whales* *v. potential impacts on water quality and consequent potential impacts on marine fauna such as whales, dugongs, sharks, rays, and seabirds from the risk of unplanned chemical discharges (non-hydrocarbon)"*	Possible (sharks)	Possible (sharks)
		Interest: Plankton *"Potential impacts on marine species and natural environment, relevant to the natural environment, relevant to the Applicant's interests, including but not limited to:* *i. chronic mortality to some marine organisms, including zooplankton*	Possible	Possible
		Interest: Water quality *"Potential impacts on marine species and natural environment, relevant to the natural environment, relevant to the Applicant's interests, including but not limited to:* *iv. potential operational discharges associated with the presence of ships in the area, including potential impacts to water quality* *v. potential impacts on water quality and consequent potential impacts on marine fauna such as whales, dugongs, sharks, rays, and seabirds from the risk of unplanned chemical discharges (non-hydrocarbon)*	Yes	Yes
		Interest: Seabirds *"Potential impacts on marine species and natural environment, relevant to the natural environment, relevant to the Applicant's interests, including but not limited to:* *v. potential impacts on water quality and consequent potential impacts on marine fauna such as whales, dugongs, sharks, rays, and seabirds from the risk of unplanned chemical discharges (non-hydrocarbon)*	Possible	Possible

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Relevant Indigenous group / individuals	Consultation context	Description of value / feature / interest	Potential for overlap	
			Operational Area	EMBA
		Interest: Where saltwater and freshwater meet *"The places where the saltwater from the sea and the freshwater from the land connect are where the biggest energy lines[5] are, and that connection is a core of creation relevant to a Dreaming story."*	No	Possible
		Value: Rock Art *"Rocks at Murujuga symbolise stories, the totems (the depicted artwork) - whether representing plants or animals - and tell a story of their history, and how long they've been there."*	No	Possible (submerged)
		Value: Bungarra, Eagle, Kangaroo *Identified totemic species*	No	No
		Feature: Murujuga Interest: Climate Change *Potential damage to Murujuga rock art due to "acid gas emissions from operations on the Burrup" and climate change.*	No (Murujuga)	No (Murujuga)

[5] *Although Save our Songlines referred to and described Energy Lines, these are understood to be the same as songlines and this document therefore refers to songlines*

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

4.9.1.6 Summary of cultural features and heritage values

Woodside has developed a robust understanding of cultural features and heritage values relevant to the Petroleum Activity through examination of publicly available information, studies and consultation with relevant persons under section 25 of the Environment Regulations.

The cultural features and heritage values identified in Sections 4.9.1.1 to 4.9.1.7 confirm whether there is any potential for these to exist within the Operational area or EMBA. As previously described, topics that have been raised in the context of an interest linked to the natural environment are impact and risk assessed in Sections 6.6 and 6.7. Assessment of heritage values beyond environmental value is addressed in Section 6.9.

Cultural features and heritage values identified through both consultation and desktop assessment are summarised in Table 4-21.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 4-21: Summary of cultural features and heritage values

Identified cultural features and heritage values	Context	EP source		Potential for overlap	
		Consultation feedback	Desktop literature assessment	Operational Area	EMBA
Archaeological heritage and landscapes					
Coastal/ island archaeological sites	Coastal archaeological sites include shell middens, artefact scatters, skeletal material/burial sites, camps, meeting places, hunting places and water sources.	✓	✓	No	Possible (shoreline accumulation areas)
Petroglyphs	Petroglyphs are a form of rock art. Petroglyphs are a prominent feature particularly at Murujuga where it is found on hard, volcanic rock.	✓	x	Possible (submerged)	Possible
Fish traps	Stone arrangements constructed in intertidal areas which fill with fish at high tide and trap them at low tide	✓	✓	Possible (submerged)	Possible
Submerged archaeological sites	The Ancient Landscape extends between 12 m and 130 m below current sea level. Ancient occupation of this area may have left traces through now submerged archaeological sites.	✓	✓	Possible	Possible
Rivers, waterholes, tidal channels and seeps	Water sources on the Ancient Landscape which may be culturally significant or archeologically prospective. Traditional knowledge retains knowledge of some water sources on the Ancient landscape and some submerged waterholes are related to a Kangaroo songline.	✓	✓	Possible	Known to occur
Submerged calcarenite ridges/ paleo beach barrier systems	Calcarenite ridges that have formed at former coastal sand dunes have the potential to encase and preserve artefacts from disturbance during inundation where these formed following human occupation.	x	✓	Possible	Known to occur

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Identified cultural features and heritage values	Context	EP source		Potential for overlap	
		Consultation feedback	Desktop literature assessment	Operational Area	EMBA
Submerged hills	Hills on the Ancient Landscape which may be culturally significant or archeologically prospective. As sea level rose these hills would have become islands and eventually submerged.	x	✓	Possible	Known to occur
Madeleine Shoals	Archaeologically prospective location on the submerged landscape, including igneous geology which has the potential to include rock art.	x	x	No	Known to occur
Karst depressions/ Ravines and valleys between submerged ridges	Natural depressions with the potential to contain artefacts displaced during inundation.	x	x	Possible	Possible
Intangible values					
Songlines	Publicly available literature has noted songlines continue beyond the coast and across the submerged landscape	✓	✓	Possible (unspecified)	Possible (unspecified)
Creation / dreaming sites, sacred sites and ancestral beings	Publicly available literature talks to creation/dreaming and ancestral beings, including water serpents, connected to or originating from the sea generally.	✓	✓	Possible (unspecified)	Possible (unspecified)
Ceremonial sites	Places where ceremony (e.g. Thalu ceremonies) are performed. All identified ceremonial sites are located onshore.	✓	✓	No	Possible (unspecified)
Cultural obligations to care for Country	Cultural obligation to care for the environmental values of Sea Country. Exclusion of Traditional Custodians from Sea Country or decision making processes may inhibit ability to care for Country.	✓	✓	Possible (unspecified)	Possible (unspecified)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Identified cultural features and heritage values	Context	EP source		Potential for overlap	
		Consultation feedback	Desktop literature assessment	Operational Area	EMBA
Knowledge of Country / customary law and transfer of knowledge	The preservation and transmission of knowledge is dependent on the preservation of the environment generally. Exclusion of Traditional Custodians from Sea Country may inhibit the transfer of knowledge.	✓	✓	Possible (unspecified)	Possible (unspecified)
Connection to Country	Connection to Country is described in publicly available literature as “important to the Traditional owners’ spirituality and religion”. Connection to Country may be damaged where people are displaced or disrupted (e.g. during colonisation) or where there is a loss of technical skills or environmental knowledge	✓	✓	Possible (unspecified)	Possible (unspecified)
Access to Country	Limitations on Traditional Custodians accessing or enjoying areas of Sea Country	✓	✓	Possible (unspecified)	No (no limitations on access beyond the OA)
Kinship systems and totemic species	Traditional Custodians have connection to species through kinship and totemic systems.	✓	✓	Possible (unspecified)	Possible (unspecified)
Resource collection	An individual may have obligation to care for or not consume a species to which they are kin.	✓	✓	Possible (unspecified)	Possible (unspecified)
Marine ecosystems and species					
Marine species	Generally raised in engagement with Indigneous Peoples and literature	✓	✓	Likely	Likely
Marine mammals: Whales	• Generally raised in engagement with Indigneous Peoples • Thalu species of totemic importance • Linked to songlines and dreaming stories • Humpback whales in particular	✓	✓	Possible	Possible

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Identified cultural features and heritage values	Context	EP source		Potential for overlap	
		Consultation feedback	Desktop literature assessment	Operational Area	EMBA
Marine mammals: Dolphins	Culturally important species	✓	✓	Possible	Possible
Marine mammals: Dugongs	• Culturally important species • Used as a resource	✓	✓	No	Possible
Marine reptiles: Marine turtles	• Culturally important species and migration • There are Thalu ceremonies associated with turtles • Turtles and turtle eggs as a resource	✓	✓	Possible	Possible
Marine reptiles: Sea snakes	Culturally important species	✓	✓	Possible	Possible
Fish: Fish, sharks and rays	• Culturally important species • Used as a resource • There are Thalu ceremonies associated with increasing fish stocks • Fish, including bream and sting rays are totemic species • Fish, including sharks and rays raised as a natural environment interest	✓	✓	Possible	Possible
Cephalopods: Squid and Octopus	• Thalu species of totemic importance • Resource	✓	✓	Possible	Possible
Seabirds	• Culturally important species • Birds (including shags, seagulls and osprey) and bird eggs as a resource	✓	✓	Possible	Possible
Benthic habitats: Coral	Culturally important with regard to connection to habitats and use of reefs for resources	✓	✓	No	Likely
Benthic habitats: Seagrass	• Culturally important species • Protection of animals.	✓	✓	No	Likely

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Identified cultural features and heritage values	Context	EP source		Potential for overlap	
		Consultation feedback	Desktop literature assessment	Operational Area	EMBA
Benthic habitats: Macroalgal communities	Interest only, raised as a natural environment interest.	✓	✓	Possible	Likely
Benthic habitats: Epifauna and infauna	Interest only, subtidal soft bottom communities raised as a natural environment interest.	✓	✓	Likely	Likely
Shoreline habitats: Mangroves	• Mangrove seeds as resource • Critical breeding ground for marine and terrestrial wildlife. • Mangroves would have provided shelter, crabbing, digging for shellfish, could be turtle nurseries	✓	✓	No	Possible
Shoreline habitats: Intertidal sand/ mudflat communities	Interest only, raised as a natural environment interest.	✓	✓	No	Possible
Shoreline habitats: Rocky shores	Interest only, raised as a natural environment interest.	✓	✓	No	Possible
Shorelines	Interest only, raised as a natural environment interest.	✓	✓	No	Possible
Marine Parks or Coastal Reserves	Interest and responsibility to manage	✓	✓	No	Yes

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

4.9.1.7 Historic sites of significance

Historic sites of significance and heritage value are found along foreshores of the NWMR. Heritage places are protected in WA under the *Heritage Act 2018*.

There are no sites of historic cultural heritage significance within the Operational area. Woodside's Master Existing Environment (Appendix I) describes cultural heritage sites that may be within the EMBA.

4.9.1.8 Historic underwater heritage

The protection of historic underwater heritage under Commonwealth and State legislation is described in Appendix B.

The Australasian Underwater Cultural Heritage database records all known Maritime Cultural Heritage (shipwrecks, aircraft, relics and other underwater cultural heritage) in Australian waters. The Australian National Shipwreck Database lists all known shipwrecks in Australian waters. A search of these databases indicated there are no sites within 10 km of the Operational area.

4.9.1.9 World, National and Commonwealth Heritage listed places

No listed heritage places overlap the Operational area. World, National and Commonwealth heritage places within the EMBA are identified in Table 4-22. Woodside's Master Existing Environment (Appendix I) the values and sensitivities of these places.

Table 4-22: World, National and Commonwealth Heritage listed places within the EMBA

Listed place	Distance and direction from Operational area to listed place (km)
World Heritage places	
The Ningaloo Coast	313 km south-west
National Heritage places	
The Ningaloo Coast	313 km south-west
Commonwealth Heritage places	
Ningaloo Marine Area – Commonwealth waters	339 km south-west

4.9.2 Commercial fisheries

Commonwealth and State fishery management areas are located within the Operational area and EMBA.

To identify if they have fished within and their potential to interact with the Operational area and EMBA, the most recently available five-year period of catch and effort data were used. The datasets were obtained from the Australian Bureau of Agricultural and Resource Economics and Sciences and from the WA Department of Primary Industries and Regional Development (DPIRD) FishCube. Five years was deemed an appropriate period to represent potential future fishing effort over the lifecycle of this EP.

This information was used to determine relevant fisheries for consultation who may be impacted by the proposed Petroleum Activity. Table 4-23 provides an assessment of the potential interaction and Woodside's Master Existing Environment (Appendix I) further detail on the fisheries that were identified through desk-based assessment and consultation (Section 5).

No Commonwealth managed fisheries were identified as having a potential interaction with the Petroleum Activity within the Operational area; however, three were identified as potentially interacting with the EMBA (Table 4-23). Four State managed fisheries were identified as having potential to interact with the Operational area (Figure 4-14), and 13 were identified within the EMBA (Table 4-23). Fishing tour operators were identified as having potential to interact with the Petroleum Activity in the Operational area and EMBA (Table 4-23).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 4-23: Commonwealth and State commercial fishery management areas overlapping the Operational area and EMBA

Fishery	Potential for interaction during the Petroleum Activity (x = no spatial overlap; ✓= spatial overlap; blue shading = possibility of interaction)		Description
	Operational Area	EMBA	
Commonwealth managed fisheries			
Southern Bluefin Tuna Fishery	✓	✓	The Southern Bluefin Tuna Fishery management area overlaps the EMBA and Operational area. The fishery spans the Australian Fishing Zone; however, since 1992, most Australian catch has concentrated in south-eastern Australia (Patterson, et al., 2025b). Fishing mainly occurs in the Great Australian Bight during summer months, and off the New South Wales coastline during winter months (Australian Fisheries Management Authority, 2025). Fishery Status Reports indicate there has been no fishing effort reported within the Operational Area or the EMBA in the last five years. Woodside considers there to be no potential for interaction between this fishery and the Petroleum Activity.
Western Skipjack Fishery	✓	✓	The Western Skipjack Tuna Fishery management area overlaps the Operational area and the EMBA. The fishery spans the Australian Fishing Zone west of Victoria and the Torres Strait. The fishery is not currently active, and no fishing has occurred since 2009 (Patterson & Dylewski, 2025). Woodside considers there to be no potential for interaction between this fishery and the Petroleum Activity.
Western Tuna and Billfish Fishery	✓	✓	The Western Tuna and Billfish Fishery management area overlaps the EMBA and Operational area., While most Australian catch has concentrated in south-eastern Australia and occasionally off south-western Australia and South Australia (Patterson, et al., 2025a), vessels have been in the fishery in 2024. Fishery Status Reports indicates recent activity inside the EMBA. Woodside considers it a possibility that interactions with the fishery may occur within the EMBA.
North-West Slope Trawl Fishery	×	✓	The North-West Slope Trawl Fishery management area overlaps the EMBA only. The fishery targets several scampi species, with recent catches largely dominated by Australian scampi. Between one to six vessels have been active in the fishery since 2005, with three vessels operating in the 2023–2024 season (Keller, et al., 2025a). Fishery Status Reports indicate recent activity inside the EMBA. Woodside considers it a possibility that interactions with the fishery may occur within the EMBA.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Fishery	Potential for interaction during the Petroleum Activity (x = no spatial overlap; ✓= spatial overlap; blue shading = possibility of interaction)		Description
	Operational Area	EMBA	
Western Deepwater Trawl Fishery	×	✓	The Western Deepwater Trawl Fishery management area overlaps the EMBA. Fishery Status Reports indicate recent activity inside the EMBA, with one vessel active in the 2023–24 season, and between zero and three vessels historically active within the fishery since 2005–06 (Keller, et al., 2025b). Total trawl-hours have been variable but relatively low since 2005–06. In 2023–24, 15 trawl-hours were recorded in the fishery, compared to zero hours recorded in 2022–23 and 76 trawl-hours recorded in 2021–22 (Keller, et al., 2025a). The Western Deepwater Trawl Fishery primarily targets ruby snapper (Etelis spp.) and other finfish, and historically targeted deepwater bugs (Ibacus spp.). Woodside considers it a possibility that interactions with the fishery may occur within the EMBA
State managed fisheries			
Western Australian Abalone Managed Fishery	✓	✓	The Western Australian Abalone Managed Fishery overlaps the Operational area and EMBA. Most catch associated with this fishery is concentrated around the south of Western Australia, particularly along the south coast (Strain, et al. 2024a). There has been no fishing effort reported in the EMBA in the last five years. Woodside considers there to be no potential for interaction between this fishery and the Petroleum Activity.
Mackerel Managed Fishery (Area 2)	✓	✓	The Mackerel Managed Fishery management area overlaps both the Operational area and EMBA, with catch data showing the fishery has been active in all areas. However, catch data overlapping the Operational area show there were only catches reported in the 60 NM block and not in the 10 NM block over the past five years, which reduces the likelihood that any recent activity has occurred in the Operational area. Catch data show the fishery has reported catches as recently as 2024 along the north-west coast of Western Australia and is therefore likely to be operating in the EMBA. There were 15 vessels operating in the fishery in the 2023 season, with 242 t of catch recorded, predominantly from the Kimberley region (Area 1) (Lewis & Rynvis, 2024). Woodside considers it a possibility that interactions with the fishery may occur within the Operational Area and EMBA.
Marine Aquarium Fish Managed Fishery	✓	✓	The Marine Aquarium Fish Managed Fishery overlaps the Operational area and the EMBA. This fishery is diver-based and typically restricted to relatively shallow waters (less than 30 m) (Newman, et al., 2024); therefore, it is unlikely it would be operating in the Operational area, where waters depths are over 100 m. Fishing effort has been recorded in the blocks overlapping the EMBA in the last five years, but was not reported in the Operational area. Woodside considers it a possibility that interactions with the fishery may occur within the EMBA.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Fishery	Potential for interaction during the Petroleum Activity (x = no spatial overlap; ✓= spatial overlap; blue shading = possibility of interaction)		Description
	Operational Area	EMBA	
North Coast Shark Fishery	✓	✓	The North Coast Shark Fishery management area overlaps the Operational area and EMBA; however, no catch data has been reported in either area. The last reported fishing activity from this fishery was in the 2008–2009 fishing season (Braccini & Rynvis, 2023). Woodside considers there to be no potential for interaction between this fishery and the Petroleum Activity.
Onslow Prawn Managed Fishery	✓	✓	The Onslow Prawn Managed Fishery management area overlaps the Operational area and the EMBA, with catch data reported in the EMBA in the last five years, south of the Operational area near Exmouth. The last reported catch for this fishery was in the 2023–2024 season, with relatively low catch and effort (Koeford, et al., 2024b). No fishing effort has been recorded in the Operational area in the last five years. Woodside considers it a possibility that interactions with the fishery may occur within the EMBA.
Pearl Oyster Managed Fishery	✓	✓	The Pearl Oyster Managed Fishery management area overlaps the Operational area and EMBA. Fishing effort is diver-based, mostly focused on shallow coastal waters, primarily off the coast of Eighty Mile Beach and smaller catch from the Lacepede Islands (Strain, et al., 2024b). No fishing effort has been recorded in the Operational area or EMBA in the last five years. Woodside considers there to be no potential for interaction with this fishery and the Petroleum Activity.
Pilbara Crab Managed Fishery	✓	✓	The Pilbara Crab Managed Fishery management area overlaps the Operational area and the EMBA, with catch data only reported in the EMBA. Catch data for this fishery suggests it mostly operates around Dampier and Nikol Bay. Woodside considers it a possibility that interactions with the fishery may occur within the EMBA.
Pilbara Fish Trawl (Interim) Managed Fishery	✓	✓	The Pilbara Fish Trawl (Interim) Managed Fishery management area overlaps the Operational area and the EMBA, with catch data reported in both areas. The fishery has remained consistently active in the Operational area and the EMBA, recording catches in each of the last five years. The fishery targets over 50 demersal scalefish species, with most catch comprising the red emperor (*Lutjanus sebae*), Rankin cod (*Epinephelus rankini*) and bluespotted emperor (*Lethrinus punctulatus*). The fishery landed 74% (1,907 t) of total commercial catches of the demersal scale fish in the Pilbara in 2023 (Wakefield, et al., 2024). Woodside considers it is possible that interactions with the fishery may occur in the Operational area and EMBA.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Fishery	Potential for interaction during the Petroleum Activity (x = no spatial overlap; ✓= spatial overlap; blue shading = possibility of interaction)		Description
	Operational Area	EMBA	
Pilbara Trap Managed Fishery	✓	✓	The Pilbara Trap Managed Fishery management area overlaps the Operational area and EMBA, with catch data reported across all areas. Catch effort for this fishery was reported consistently across the NWS. Three vessels operated in the fishery in 2023, with a catch landing of 22% (573 t) of the demersal scale fish in the Pilbara (Wakefield, et al., 2024). Woodside considers there to be potential for interaction in the Operational area and EMBA.
Pilbara Line Fishery (Condition)	✓	✓	The Pilbara Line Fishery management area overlaps the Operational area and EMBA, with catch data reported across all areas. The Pilbara Line Fishery (Condition) targets similar species to the Pilbara Trap and Trawl fisheries, but with a higher proportion of catch comprising deeper offshore species, including goldband snapper (Pristipomoides multidens) and ruby snapper (*Etelis boweni*). Of the total commercial catches of demersal scalefish in the Pilbara in 2023, 4% (114 t) was taken by the Pilbara Line Fishery (Condition). The total annual catch taken by the fishery has remained relatively consistent over the past decade throughout the NWS (average of 120 t per year) (Wakefield, et al., 2024) Catch effort for this fishery has been reported consistently across the NWS. Woodside considers there to be potential for interaction in the Operational area and EMBA.
Specimen Shell Managed Fishery	✓	✓	The Specimen Shell Managed Fishery management area overlaps the Operational area and EMBA, with catch data only reported in the EMBA. Most of the recent catch data show the fishery is active south of the Operational area and has consistently reported catch over the last five years along the WA coast. The fishery is largely diver-based, targeting specimen shells in water depths mostly <30 m. Woodside considers there to be potential for interaction with this fishery in the EMBA.
South-West Coast Salmon Fishery	✓	✓	The South-West Coast Salmon Fishery management area overlaps the Operational area and EMBA; however, no catch data were reported in these areas. No fishing occurs north of the Perth metropolitan area, despite the managed fishery boundary extending to Cape Beaufort (WA/Northern Territory border). Woodside considers there to be no potential for interaction with this fishery.
West Coast Deep Sea Crustacean Managed Fishery	✓	✓	The West Coast Deep Sea Crustacean Managed Fishery management area overlaps the Operational area and EMBA. However, no catch data was reported in the Operational area. The fishery is prohibited from fishing landwards of the 150 m isobath (Tuffley & Wiberg, 2024). Most catch is taken in depths of 500 m to 800 m. Woodside considers there to be no potential for interaction with this fishery.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Fishery	Potential for interaction during the Petroleum Activity (x = no spatial overlap; ✓= spatial overlap; blue shading = possibility of interaction)		Description
	Operational Area	EMBA	
Exmouth Gulf Prawn Fishery	×	✓	The Exmouth Gulf Prawn Managed Fishery is a trawl fishery operating in Exmouth Gulf. Target species are generally in <50 m water depth. The fishery management area overlaps the EMBA, with catch limited to the spatial extent within the Exmouth Gulf and Muiron Islands in the southwest of the EMBA. Six vessels were active in the Exmouth Gulf during the 2023 season, with a total catch of 653 t in 2023 (Koeford, et al., 2024a). In previous years the fishery landed catches of 898 t in 2022, 777 t in 2021 and 673 t in 2020 (Wilkin, et al., 2023). The fishery's catch mostly comprises western king prawns (*Penaeus latisulcatus*), brown tiger prawns (Penaeus esculentus) and blue endeavour prawns (*Metapenaeus endeavouri*) (Koeford, et al., 2024a). Woodside considers it a possibility that interactions with the fishery may occur within the EMBA
Gascoyne Demersal Scalefish Fishery	×	✓	This fishery management area does not overlap with the Operational area; however, overlaps with the EMBA. FishCube data reports fishing effort occurs within the EMBA over the last five years. Woodside considers it a possibility that interactions with the fishery may occur within the EMBA
West Australian Sea Cucumber Fishery	×	✓	The Western Australian Sea Cucumber Fishery management area overlaps the EMBA. The fishery operates as wader- and diver-based in the Pilbara, Kimberley and Gascoyne regions and is typically restricted to coastal waters outside of the Operational area. Catch data overlapping the EMBA show there are only catches reported in the 60 NM block and not in the 10 NM block over the past five years, which reduces the likelihood that any recent activity has occurred in the EMBA. Woodside considers it a possibility that interactions with the fishery may occur within the EMBA.
Nickol Bay Prawn Managed Fishery	×	✓	The Nickol Bay Prawn Managed Fishery management area overlaps the EMBA, with catch data reported over the past five years. The fishery operates in nearshore and offshore waters of the Pilbara region along the NWS. Trawling has been reported to occur at several locations along the Pilbara coast to the east of the Burrup Peninsula, including within the waters of Nickol Bay. Woodside considers it a possibility that interactions with the fishery may occur within the EMBA.
Tour operators	✓	✓	Fishing tour operators are permitted to operate across WA State waters and must report monthly logbook records of customer fish catches. FishCube data indicate tour operator fishing effort is highest around Ningaloo and the Muiron Islands and at Barrow Island and the Montebello Islands. The FishCube data reported active tour operators at 10 NM overlapping the Operational area in the last five years. Woodside considers it a possibility that interactions with tour operators may occur in the Operational area and EMBA.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

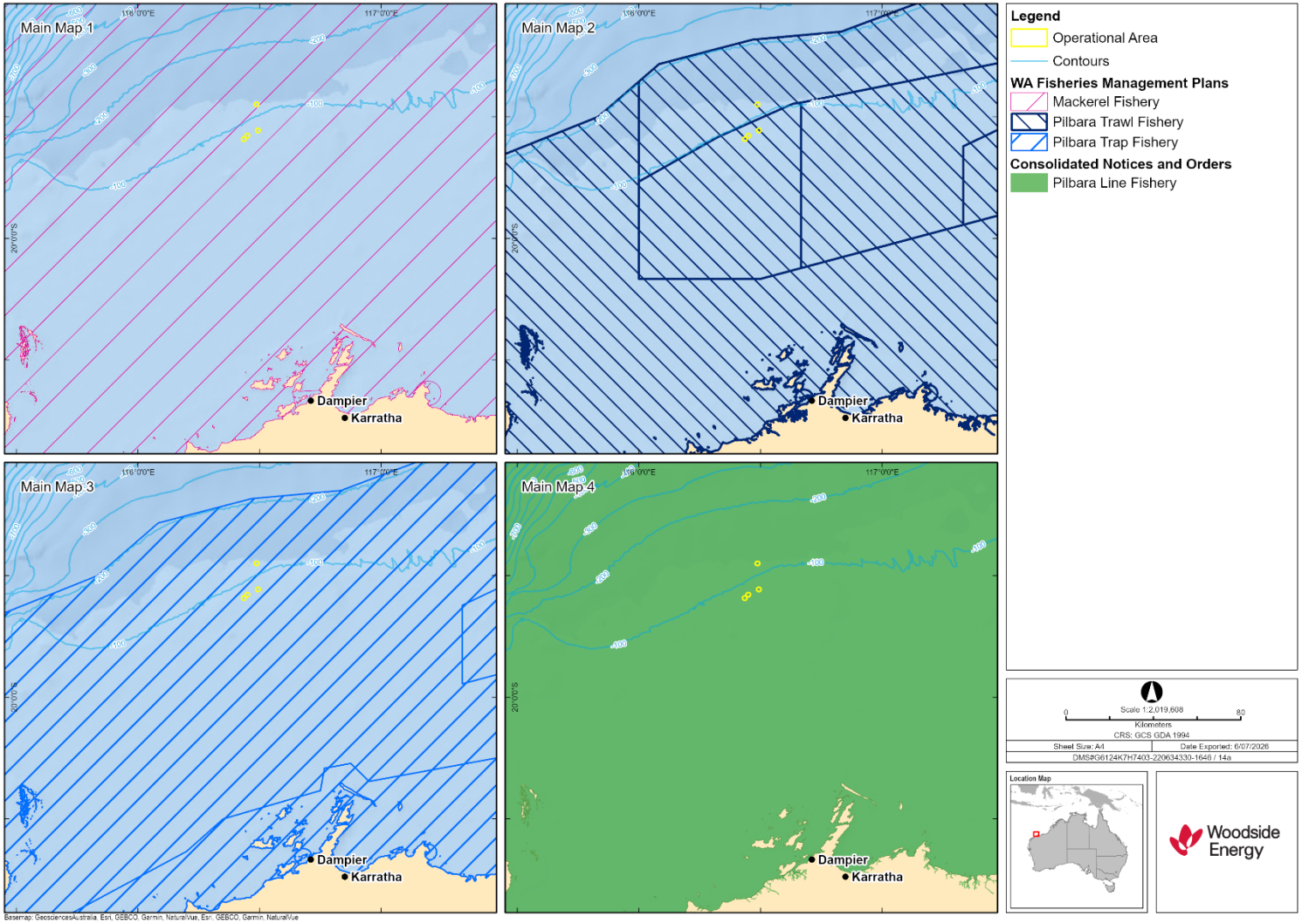


Figure 4-14: State-managed fisheries with a potential for Interaction with the Petroleum Activity

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

4.9.3 Traditional and customary fishing

There are no traditional or customary fisheries within the Operational area, as these are typically carried out in shallow coastal waters and areas with structures such as reef. The WA Recreational Fishing Guide (2024) states that First Nations people do not need a recreational fishing licence, in any waters, if it is in accordance with continuing tradition, for individual or familial consumption, and not for a commercial purpose. It is recognised that offshore waters of Barrow Island and Montebello Islands have a history of fishing when areas were occupied (as from historical records) (Department of Environment Conservation, 2007).

Traditional fishing methods in the NWMR are further described in Woodside's Master Existing Environment (Appendix I).

4.9.4 Tourism and recreation

The Operational area are located offshore of the North West tourism region, which includes parts of the Gascoyne and Pilbara regions. Tourism is concentrated in the vicinity of population centres such as Broome, Dampier, Exmouth, Coral Bay and Shark Bay. While FishCube data (2019 to 2024) indicates tour operators have been present in the Operational area, based on the location, their presence during the Petroleum Activity is expected to be minimal.

Due to the distance from access nodes, such as Dampier and Onslow (about 120 km south and 269 km south-west from the Operational area), recreational fishing effort is expected to be restricted to relatively large vessels and hence interactions are considered unlikely.

Tourism and recreation in the context of the wider NWMR is described in Woodside's Master Existing Environment (Appendix I).

4.9.5 Commercial shipping

The Australian Maritime Safety Authority (AMSA) has introduced a network of marine fairways across the NWMR to reduce the risk of vessel collisions with offshore infrastructure. It is noted that none of these fairways intersect with the Operational area; the nearest fairway is about 34 km from the Operational area (Figure 4-15). Vessel tracking data suggest shipping is concentrated in the major shipping channel from the Port of Dampier.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

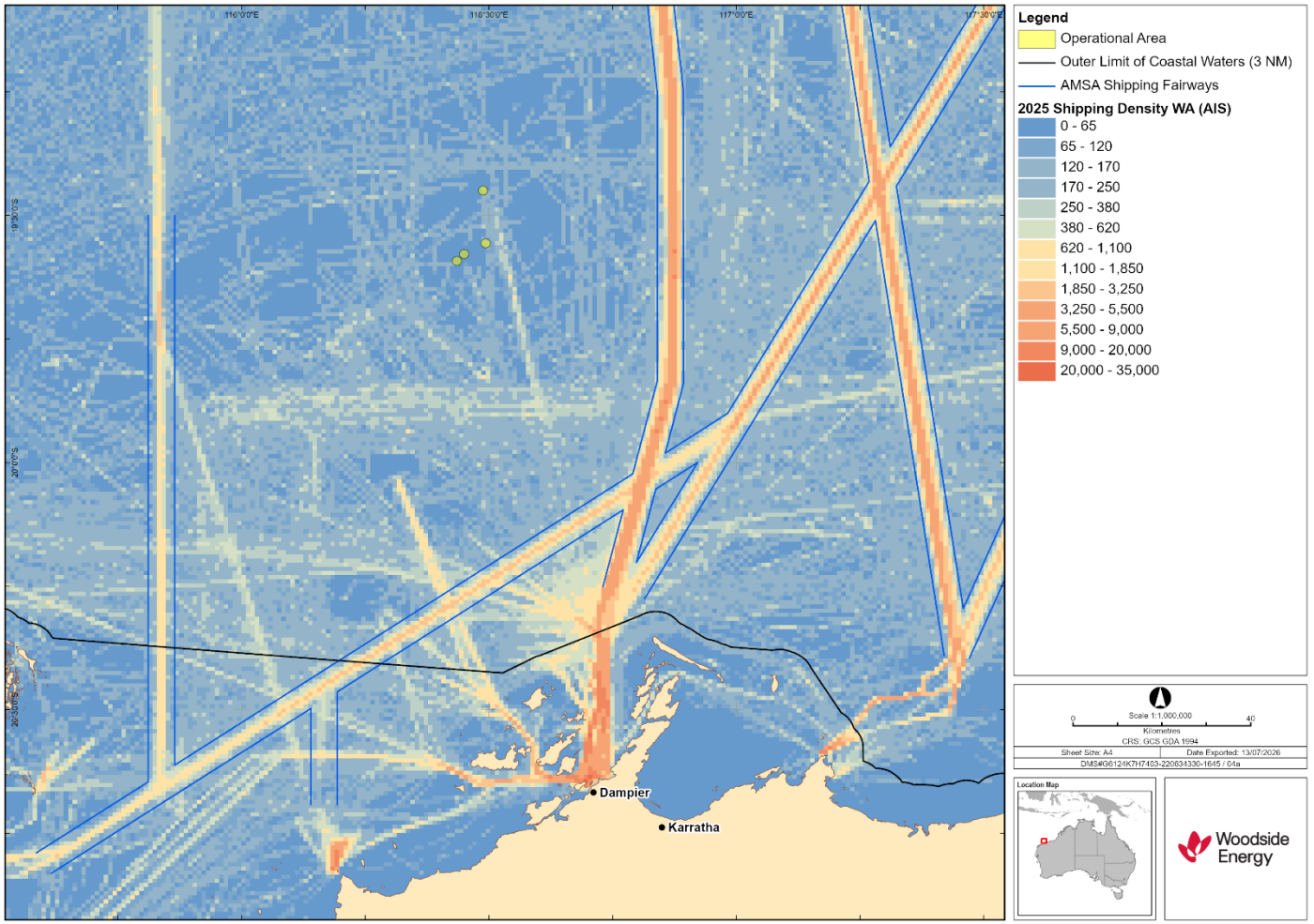


Figure 4-15: Vessel density map for the Operational Area

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

4.9.6 Oil and gas facilities, infrastructure and other industries

Infrastructure associated with the ongoing production through the Okha FPSO from the operation of the CK-4, LH-3, WA-7 and WA-8 wells, and several additional wells, are within the Operational Area including manifolds, umbilicals and flowlines.

The Okha FPSO is within the Operational area, its swing radius being approximately 950 m from both WA7 and WA8 wells. (Figure 4-16).

The Woodside Angel facility, North Rankin Complex and Goodwyn platform are located within 50 km of the Operational area, with other oil and gas facilities located within the region (Figure 4-16).

Woodside's Master Existing Environment (Appendix I) describes current oil and gas development within the EMBA, also shown in Figure 4-16.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

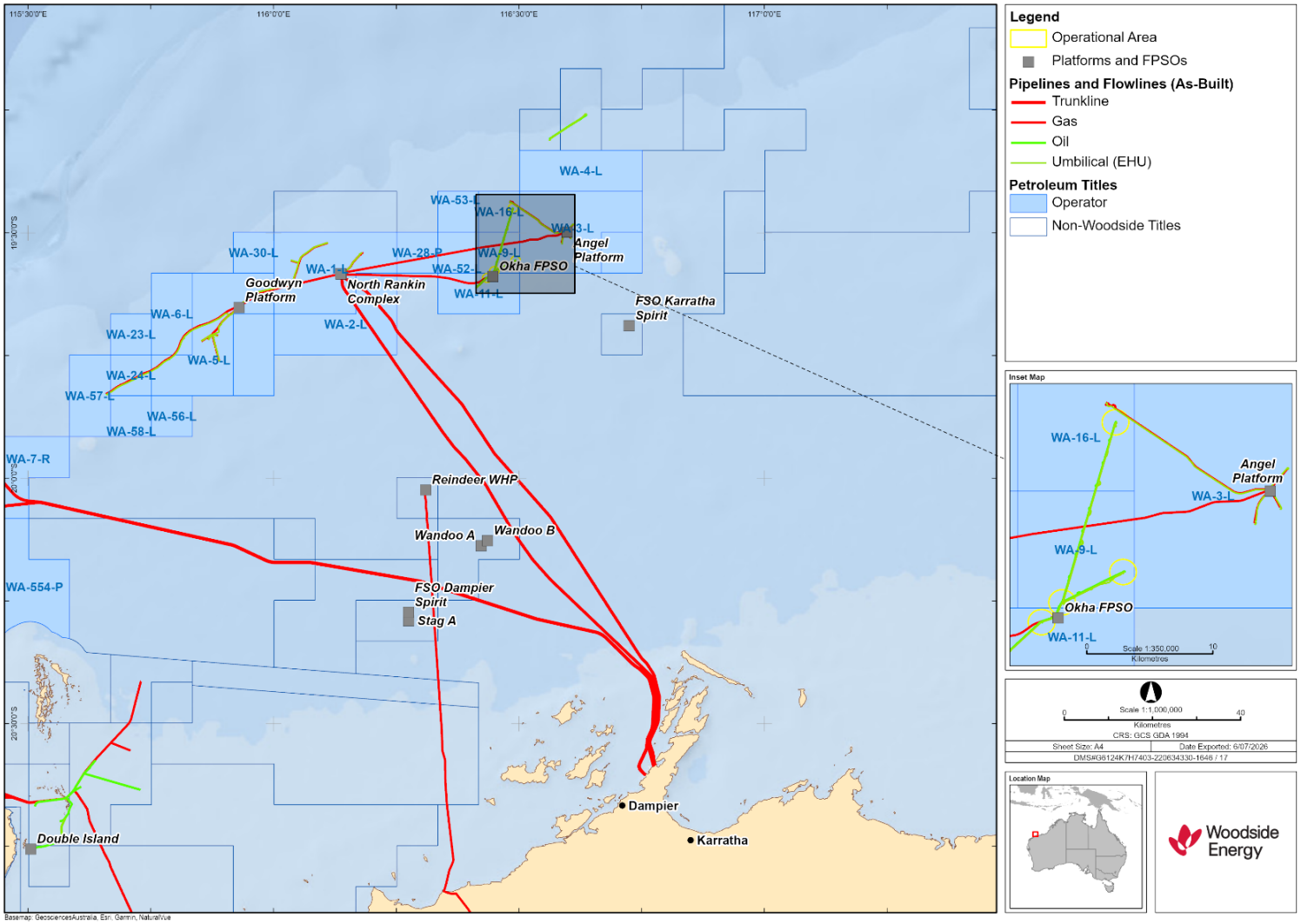


Figure 4-16: Oil and gas infrastructure within the Operational area and EMBA

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

4.9.7 Submarine communications infrastructure

The Petroleum Activity is in a region with submarine communications infrastructure. However, this infrastructure is located greater than 10 km from the Operational area.

4.9.8 Defence

There are designated defence practice and training areas in the offshore marine waters off Ningaloo and the North West Cape in the EMBA; the North West Exercise Area accessed by Royal Australian Air Force Base Learmonth and the Learmonth Air Weapons Range practice area (Figure 4-17). The Operational area does not overlap these defence training areas.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

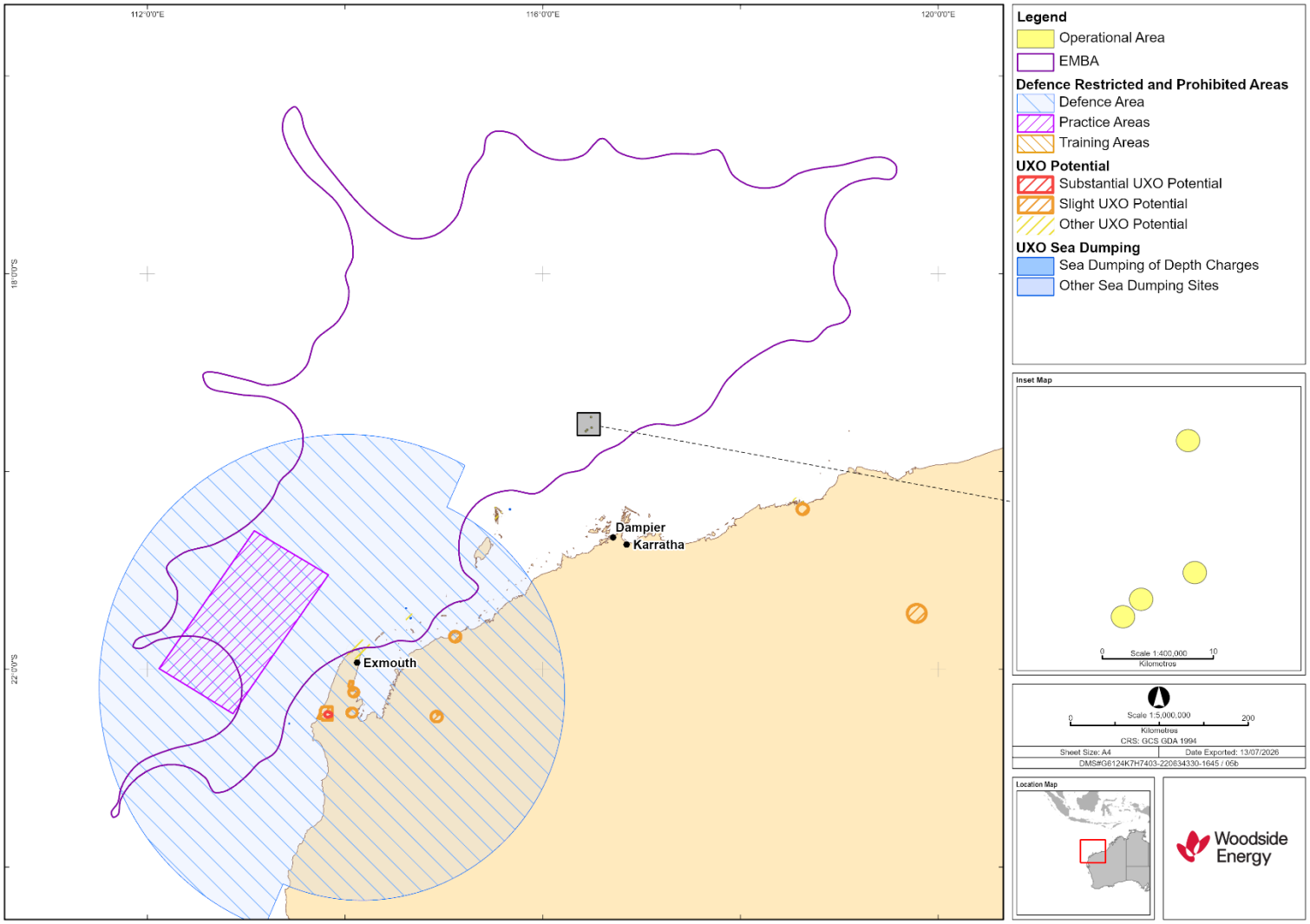


Figure 4-17: Defence areas within the EMBA

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

5. STAKEHOLDER CONSULTATION

5.1 Summary

Woodside consults relevant persons in the course of preparing an EP in accordance with regulation 25 of the Environment Regulations. (In this Section, references to 'regulations' are to the Environment Regulations, unless otherwise stated).

The consultation process is designed to identify relevant persons and provide them with sufficient information and a reasonable period to allow them to make an informed assessment of the possible consequences of the proposed activity on their functions, interests or activities. This enables Woodside to assess the merits of objections or claims about the adverse impact of each activity to which the EP relates that are received from relevant persons and for Woodside to adopt appropriate measures (if any) in response to those objections or claims so that the activity is carried out in a manner by which the environmental impacts and risks of the activity will be reduced to as low as reasonably practicable (ALARP) and will be of an acceptable level.

Consultation is informed by both the Environment Regulations and the findings of relevant Courts, including the Full Federal Court in the *Santos NA Barossa Pty Ltd v Tipakalippa [2022]* FCAFC 193 (Tipakalippa Appeal) (see Section 5.2 and 5.5.1) and *Munkara v Santos NA Barossa Pty Ltd (No 3) [2024]* FCA 9 (Munkara Case).

For this EP, Woodside has considered both the Operational Area and the broader EMBA in undertaking consultation (see further discussion in Section 5.2). The broadest extent of the EMBA has been determined by reference to the highly unlikely event of a hydrocarbon release resulting from activities in the Operational Area (see Section 4).

Woodside's consultation methodology is divided into two parts:

- the first section (Section 5.2 to 5.5) provides an overview of Woodside's consultation methodology for its EPs, including how we apply regulation 25(1) to identify relevant persons
- the second section (Section 5.6 to 5.7) details Woodside's approach to accepting feedback and assessment of the merits of each objection or claim about the adverse impact of each activity to which the EP relates, and engaging in ongoing consultation for this EP.

Woodside's consultation record is in Appendix F and includes a summary of the following:

- assessment and identification of relevant persons
- consultation information provided to relevant persons, feedback received, Woodside's assessment of the merits of objections or claims and Woodside's response to relevant persons and other persons or organisations Woodside chose to consult
- engagement with persons or organisations that Woodside chose to contact who are 'not relevant' persons for the purposes of regulation 25(1) (see Section 5.3.7)
- opportunities provided to persons or organisations to participate in consultation.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

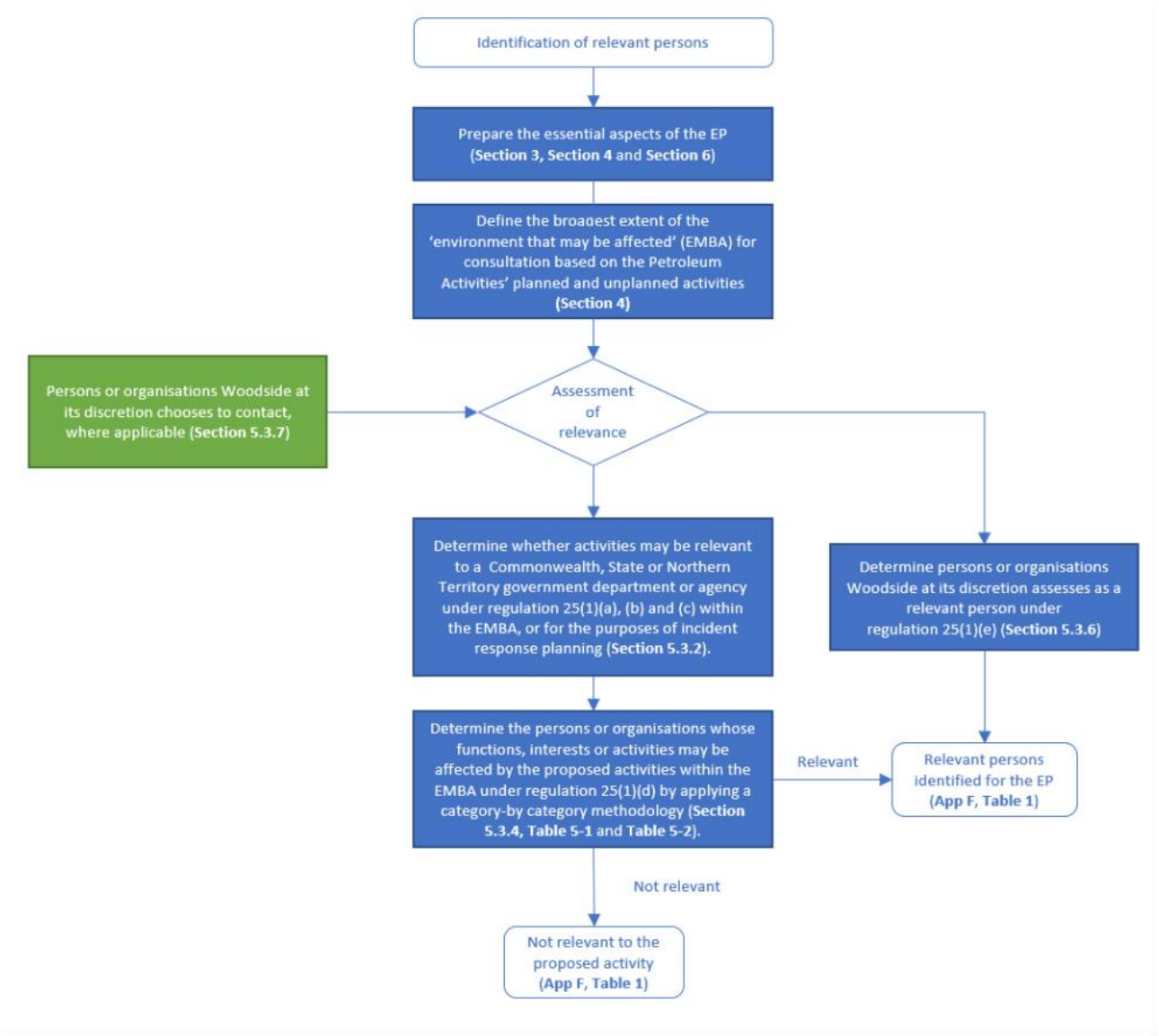


Figure 5-1: Overview of Woodside's methodology to identify relevant persons

5.2 Consultation – general context

Woodside has a portfolio of quality oil and gas assets and more than 40 years of operating experience. We have a strong history of working with local communities, the relevant regulators and a broad range of persons and organisations, to better understand the potential risks and impacts associated with our proposed activities and to develop appropriate measures to manage them.

The length of time that we have operated in Commonwealth and State waters, and the history of continued engagement with a wide range of persons and organisations, enables Woodside to develop an extensive consultation list to inform its consultation process. This consultation list is not used as a definitive list of persons to consult but, rather, assists Woodside as an input to its understanding of relevant persons with whom to consult on a Petroleum Activity. The information in the consultation list has been captured from years of experience; it contains insights relating to the type of information particular persons or organisations want to receive during consultation, the appropriate method of consultation for relevant persons and includes appropriate contact details, which are reviewed and updated periodically.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Woodside acknowledges NOPSEMA's GL2086 – *Consultation in the course of preparing an environment plan guideline* (May 2023) as well as judicial guidance in the *Tipakalippa Appeal* on the intent of consultation, as follows:

- At paragraph 54 of the appeal decision: … *provide a basis for NOPSEMA's considerations of the measures, if any, that a titleholder proposes to take or has taken to lessen or avoid the deleterious effect of its proposed activity on the environment, as expansively defined.*
- At paragraph 89 of the appeal decision: …*its purpose is to ensure that the titleholder has ascertained, understood and addressed all the environmental impacts and risks that might arise from its proposed activity. Consultation facilitates this outcome because it gives the titleholder an opportunity to receive information that it might not otherwise have received from others affected by its proposed activity. Consultation enables the titleholder to better understand how others with an objective stake in the environment in which it proposes to pursue the activity perceive those environmental impacts and risks. As the Regulations expressly contemplate, it enables the titleholder to refine or change the measures it proposes to address those impacts and risks by taking into account the information acquired through the consultations. Objectively, the scheme intends that this is likely to improve the minimisation of environmental impacts and risks from the activity.*

The *Tipakalippa Appeal* and *Munkara Case* have also been further considered in the context of specific methods for consultation with Indigenous relevant persons (Section 5.5.1).

To undertake consultation, Woodside has developed a methodology for identifying relevant persons in accordance with regulation 25(1) (Section 5.3). This methodology is consistent with NOPSEMA's Guideline and demonstrates that, to meet the requirements of regulation 34 (criteria for EP acceptance) when preparing the EP, Woodside understands:

- our planned activities in the Operational Area, being the area in which our planned activities are proposed to occur (see Section 3.3)
- the geographical extent to which the environment may be affected (EMBA) by risks and impacts from our activities (unplanned) (identified in Section 4.1 and assessed in Section 6.7).

Woodside has undertaken consultation in the course of preparing this EP in compliance with regulation 25, which requires a Titleholder to:

- consult with each of the following (a relevant person) in the course of preparing an EP:
  - 1– each Commonwealth, State or Northern Territory agency or authority to which the activities to be carried out under the EP may be relevant
  - 2– if the plan relates to activities in the offshore area of a State – the Department of the responsible State Minister
  - 3– if the plan relates to activities in the Principal Northern Territory offshore area – the Department of the responsible Northern Territory Minister
  - 4– a person or organisation whose functions, interests or activities may be affected by the activities to be carried out under the EP
  - 5– any other person or organisation that the Titleholder considers relevant (regulation 25(1)).
- give each relevant person sufficient information to allow the relevant person to make an informed assessment of the possible consequences of the activity on their functions, interests or activities (regulation 25(2))
- allow a relevant person a reasonable period for the consultation (regulation 25(3))
- tell each relevant person that the Titleholder consults with, that the relevant person may request that particular information it provides in the consultation not be published and any information subject to such a request is not to be published (regulation 25(4)).

Further, Woodside seeks to carry out consultation in a manner that:

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- is consistent with the principles of ecologically sustainable development (ESD) set out in section 3A of the EPBC Act – see Section 2
- is intended to reduce the environmental impacts and risks from the activity to ALARP and an acceptable level (regulation 4)
- is intended to minimise harm to the relevant person and the environment from the proposed petroleum activities and to enable Woodside to consider measures that may be taken to mitigate the potential adverse environmental impacts from the petroleum activity
- is collaborative. Woodside respects that, for a relevant person, consultation is voluntary. Where the relevant person seeks to engage, Woodside engages with the relevant person with the aim of seeking genuine and meaningful two-way dialogue
- provides opportunities for relevant persons to provide feedback throughout the life of the EP through its ongoing consultation process (refer to Section 5.7 and Section 7.10).

An overview of Woodside's consultation approach is outlined at Figure 5-2.

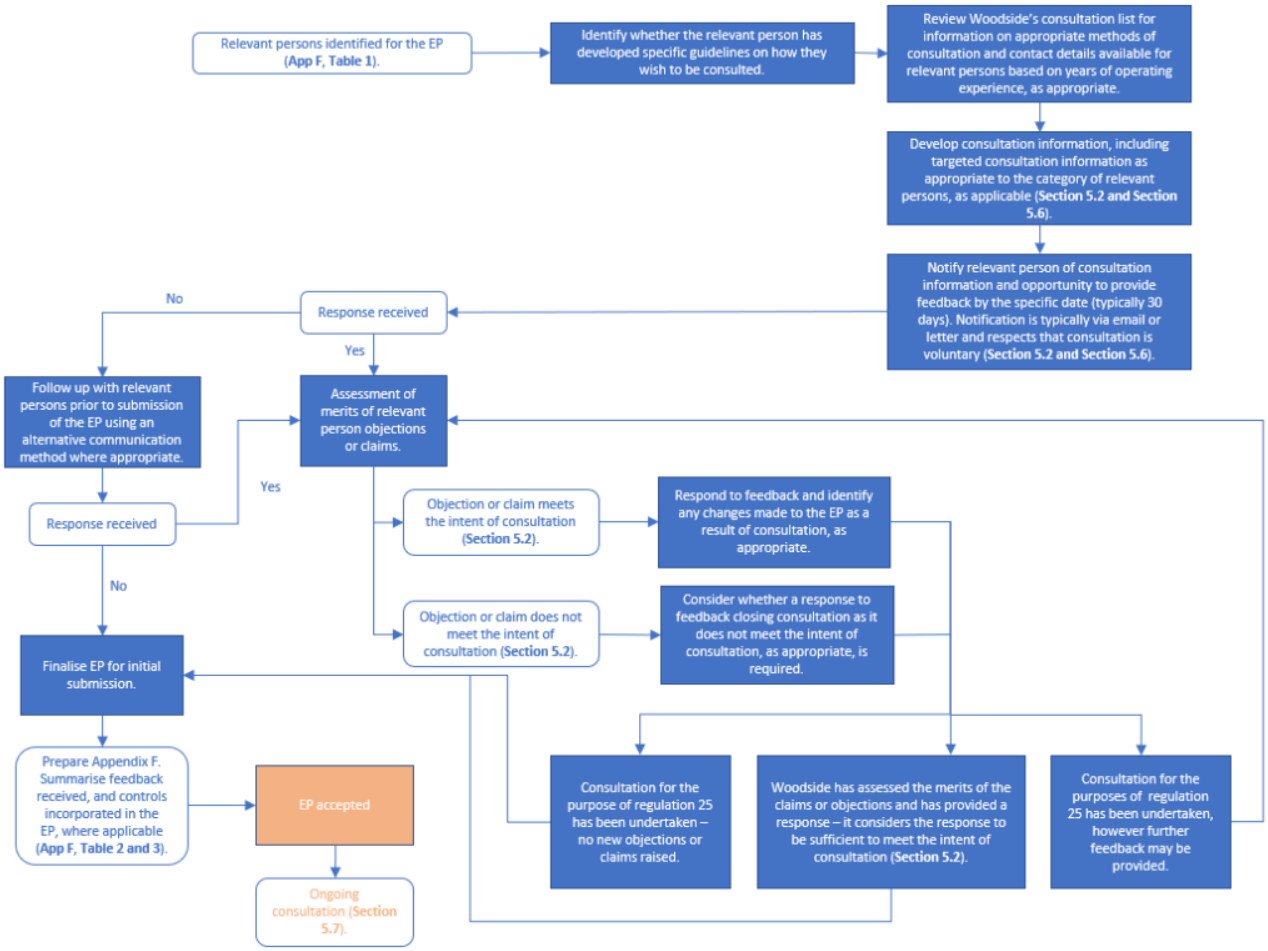


Figure 5-2: Overview of Woodside's consultation approach

The methodology for consultation for this activity has been informed by various guidelines and relevant information for consultation on planned activities, including:

Federal Court:

- Santos NA Barossa Pty Ltd v Tipakalippa [2022] FCAFC 193
- Munkara v Santos NA Barossa Pty Ltd (No 3) [2024] FCA 9

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

NOPSEMA:

- GL2086 – Consultation in the course of preparing an environment plan – May 2024
- GN1847 – Responding to public comment on environment plans – January 2024
- GN1344 - Environment plan content requirements - September 2020
- GL1721 – Environment Plan decision making – January 2024
- GN1488 - Oil pollution risk management - July 2021
- GN1785 – Petroleum activities and Australian Marine Parks – January 2024
- GL 1887 – Consultation with Commonwealth agencies with responsibilities in the marine area – August 2024
- PL9028 Managing gender-restricted information – December 2023
- Consultation on offshore petroleum environment plans – Information for the community

Department of Mines, Petroleum and Exploration (DMPE):

- Guideline for the development of Petroleum, Geothermal and Pipeline Environment Plans in Western Australia (November 2024)
- Guideline — Decommissioning of petroleum and geothermal energy property, equipment and infrastructure in Western Australian onshore areas and State coastal waters (March 2024)

Department of Climate Change, Energy, the Environment and Water (DCCEEW):

- Sea Countries of the North-West; Literature review on Indigenous connection to and uses of the North West Marine Region

Australian Fisheries Management Authority (AFMA):

- Petroleum industry consultation with the commercial fishing industry

Commonwealth Department of Agriculture, Fisheries and Forestry (DAFF):

- Fisheries and the Environment – Offshore Petroleum and Greenhouse Gas Act 2006
- Offshore Installations Biosecurity Guide

WA Department of Primary Industries and Regional Development (DPIRD):

- Guidance statement for oil and gas industry consultation with the Department of Fisheries

WA Department of Transport and Major Infrastructure (DTMI):

- Offshore Petroleum Industry Guidance Note

WA Australian Fishing Industry Council (WAFIC):

- Oil and Gas Consultation Framework

Good practice consultation:

- IAP2 Public Participation Spectrum
- Interim Engaging with First Nations People and Communities on Assessments and Approvals under the Environment Protection and Biodiversity Act 1999

5.3 Identification of relevant persons for consultation

5.3.1 Regulation 25(1)(a),(b) and (c)

The relevant inquiry for determining relevant persons under regulations 25(1)(a) and (b) is whether the activities to be carried out under the EP may be relevant to one of the government departments or agencies in those regulations. The government departments and agencies relevant to the EP are listed in Appendix F,

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 1. In accordance with regulation 25(1)(b), Woodside consults with the Department of the relevant State Minister.

5.3.2 Identification of relevant persons under Regulations 25(1)(a),(b) and (c)

Woodside's methodology for identifying relevant persons under regulations 25(1)(a), (b) and (c) is as follows:

- Woodside considers the defined responsibilities of each of the departments and agencies to which the activities to be carried out in the EMBA under the EP may be relevant. This list of relevant departments and agencies is formulated by reference to the responsibilities of the government departments, as set out on their websites, in NOPSEMA's *GL1887 – Consultation with Commonwealth agencies with responsibilities in the marine area guideline* (January 2024), which describes where the Department is a relevant agency under the Environment Regulations, as well as experience and knowledge that Woodside has gained from years of operating. This list is revised from time to time, for example, for the purposes of accommodating government restructures, renaming of departments, shifting portfolios and/or to account for new agencies that might arise.
- Woodside has categorised government department or agency groups as follows:

Government departments / agencies – marine	Agencies with legislated responsibilities for use of the marine environment.
Government departments / agencies – environment	Agencies with legislated responsibilities for the protection of the environment.
Government departments / agencies – industry	The legislated Department of the responsible Commonwealth, State or Northern Territory Minister for Industry.

- Woodside considers each of the responsibilities of the departments and agencies, determining whether those responsibilities overlap with potential risks and impacts specific to the Petroleum Activity in the EMBA. The assessment is both activity and location based.
- Woodside acknowledges the roles and responsibilities of government departments and agencies acting on behalf of various industry participants. For example, AMSA – Marine Safety is responsible for the safety of vessels and the seafarers who are operating in the domestic commercial shipping industry; and AHO is responsible for maritime safety and Notices to Mariners. To undertake proposed activities in a manner that prevents a substantially adverse effect on the potential displacement of marine users, Woodside therefore consults AMSA – Marine Safety and AHO on its proposed activities. Woodside considers each of the responsibilities of the departments and agencies and determines those that would either be involved in the incident response itself or in relation to the regulatory or decision-making capacity with respect to planning for the unlikely event of a worst-case hydrocarbon release incident response specific to the Operational Area. Feedback received, if any, is assessed in accordance with the intended outcome of consultation.
- The list of government departments and agencies assessed as relevant is set out in Appendix F, Table 1.
- Feedback received, if any, is assessed in accordance with the intended outcome of consultation and summarised at Appendix F, Table 2 and Table 3 as appropriate to the relevance assessment.

Woodside does not consult with departments or agencies with interests that do not overlap with risks and impacts specific to the Petroleum Area in the EMBA or would not be involved in incident response planning.

5.3.3 Regulation 25(1)(d)

To identify a relevant person for the purposes of regulation 25(1)(d), the meaning of "*functions, interests or activities*" needs to be understood. In regulation 25(1)(d), the phrase "*functions, interests or activities*" should be construed broadly and consistently with the objects of the Environment Regulations (regulation 4) and the objects of the EPBC Act (Section 3A).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

In developing its methodology for consultation, Woodside acknowledges the guidance below from NOPSEMA's *GL2086 – Consultation in the course of preparing an environment plan guideline* (May 2023):

Functions	Refers to a power or duty to do something.
Interests	Conforms to the accepted concept of 'interest' in other areas of public administrative law and includes any interest possessed by an individual whether or not the interest amounts to a legal right or is a proprietary or financial interest or relates to reputation.
Activities	Broader than the definition of 'activity' in regulation 5 of the Environment Regulations and is likely be directed to what the relevant person is already doing.

Woodside's methodology for determining 'relevant persons' for the purpose of regulation 25(1)(d) includes consideration of:

- whether a person or organisation has functions interests or activities that overlap with the Operational Area and EMBA
- whether a person or organisation's functions, interests or activities may be affected by Woodside's proposed planned or unplanned activities

5.3.4 Identification of relevant persons under Regulation 25(1)(d)

Relevant persons under regulation 25(1)(d) are defined as a person or organisation whose functions, interests or activities may be affected by the activities to be carried out under the EP. In identifying relevant persons, Woodside considers:

- the planned activities to be carried out under the EP (described in Section 3)
- the EMBA by unplanned activities (identified in Section 4 and assessed in Section 6).
- To identify relevant persons who fall within regulation 25(1)(d), Woodside adopts the following methodology, and then undertakes consultation with relevant persons.
- As a general proposition, Woodside assesses whether a person or organisation is a relevant person having regard to:
- whether a person or organisation has functions, interests or activities that overlap with the Operational Area and EMBA
- whether a person or organisation's functions, interests or activities may be affected by Woodside's proposed planned or unplanned activities to be carried out under the EP.

This assessment will include applying judgement, knowledge and considering available, relevant literature.

To assist in identifying the full range of relevant persons, Woodside considers the impacts and risks associated with its proposed activities and considers the broad categories of relevant persons who may be affected by the activities to be carried out under the EP. The broad categories are identified in Table 5-1 below and identification methodology applied as set out in Table 5-2.

The list of those persons or organisations assessed as relevant persons or organisations Woodside separately chose to contact is set out in Appendix F, Table 1.

Feedback received, if any, is assessed in accordance with the intended outcome of consultation and applying the categories of relevant persons methodology outlined in Table 5-2..

Feedback from relevant persons is summarised at Appendix F, Table 2. Feedback from persons assessed as 'not relevant' but whom Woodside chose to contact, or self-identified and Woodside assessed as 'not relevant', are summarised at Appendix F, Table 3.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 5-1: Categories of relevant persons

Category	Explanation
Commercial fisheries (Commonwealth and State) and peak representative bodies	Commonwealth or State Commercial Fishery with a fishery management plan recognised under the *Commonwealth Fisheries Management Act 1991* (Cth) and the *Western Australian Fish Resources Management Act 1994* (WA), which may be amended from time to time. Commonwealth peak fishery representative bodies are identified by AFMA. WAFIC is the peak representative body for state fishers in Western Australia.
Recreational marine users and peak representative bodies	Charter boat, tourism and dive operators identified by DPIRD specific to the location of the proposed activity. Representative bodies are the recognised peak organisation(s) for recreational marine users.
Titleholders and Operators	Registered holder of an offshore petroleum title or greenhouse gas (GHG) title under the OPGGS Act and associated regulations.
Peak industry representative bodies	Recognised peak organisation(s) for the oil and gas sector.
Traditional Custodians (individuals and/or groups/entity)	Traditional Custodians are Indigenous Australians with cultural rights and interests or cultural functions or who perform cultural activities over particular lands and waters. Where an Indigenous person, group or entity self-identifies and asserts cultural rights, functions, interests or activities they will be considered under the definition of Traditional Custodian for the purpose of this EP (as appropriate).
Nominated Representative Corporations	Nominated representative corporations are Traditional Custodians nominated representative institutions such as Prescribed Body Corporates (PBC). PBCs are established under the Native Title Act 1993 (Cth) by Traditional Custodians to represent their entire Traditional Custodian group (defined broadly by reference to descents from an ancestor set who were known to be the Traditional Custodians at the time of European colonisation) and their interests including, among other things, management and protection of cultural values.
Native Title Representative Bodies	A Representative Aboriginal/Torres Strait Islander Body (RATSIB) is a regional organisation appointed under the Native Title Act 1993 with prescribed functions, set out in Part 11 of the Native Title Act 1993, which relate to: facilitation and assistance; certification; dispute resolution; notifications; agreement making. They are also known, and referred to here, as Native Title Representative Bodies.
Local government and recognised local community reference/liaison groups or organisations	Local government body formed under the Local Government Act 1995 (WA). Recognised local community reference or liaison group or organisation in relation to oil and gas matters.
Other non-government groups, organisations or individuals	Non-government organisation with public website material targeting the proposed activity. Individual who demonstrates the proposed activity could potentially impact their interests, functions or activities.
Research institutes and local conservation groups or organisations	Research institutes are government or private institutions that conduct marine or terrestrial research. Local conservation groups are local non-government organisation that regularly conduct conservation activities focused on the local environment or wildlife.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 5-2: Methodology for identifying relevant persons within the EMBA undertaken under Regulation 25(1)(d) – by category

Category	Relevant person identification methodology
Commercial fisheries (Commonwealth and State) and peak representative bodies	Woodside assesses relevance for commercial fisheries (Commonwealth and State) and their representative bodies using the following next steps in its methodology: • Defining the parameters having regard to timing, location and duration of the proposed petroleum activity. • Confirming whether the EMBA overlaps with the fisheries management area (i.e., the spatial area the fishery is legally permitted to fish in) (see Section 4.9.2). • Woodside acknowledges WAFIC's consultation guidance[6], that Titleholders develop separate consultation strategies for significant unplanned events (for example an oil spill) where Titleholders can demonstrate the likelihood of such events occurring is extremely low. WAFIC's guidance is that consultation on unplanned events resulting in an emergency scenario should only be undertaken if an incident occurs (see Appendix D). • For Commonwealth and State commercial fisheries, Woodside assesses the potential spatial and temporal extent for interaction with the fishery by reviewing AFMA, ABARES and DPIRD Fishcube data within the Operational Area and EMBA (see Section 4.9.2). Assessment of relevance: • State commercial fisheries that have been assessed as having a potential for interaction within the Operational Area or EMBA (see Section 4.9.2) are assessed as relevant to the proposed activity. However, to avoid over consulting and as requested in WAFIC's guidance, Woodside only consults individual licence holders based on WAFIC's advice. Woodside also utilises WAFIC's consultation service whereby WAFIC: – directly consults fishery licence holders that are assessed as having a potential for interaction in the Operational Area – consults fisheries that are assessed as having a potential for interaction in the EMBA only in the event of an unplanned emergency scenario. • Commonwealth commercial fisheries that have been assessed as having a potential for interaction within the Operational Area or EMBA (see Section 4.9.2) are assessed as relevant to the proposed activity. Where a relevant fishery is identified, or where Woodside chooses to contact fisheries at its discretion, Woodside consults directly with individual licence holders in that fishery. • A Commonwealth fishery's representative body is assessed as relevant where the EMBA overlaps the fishery's management area, even where the fishery itself has been assessed as not relevant based on potential for interaction. This recognises the representative body's role in representing fishing entitlements and broader fisheries considerations within the management area. Recognised Commonwealth fishery representative bodies are identified by AFMA through information on its website. For State fisheries, representative bodies are assessed as relevant where the fishery they represent is assessed as relevant based on potential for interaction. WAFIC is the only recognised State fishery representative body.
Recreational marine users and peak representative bodies	Woodside assesses relevance for recreational marine users and peak representative bodies using the following next steps in its methodology:

[6] *Consultation Approach for Unplanned Events - WAFIC*

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

	• Using Woodside knowledge and operating experience, applying knowledge of recreational marine users in the area. This assessment is both activity and location based. • Defining the parameters having regard to timing, location and duration of the proposed petroleum activity. • Assessing the potential spatial and temporal extent for interaction with recreational marine users by reviewing DPIRD Fishcube data to assess whether there has been activity within the EMBA in the past 5 years. Assessment of relevance: • Recreational marine users that have been active in the past 5 years within the EMBA are assessed as relevant to the proposed activity. Woodside is provided with the contact details of charter, boat tourism and dive operators specific to the region of the EMBA by DPIRD to consult with the relevant persons. • If Woodside has identified recreational marine users as relevant persons, then Woodside also consults identified peak recreational marine user representative bodies. For example, Recfishwest represents the interests of recreational fishers. These representative bodies are identified via Woodside's existing consultation list, which is updated as appropriate via advice from known groups and DPIRD.
Titleholders and Operators	Woodside assesses relevance for other Titleholders and Operators using the following steps in its methodology: • Using GPInfo to determine overlap with other Titleholders' or Operators' permit areas within the EMBA. • Using Woodside knowledge and operating experience, applying knowledge of other operators in the area. • Woodside produces a map showing the outcome of this assessment. Assessment of relevance: • Titleholders and Operators whose permit areas are identified as having an overlap within the EMBA are assessed as relevant.
Peak industry representative bodies	Woodside assesses relevance for peak industry representative bodies using the following steps in its methodology: • Review of peak industry representative bodies responsibilities that Woodside actively participates in, with consideration of overlap between industry focus area and Woodside's proposed activities within the EMBA. • Review of Woodside's existing consultation list. • Website search to identify whether any additional peak industry representative bodies have been created whose responsibilities may overlap with Woodside's proposed activities within the EMBA. Assessment of relevance: • Peak industry representative bodies whose responsibilities are identified as having an overlap with Woodside's proposed activities within the EMBA are assessed as relevant.
Traditional Custodians (individuals and/or groups/entity) and Nominated Representative Corporations	Consistent with its understanding of the matters discussed in Section 4.9, to identify Traditional Custodian groups or individuals, Woodside: • Uses existing systems of recognition to identify Indigenous groups who overlap or are coastally adjacent to the EMBA (for example, recognition provided under Native Title or cultural heritage legislation, or marine park management plans, or identification by other Indigenous groups or entities) • Notifies and invites consultation with Indigenous people through their nominated representative corporation (for example Prescribed Bodies Corporate (PBCs)); or, in the case of Native Title and where appropriate, the Native Title Representative Body

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

	• Requests the nominated representative body to forward the notifications and invitations to consult to their members (members are individual communal rights holders); • Requests advice as to other Indigenous groups or individuals that should be consulted • Advertises widely so as to invite self-identification and consultation by Indigenous groups and individuals. Further detail to Woodside's methodology is as follows. Woodside uses the databases of the National Native Title Tribunal: • To understand whether there are any Native Title Claims (historical or current) or determinations overlapping or coastally adjacent to the EMBA • To understand whether there are any relevant Indigenous Land Use Agreements (ILUAs), registered with the National Native Title Tribunal that overlap or are adjacent to the EMBA that may identify Traditional Custodians or representative bodies to contact regarding potential cultural values. Where there is a positive determination of Native Title, contacting the PBC or, where their representative is a Native Title Representative Body, contacting the Native Title Representative Body. Where appropriate, contacting the relevant Native Title Representative Body to request a list of any Indigenous groups asserting Traditional Custodianship over an area of coastline adjacent to the EMBA. Review of Commonwealth and State Marine Park Management Plans that overlap the EMBA which may identify Traditional Custodians or representative bodies to contact regarding potential cultural values. In Victoria, using the Victorian Aboriginal Heritage Council data to determine whether there are any Registered Aboriginal Parties (RAP) appointed under the Aboriginal Heritage Act 2006 (Vic), that overlap or are adjacent to the EMBA. Indigenous groups or individuals identified by a Traditional Custodian, nominated representative corporation, Native Title Representative Body. Request to the PBC to distribute Woodside consultation materials through its membership. Woodside is unable to contact this membership through any other means. Woodside has a number of public notification and information sharing processes by which individual Traditional Custodians can become aware of the proposed activity, its risks and impacts, and self-identify. Individuals that consider their functions, interests or activities may be affected by a proposed activity are provided an opportunity to self-identify for each EP. Woodside does not presume that self-identification for an activity, covered by another EP, automatically means that an individual/s functions, interests and activities may be affected by other activities where EMBAs overlap. This decision is for the individual to make. The public notification, information sharing, and consultation processes Woodside puts in place enables Traditional Custodians to become aware of proposed activities, assess risks and impacts to their values, and enable individuals to self-identify. Assessment of relevance: • Traditional Custodian groups, entities or individuals and Nominated Representative Corporations who are identified through the above methodology and overlap or are coastally adjacent to the EMBA are assessed as relevant.
Native Title Representative Bodies	Woodside assesses relevance for Native Title Representative Bodies using the following steps in its methodology: • A Representative Aboriginal/Torres Strait Islander Body (RATSIB) is a regional organisation appointed under the Native Title Act 1993 with prescribed functions set out in Part 11 of the Native Title Act 1993, which relate to: facilitation and assistance; certification; dispute

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

	resolution; notifications; agreement making. They are also known, and referred to here, as Native Title Representative Bodies. • Review of National Native Title Tribunal RATSIB areas that overlap or are coastally adjacent to the EMBA. Assessment of relevance: • Where the area for which a Native Title Representative Body is recognised under the Native Title Act 1993, overlaps with the EMBA or is coastally adjacent to the EMBA, Woodside will assess the Native Title Representative Body as relevant.
Local government and recognised local community reference/liaison groups or organisations	Woodside assesses relevance for local government and recognised local community reference/liaison groups or organisations using the following steps in its methodology: • Review of Woodside maps (developed based on data from the WA Local Government, Sport and Cultural Industries 'My Council' database and WA Local Government Association (WALGA) Local Government Directory maps to assess overlap between the local government's defined area of responsibility and the EMBA. • Woodside hosts regular community reference/liaison group meetings. Members represent a cross-section of the community and local towns interests. Representatives are from community and industry and generally include Woodside, State Government (for instance relevant Regional Development Commissions), Local Government, Indigenous Groups, Industry representative bodies, community and industry organisations. Woodside considers these reference/liaison groups to be the appropriate recognised representatives of the local community for the oil and gas sector. • Woodside reviews the community reference/liaison group's terms of reference to determine its area of responsibility and overlap with the EMBA. For example, the Exmouth Community Liaison Group's area of responsibility in relation to Woodside's operational, development and planning activities, is defined in the terms of reference as the Exmouth sub-basin. Comparatively, the Karratha Community Liaison Group's area of responsibility is the Pilbara region (i.e., onshore). Assessment of relevance: • The local government whose defined area of responsibility overlaps the EMBA is assessed as relevant. • The community reference/liaison group whose defined area of responsibility overlaps the EMBA is assessed as relevant and consulted collectively via the relevant reference/liaison group.
Other non-government groups, organisations or individuals	Woodside assesses relevance for other non-government groups, organisations or individuals using the following steps in its methodology: • Review of Woodside's existing consultation list. • Website search of registered non-government groups or organisations (i.e., registered with an Australian Business Number (ABN) and publicly available contact information) that may have public website and/or social media material specific to the proposed activity at the time of development of the EP. • Organisation has a publicly available statement (or purpose) that clearly describes their collective functions, interests or activities. • Review of current website and/or social media material to identify targeted information which demonstrates functions, interests or activities relevant to the potential risks and impacts associated with planned activities associated with the EMBA. • Review of an organisation's/individual's feedback to consider whether their functions, interests or activities within the EMBA may be affected by the activities to be carried out under the EP. Considering interests outside the EMBA would be considered too remote and contrary to the purpose of EP consultation. Assessment of relevance:

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

	• Registered non-government groups or organisations with current targeted public material specific to the proposed activity at the time of developing the EP and who have demonstrated functions, interests or activities relevant to the potential risks and impacts associated with planned activities in accordance with the intended outcome of consultation will be assessed as relevant. • Individual demonstrates their functions, interests or activities may be impacted will be assessed as relevant.
Research institutes and local conservation groups or organisations	Woodside assesses relevance for research institutes and local conservation groups or organisations using the following steps in its methodology: • Review of Woodside's existing consultation list. • Website search for research institutes that may operate within the EMBA. This assessment is both activity and location based. • Website search for local conservation groups or organisations that regularly conduct conservation activities within the EMBA. Assessment of relevance: • Where there is known research being undertaken by a research institute within the EMBA, the research institute that is conducting the research will be assessed as relevant. • Local environmental conservation groups who regularly conduct conservation activities or have demonstrated conservation functions, interests or activities within the EMBA are assessed as relevant. This assessment is both activity and location based.

5.3.5 Regulation 25(1)(e)

In addition to assessing relevance under regulation 25(1)(d), Woodside has discretion to categorise any other person or organisation as a relevant person under regulation 25(1)(e).

5.3.6 Identification of relevant persons under Regulation 25(1)(e)

Woodside adopts a case-by-case approach for each EP to assess relevance under regulation 25(1)(e).

5.3.7 Persons or organisations Woodside chooses to contact

In addition to undertaking consultation with relevant persons under regulation 25(1), from time to time there are persons or organisations that Woodside chooses to contact in relation to a proposed activity. For example, these are persons or organisations:

- that are 'not relevant' pursuant to regulation 25(1) but that Woodside has chosen to seek additional guidance from, for example, to inform the correct contact person that Woodside should consult, or engage with
- that are 'not relevant' pursuant to regulation 25(1) but have been contacted as a result of consultation requirements changing or updated guidance from the Regulator
- where it is unclear what their functions, interests or activities are, or whether their functions, interests or activities may be affected. In this circumstance, engagement is used to inform relevance under Woodside's methodology. Woodside follows the same methodology for assessing a person or organisation's relevance as it does during its initial assessment (as described in Figure 5-1 and Section 5.3). The result of Woodside's assessment of relevance during the development of the EP is outlined at Appendix F, Table 1.

5.3.8 Assessment of relevant persons for the proposed activity

The result of Woodside's assessment of relevant persons in accordance with regulation 25(1) is outlined at Appendix F, Table 1 and Appendix F, Table 2.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Persons or organisations that Woodside assessed as 'not relevant' but chose to contact at its discretion in accordance with Section 5.3.7, or self-identified and Woodside assessed as 'not relevant', are summarised at Appendix F, Table 1 and Appendix F, Table 3.

5.4 Consultation material and timing

Regulation 25(2) provides that a Titleholder must give each relevant person sufficient information to allow the relevant person to make an informed assessment of the possible consequences of the activity on the functions, interests or activities of the relevant person. Regulation 25(3) provides that the Titleholder must allow a relevant person a reasonable period for the consultation.

As set out in Section 5.2, Woodside notifies relevant persons of the proposed activities, respecting that consultation is voluntary, and collaborates on a consultation approach where further engagement is sought by the relevant person. The consultation process aims to be appropriate for the category of relevant persons and not all persons or organisations will require the same level of engagement. Woodside recognises that the level of engagement is dependent on the nature and scale of the Operational Area. Woodside acknowledges published guidance for good practice consultation, relevant to different sectors and disciplines. Woodside's methodology for providing relevant persons with sufficient information as well as a reasonable period of time to provide feedback is set out in this section.

5.4.1 Sufficient information

Woodside produces a Consultation Information Sheet for each EP. This is provided to relevant persons and organisations and is also available on Woodside's website for interested parties to access and to provide feedback on. The Consultation Information Sheet typically includes:

- a description of the proposed petroleum activity
- the Operational Area
- where the activity will take place
- the timing and duration of the activity
- a location map of the Operational Area and EMBA
- a description of the EMBA
- relevant exclusion zones
- a summary of relevant risks and mitigation and management control measures relevant to the proposed petroleum activity

It also sets out contact details to provide feedback to Woodside.

The level of information necessary for a person or organisation to understand the impacts of the proposed activity on their functions, interests or activities may vary and may depend on the degree to which a relevant person is affected. For example, Woodside considers that relevant persons who may be impacted by planned activities in the Operational Area, as a result of temporary displacement due to exclusion zones, may require more targeted information relevant to their functions, interests or activities. Sufficient information may have been provided to a relevant person even where all documents requested by a relevant person have not been provided. Woodside acknowledges NOPSEMA's brochure entitled *Consultation on offshore petroleum environment plans information for the community*, which advises persons being consulted that they may inform Titleholders that they only want to be consulted in the very unlikely event of an oil spill.

Woodside places advertisements in selected local, state and national newspapers. This typically includes:

- the name of the EP Woodside is seeking feedback on
- an overview of the activity
- the consultation feedback date
- the ways in which a person or organisation can provide feedback.

Advertising in the local paper in the area of the activity is also consistent with the public notification process under section 66 of the Native Title Act 1993 for Native Title applications. Woodside typically aligns

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

advertisement feedback timeframes with the timing described below. Feedback received is assessed in accordance with Section 5.3 to determine relevance and evidenced in Appendix F, Table 1 as appropriate.

Woodside utilises a range of tools to provide sufficient information to relevant persons, which may include one or more of the following:

- Consultation Information Sheet available on Woodside's website and shared directly with relevant persons
- Summary Consultation Information Sheet, presentations or summaries specific to a particular relevant person group
- subscription available on Woodside's website to receive notification of new Consultation Information Sheets for Woodside EPs
- emails
- letters
- phone calls
- face-to-face meetings (virtual or in person) with presentation slides or handouts as appropriate
- Let's Talk newsletter – digital and hard copy
- maps outlining a person or organisation's defined area of responsibility in relation to the proposed activity, for example a fisheries management area or defence training area
- community meetings, as appropriate
- attendance at on-the-ground community events or planned regional roadshows
- broader awareness campaigns on the how to be involved in the EP consultation process

Woodside recognises that information may be provided to relevant persons in an iterative manner during the consultation process. Woodside considers that genuine two-way engagement may be demonstrated via information on incorporation of controls, where applicable, being provided to the relevant person so that the relevant persons understand how their input has been considered in the development of the EP.

Woodside communicates with relevant persons in different ways. Woodside recognises that, as part of genuine two-way dialogue, these forms of communication may evolve including, for example due to changes to organisation representation, as relationships are further established, or a preference for an alternative form of communication is expressed by a person or organisation. There might be limitations in how Woodside can consult with relevant persons.

Typical forms of communications for categories of relevant persons are set out below.

Category of relevant person	Typically accepted form of communication
Government departments / agencies – marine	Woodside applies NOPSEMA's guideline for engagement with Commonwealth government departments or agencies (GL1887 – Consultation with Commonwealth agencies with responsibilities in the marine area – January 2024) by using email for its consultation unless another form of communication is requested. Other forms of communication, such as phone calls, meetings and/or presentation briefings are used on request.
Government departments / agencies – environment	
Government departments / agencies – industry	
Commercial fisheries and peak representative bodies	**Commonwealth commercial fisheries**: Email is used as the primary form of communication with Commonwealth commercial fisheries in the ordinary course of business. Other forms of communication, such as phone calls, and meetings and/or presentation briefings are used on request. **State commercial fisheries and recreational marine users**: The Western Australian Department of Primary Industries and Regional Development (DPIRD) has responsibility for managing the Fish Resources Management Act 1994 and Aquatic Resources Management Act 2016, which limits the provision of contact details from the register to the name and business address of licence
Recreational marine users and peak representative bodies	

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

	holders. Alternative forms of communication are at the licence holder's discretion. Other forms of communication, such as phone calls, and meetings and/or presentation briefings are used on request. **Peak representative bodies**: Email is used as the primary form of communication with commercial fishery and recreational marine user peak representative bodies in the ordinary course of business. Other forms of communication, such as phone calls, and meetings and/or presentation briefings are used on request.
Titleholders and Operators	Email is used as the primary form of communication between Titleholders and operators in the ordinary course of business. Other forms of communication, such as phone calls, and meetings and/or presentation briefings are used on request.
Peak industry representative bodies	Email is used as the primary form of communication with peak representative bodies in the ordinary course of business. Other forms of communication, such as phone calls, and meetings and/or presentation briefings are used on request.
Traditional Custodians and nominated representative corporations	There are many forms of communication that Woodside uses on a case-by-case basis and as appropriate to or requested by the specific group, such as email, phone calls, meetings and community forums. Other forms of communication are used on request.
Native Title Representative Bodies	There are many forms of communication that Woodside uses on a case-by-case basis and as appropriate to or requested by the specific group, such as email, phone calls, meetings and community forums. Other forms of communication are used on request.
Historical heritage groups or organisations	NOPSEMA's guideline (GL1887 – Consultation with Commonwealth agencies with responsibilities in the marine area – January 2024) for engagement with government departments or agencies is used as a reference for Woodside's approach for communicating with historical heritage groups or organisations. Other forms of communication, such as phone calls, and meetings and/or presentation briefings are used on request.
Local government and recognised local community reference/liaison groups or organisations	**Local government:** NOPSEMA's guideline guideline (GL1887 – Consultation with Commonwealth agencies with responsibilities in the marine area – January 2024 for engagement with local government is used as a reference for Woodside's approach for communicating with historical heritage groups or organisations. **Community reference/liaison groups and chambers of commerce**: Email and presentations are used as the primary form of communication with local community reference/liaison groups or organisations in the ordinary course of business. Other forms of communication, such as phone calls, and meetings and/or presentation briefings are used on request.
Other non-government groups or organisations	Email is used as the primary form of communication with Other non-government groups or organisations. Other forms of communication, such as phone calls, and meetings and/or presentation briefings are used on request.
Research Institutes and Local conservation groups or organisations	Email is used as the primary form of communication with research institutes and local conservation groups or organisations. Other forms of communication, such as phone calls, and meetings and/or presentation briefings are used on request.

Information which is provided to relevant persons for the purposes of consultation on this EP is summarised at Appendix F, Table 2.

Appendix F, Table 3 sets out the information which is provided to persons or organisations that are 'not relevant' for the purposes of regulation 25 but which Woodside has chosen to contact.

When engaging in consultation, Woodside notifies relevant persons that, in accordance with regulation 25(4), the relevant person may request that the Titleholder notifies NOPSEMA that particular information the

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

person or organisation provides in the consultation not be published, and that information subject to that request will not be published under the Environment Regulations.

5.4.2 Reasonable period for consultation

Woodside seeks to consult in order to support preparation of its EP. Woodside recognises that what constitutes a reasonable period for consultation should be considered on a case-by-case basis, with reference to the nature, scale and complexity of the activity.

Woodside recognises that information may need to be provided to relevant persons in an iterative manner during the consultation process. Woodside considers that genuine two-way engagement may be demonstrated via information on incorporation of controls, where applicable, being provided to the relevant person so that the relevant person understands how their input has been considered in the development of the EP.

Woodside's methodology allows relevant persons a reasonable period for consultation (regulation 25(3)). A reasonable period for all relevant persons, including Traditional Custodians, to participate in consultation for this EP has been provided.

The consultation period under this EP has satisfied benchmark periods under other relevant legislative processes:

- Regulation 30 sets out a public consultation period of 30 days.
- The Department of Mines, Petroleum and Exploration (DMPE) *Guidelines for Consultation with Indigenous People by Mineral Explorers* directs a period of 21-30 days of consultation with traditional owners.

This period of consultation demonstrates that Woodside has provided a "*reasonable period*" for relevant persons to consult in accordance with regulation 25(3). Commentary in the Tipakalippa Appeal judgment limits consultation to a process that must be capable of being discharged within a reasonable time:

"it must be taken to be the regulatory intention that the consultation requirement cannot be one that is incapable of being complied with within a reasonable time..."[7]

Woodside seeks feedback in order to support preparation of its EP. What constitutes a reasonable period for consultation is considered on a case-by-case basis, with reference to the person being consulted and the nature, scale and complexity of the activity.

Woodside's typical approach to providing a reasonable period for consultation is as follows:

- advertising in selected local, state and national newspapers to give persons or organisations the opportunity to understand the activity and identify whether their functions, interests or activities may be affected
- providing consultation materials directly to identified relevant persons as well as persons who are 'not relevant' but Woodside chose to contact and providing a target date for feedback. Woodside acknowledges that feedback may be received from relevant persons following the target date
- acknowledging that the way in which Woodside provides consultation information may vary depending on the relevant person or organisation and, may depend on the degree to which a relevant person or organisation is affected. Different consultation processes may be required for relevant persons and organisations depending on the information requirements
- following up with relevant persons prior to EP submission. Where possible, Woodside will endeavour to use an alternative method of communication to contact the relevant person
- engaging in two-way dialogue with relevant persons or organisations where feedback is received.

Appendix F, Table 2 and Table 3 sets out a history of ongoing consultation and demonstrates that a reasonable period of consultation has been provided.

Woodside considers that consultation for this EP has closed.

[7] *Santos NA Barossa Pty Ltd v Tipakalippa [2022] FCAFC 193 at paragraph [136].*

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

As detailed in Section 5.6, if comments and feedback are received after the EP has been submitted, Woodside will consider those comments and update controls as appropriate and at all stages of the life of the EP as per Woodside's ongoing consultation approach described in Section 5.7.

5.4.3 Discharge of Regulation 25

The Full Federal Court made clear in the Tipakalippa Appeal that consultation should be approached in a "*reasonable*", "*pragmatic*" and "*not so literal*" way, so that consultation obligations were capable of being met by Titleholders (Section 5.5.1)[8]. Consultation is a "*real world activity*" and must be capable of reasonable discharge[9]. The Full Federal Court referred to Native Title cases as an illustration that reasonable limits should be applied to consultation efforts to ensure the process is workable[10].

When the Titleholder demonstrates that it has provided sufficient information and a reasonable period for consultation, then regulation 25 consultation requirements are met[11]. Meeting these obligations requires evaluative judgement to determine reasonable satisfaction of the consultation obligation and, as such, the Regulator uses its discretion to determine if these criteria are met. The nature of the person being consulted and their function, interest and activity that may be affected, will inform the manner of consultation and the reasonable period to be afforded[12].

While a Titleholder is required to provide an opportunity to consult, the Titleholder is not required to obtain consent to engage in the activity from a person being consulted, or confirmation from a person being consulted, that consultation is complete. The Federal Court has commented that a "reasonable opportunity" for consultation must be afforded to relevant persons[13]. A reasonable opportunity may not be every opportunity requested and is limited to reasonable opportunities to consult.

Woodside has completed steps required to discharge its consultation obligations. Woodside has provided sufficient information and a reasonable period of time to enable relevant persons to make an informed assessment of the possible consequences of the activity on their functions, interests or activities; and sufficient time to provide relevant feedback for Woodside to assess relevant persons' objections or claims. Woodside has also provided a reasonable opportunity for there to be genuine two-way dialogue on a person's claims or objections.

Woodside has discharged its duty under regulation 25 and considers that it is complete.

Appendix F, Table 2 and Table 3 of this EP set out the history of consultation under regulation 25. To the extent a relevant person says that they have further information to share or claims that consultation under regulation 25 has not been completed, Appendix F, Table 2 and Table 3 provide reasons why Woodside considers consultation under regulation 25 has been met, in relation to that relevant person.

5.5 Context of consultation approach with Traditional Owners

To comply with regulation 25, Woodside identifies and consults Traditional Custodians whose functions, interests or activities may be affected by the activities under an EP.

5.5.1 Approach to methodology – Woodside's interpretation of Tipakalippa Appeal

Woodside has implemented a consultation methodology consistent with regulation 25 and guidance provided in the *Tipakalippa* Appeal (Section 5.2). Woodside's consultation methodology allows for a sufficiently broad capture of Traditional Custodian relevant persons, provides for informed consultation, follows cultural protocols and allows a reasonable opportunity for consultation with Traditional Custodians whose functions, interests or activities may be affected by the activity described in this EP (Section 5.5.3 to 5.5.7).

---

[8] Santos NA Barossa Pty Ltd v Tipakalippa [2022] FCAFC 193 [89], [98], [103]-[104] and [109].

[9] Santos NA Barossa Pty Ltd v Tipakalippa [2022] FCAFC 193 at [89].

[10] Santos NA Barossa Pty Ltd v Tipakalippa [2022] FCAFC 193 at [96] and [103].

[11] Explanatory Statement, Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023, page 29.

[12] Explanatory Statement, Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023, page 30 and Santos NA Barossa Pty Ltd v Tipakalippa [2022] FCAFC 193 at [153].

[13] Cooper v National Offshore Petroleum Safety and Environmental Management Authority (No 2) [2023] FCA 1158 at paragraph [11]; Santos NA Barossa Pty Ltd v Tipakalippa [2022] FCAFC 193 at [153].

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Woodside notes the Full Federal Court discussed several Native Title Act 1993 (Cth) cases in response to a submission made in that case that a requirement under regulation 25 to consult "*each and every*" relevant person would be "*unworkable*". The reference to Native Title cases dealt with how decision-making processes under the NTA requiring "*all*" members of a group to be contacted for communal approval are interpreted by courts in a "*reasonable*", "*pragmatic*" and "*not so literal*" way[14], and how obligations to consult "*each and every*" person under regulation 25 should be interpreted in a similarly pragmatic way, so that consultation is workable. The reference to NTA authorities was made by analogy:

"It can be seen that the terms of [the native title legislation] are somewhat absolute – "all". However, [the native title legislation] has consistently been construed in a way that is not so literal … The cases concerning [the native title legislation] … have reiterated … that [the native title legislation] does not require that "all" of the members of the relevant claim group be involved in the decision. The key question will be whether a reasonable opportunity to participate in the decision-making process has been afforded by the notice for a relevant meeting."[15]

"We consider the authorities in relation to processes under the NTA to be illustrative of how a seemingly rigid statutory obligation to consult persons holding a communal interest may operate in a workable manner"[16] (emphasis added).

"…there is no definition of what constitutes "consultation for the purpose of Reg11A [now regulation 25] ... A titleholder will need to "demonstrate" to NOPSEMA that what it did constituted consultation appropriate and adapted to the nature of the interests of the relevant persons"[17] (emphasis added).

The Judgment in the *Tipakalippa Appeal* makes it clear that a Titleholder will have some decisional choice in identifying which person(s) are to be approached, how the information will be given to allow the "*relevant person*" to assess the possible consequence of the proposed activities on their functions, interests or activities, and how the requisite consultation is undertaken[18]. Consultation is not fixed to a rigid process and will be adapted so that it is informed by the relevant person or group. Woodside has met its regulation 25 requirements through its consultation methodology (Section 5.2).

Consistent with the *Tipakalippa Appeal*, Woodside considers NTA-style "*full group*" meetings are not required for there to be compliance with regulation 25. Nominated representative corporations (such as PBCs established under the NTA) have a designated role of representing the views of their member Traditional Custodians. They have established methods for engaging with their own members. Woodside will not undermine the purpose and authority of nominated representative corporations by requiring full group meetings where the nominated representative corporations have not requested engagement of members via full group meetings. It is not appropriate for Titleholders to direct or challenge the nominated representative corporations on how to engage with their members.

Woodside's approach described below demonstrates that sufficient information and a reasonable opportunity is provided to individual Traditional Custodians to provide feedback on Woodside activities beyond the opportunity provided to nominated representative corporations.

5.5.2 Consultation method

Woodside's Indigenous Affairs team has experience in engaging and working with Traditional Custodian organisations and individuals, including within the Commonwealth Native Title and cultural heritage systems, and state and territory cultural heritage and land rights systems. The team understands the complexities of making information accessible to groups and individuals and engaging in accordance with Traditional Custodian groups' established channels of communication and methods of consultation. Woodside's Indigenous Affairs team exercises its professional judgement and is respectful of long-standing relationships (where in place) when considering consultation with Traditional Custodian groups. The Indigenous Affairs team's approach is also informed by the established systems of recognition for Traditional Custodian groups and their nominated representative corporations within particular jurisdictions.

[14] *Santos NA Barossa Pty Ltd v Tipakalippa [2022] FCAFC 193 at paragraph [95], [98], [103]-[104] and [109].*

[15] *Santos NA Barossa Pty Ltd v Tipakalippa [2022] FCAFC 193 at paragraph [98].*

[16] *Santos NA Barossa Pty Ltd v Tipakalippa [2022] FCAFC 193 at paragraph [96].*

[17] *Santos NA Barossa Pty Ltd v Tipakalippa [2022] FCAFC 193 at paragraph [104].*

[18] *Santos NA Barossa Pty Ltd v Tipakalippa [2022] FCAFC 193 at paragraph [47] and [48].*

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

For example, the methodology for engaging with Traditional Custodian groups in the Northern Territory ('not relevant' for this EP) tends to centre around engagement through Aboriginal land councils (under the *Aboriginal Land Rights (Northern Territory) Act 1976 (Cth*)) as well as community meetings that target clan groups where they do not have PBCs or other nominated representative corporations to represent them.

By contrast, recognition for Traditional Custodian groups and their nominated representative corporations in Western Australia falls under the *Native Title Act 1993 (Cth)* because the vast majority of the Western Australian coastline is settled under the Native Title regime. This means that the methodology and process for consultation in Western Australia places greater emphasis on, but is not limited to, Native Title Representative Bodies and PBCs.

Native Title determinations provide certainty about the appropriate Traditional Custodian groups that have the cultural authority to speak for country adjacent to the EMBA and help Woodside to identify Traditional Custodian persons and groups asserting Traditional Custodianship. The Judgment in the *Tipakalippa Appeal* endorses methods of consultation with groups of relevant persons that are appropriate and adapted to the characteristics of groups[19]. Woodside's consultation methodology is adapted and appropriate to the recognised systems of communal interests in Western Australia.

In Western Australia (relevant for this EP), Woodside has sought to follow the established, effective and respectful means of communication used by Native Title Representative Bodies and nominated representative corporations (including PBCs) with their respective Traditional Custodian communities. Woodside follows these processes for the appropriate broad capture of individuals' awareness of our activities, to self-identify (Section 5.5.2), and to provide feedback to inform the management of environmental impacts and risks.

Using these processes, Woodside communicates information about EPs by:

- advertising in relevant Indigenous and non-Indigenous newspapers. This encourages self-identification, by advertising proposed activities widely through newspapers that have national and intra-state circulation, i.e., Koori Mail, National Indigenous Times, The West Australian.
- creating carefully considered Summary Consultation Information Sheets with content developed by Woodside's Indigenous Affairs Team to remove jargon and present information in a simplified format.
- directing contact through nominated representative corporations.
- using social media (i.e. Facebook/Instagram), texts, phone calls and emails. These mediums are the preferred communication methods used by Traditional Custodians throughout Western Australia and, on that basis, used by Native Title Representative Bodies and other government agencies and industry, to engage with Traditional Custodians or call meetings. Indigenous Australian woman, Professor Bronwyn Castle, through 10 years of research found *"Social media is an intrinsic part of daily life. The use of Facebook is around 20 per cent higher [among Indigenous people] than the national average across all geographical locations"* (Social media mob: being Indigenous online, Professor Bronwyn Carlson (2018)).
- For ongoing consultation post Regulation 25 consultation, Woodside supports ongoing engagement with Traditional Custodians. Woodside is committed to ongoing engagement and support to care for and manage country, including Sea Country.
- basing members of its Indigenous Affairs team in Karratha and Roebourne who serve as on-Country points of contact for Traditional Custodian organisations and individuals. These team members have broad local knowledge and established, on-the-ground relationships within communities. This helps contribute to positive outcomes including distributing information and providing notice to the community to support Traditional Custodian attendance and involvement at Woodside's information sessions and Community roadshows.
- ensuring that from the commencement of engagement with Traditional Custodians, Woodside seeks direction on how they prefer to be consulted and has consulted accordingly. Consultation processes that are informed by Traditional Custodians and co-designed on a case-by-case basis and includes their

[19] *Santos NA Barossa Pty Ltd v Tipakalippa [2022] FCAFC 193 at paragraph [95].[104].[153].*

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

direction as to cultural protocols, structure of consultation and who to appropriately consult with (such as elders).

- holding meetings on Country at a place and time agreed with Traditional Custodians and offering and providing financial assistance for meeting expenses (as appropriate).
- providing information specifically designed to be easily understood, to reach all relevant people, and give a reasonable period of time for those people to make an informed assessment of the possible consequences of the proposed activity on them.

The Indigenous Affairs team approach to consultation is also consistent with the Federal Court's decision in the *Munkara Case*. The *Munkara Case* notes that the word "*culture*" (and hence the word "*cultural*") has a communal aspect to it. To establish cultural features, it is necessary that the beliefs and values are held by the relevant people *as a people*. For values, features or beliefs that are expressed by an individual to be "*cultural*" they cannot simply be an individual's belief - the belief must have a communal aspect too, and demonstrate that the "*individual beliefs are broadly representative of the beliefs of other members of the group*"[20]. The phrase "*cultural features*", when applied to "people" as constituent parts of an ecosystem, is not directed to idiosyncratic views or beliefs of an individual[21]. When the Indigenous Affairs team is told that a particular value is cultural by an individual Traditional Owner, that information is taken back to the relevant cultural authority to test its broad acceptance. In the case of gender sensitive information, that information would be restricted to the specific gender within the community.

5.5.3 Identification of relevant persons

To undertake consultation, Woodside has developed a methodology for identifying relevant persons, in accordance with regulation 25(1) (Section 5.2 and 5.3).

Specific to Woodside's approach for identifying relevant Traditional Custodians, Woodside's Indigenous Communities Policy and consultation approach is guided by Traditional Custodians by directing consultations through their nominated representative corporation. This has been implemented by Woodside through consultation with a nominated representative corporation, where that corporation has advised Woodside that it acts as the representative body for a Traditional Custodian group and has requested that Woodside engage with it as the representative body for that Traditional Custodian group.

Woodside asks nominated representative corporations (such as PBCs) and Native Title Representative Bodies to identify individuals that should be consulted, and enables individuals to self-identify in response to national and local advertising, social media and community engagement opportunities (Section 5.5.4). Where there is a nominated representative corporation for an area, unless directed by the nominated representative corporation, Woodside does not directly approach individuals for consultation, because this has the potential to undermine the role of the nominated representative corporation. Approaching individuals directly is a practice that is no longer considered acceptable because of divisions it has been shown to cause in communities. In addition to asking for the identification of individuals, Woodside also asks nominated representative corporations to distribute consultation information to whomever the nominated representative corporations deem appropriate, including members of the nominated representative corporations who are communal rights holders.

Having said this, as set out in further detail in Section 5.5.4 below, individuals are also given the opportunity to self-identify, consult and provide their own feedback on the proposed activity. When approached in this way, Woodside will engage individuals as relevant persons and will also (subject to any confidentiality or cultural restrictions) advise the nominated representative body of the consultation where it relates to cultural values. These methods of consultation are consistent with requirements for notification under the *Native Title Act 1993 (Cth),* such as under the future act provisions (section 29), which requires notification of the Native Title Representative Body, the PBC (or nominated representative) and notification through newspapers. The notification process has been selected as a respectful, practical and pragmatic analogue for consultation with Indigenous peoples, rather than requiring members to be notified via a formal authorisation process which

[20] *Munkara v Santos NA Barossa Pty Ltd (No 3) [2024] FCA 9 at [205]*

[21] *Munkara v Santos NA Barossa Pty Ltd (No 3) [2024] FCA 9 at [205]*

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

seeks, from members, authorisation of agreements and Native Title/compensation claims under the *Native Title Act 1993 (Cth)*[22].

In this consultation, Woodside requested nominated representative corporations to identify any potential individual relevant persons for consultation. Woodside requests nominated representative corporations to distribute consultation materials to their members. However, Woodside recognises that the process is voluntary and that it cannot compel nominated representative corporations (such as PBCs) to do so. Woodside also recognises that it would not be appropriate to seek to audit the nominated representative corporations for compliance with any member consultation request.

5.5.4 Opportunity to self-identify and identifying other individuals

Woodside requests nominated representative corporations and Native Title Representative Bodies to identify other individuals to consult with or individuals who may seek to self-identify for a proposed activity. Woodside also advertises broadly through Indigenous, national and local advertising, social media and community engagement opportunities to provide individuals with an opportunity to consult. Woodside does not directly approach individuals for consultation, as this undermines the role of the nominated representative corporations (Section 5.5.3 5.5.4). Woodside's approach to providing individual Traditional Custodians the opportunity to self-identify and consult for an EP is as follows:

- Woodside applies the principles of self-determination when consulting with Traditional Custodians by consulting through the Traditional Custodians authorised representative entities.
- Recognising the function of nominated representative corporations (such as PBCs) and Native Title Representative Bodies to represent communal interests and manage cultural values, Woodside requests that the information provided to representative entities is provided to their members but Woodside recognises the process is voluntary and Woodside cannot compel them to do so, nor seek to audit the representative entities for compliance with any request.
- Representative entities cannot provide membership details to Woodside due to individual confidentiality requirements.
- Woodside requests advice as to who else Woodside should be consulting but recognises the process is voluntary and cannot compel nominated representative corporations to provide this information.
- Modern Indigenous engagement practises rely on the building and maintaining of respectful relationships. To date, most nominated representative corporations have requested the building of that relationship, where one is not already in place.
- While Woodside has, in some cases, approached individual directors and Elders outside of this process due to requirements imposed in EP consultation, this approach is considered inappropriate by modern Indigenous engagement standards, fundamentally undermining the authority of the authorised representative entity and can be detrimental to the relationship.

For this proposed activity, Woodside requested nominated representative corporations (including PBCs) and Native Title Representative Bodies to identify any potential individual relevant persons for consultation, and to distribute consultation materials to their member base. However, Woodside recognises the process is voluntary and it cannot compel them to do so nor seek to audit the representative entities for compliance with any request. Woodside has not been directed to engage individual Traditional Custodians by nominated representative corporations for this proposed activity. Woodside has nevertheless provided reasonable opportunity for individual Traditional Custodians to engage in consultation through appropriate and adapted consultation methods.

5.5.5 Sufficient information

Woodside recognises that the information sufficient to allow a person or organisation to make an informed assessment of the possible consequences of the proposed activity on their functions, interests or activities may vary and may depend on the degree to which a relevant person is potentially affected.

[22] *Santos NA Barossa Pty Ltd v Tipakalippa [2022] FCAFC 193, at [104]*

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Woodside produces Consultation Information Sheets for each EP which is provided to relevant persons and organisations for the purpose of seeking feedback on the activity (Section 5.4.1). In response to feedback from Traditional Custodians on information provisions, Woodside has tailored effective consultation methods for its activities. These methods are specifically designed for Traditional Custodians, so that information is provided in a form that is readily accessible and appropriate. The targeted Summary Information Sheet is developed and reviewed by Woodside's Indigenous Affairs Team to ensure that content is appropriate to the intended recipients, which is then provided to relevant Traditional Custodian groups. Phone calls are made to provide context to the consultation.

Where face-to-face consultation meetings are requested, Woodside coordinates engagement at the Traditional Custodians location of choice (where practicable) and with their nominated attendees. Along with members of Woodside's Indigenous Affairs engagement team, key project personnel and environmental experts are typically present to enable effective communication and prompt response to questions. Materials for these sessions incorporate visual aids such as photos, maps and videos, and plain language suitable for people with a non-technical background.

During consultation, Woodside provides relevant persons with additional information as appropriate in response to requests. There is no requirement to provide relevant persons with all information or documents requested and a Titleholder will have provided sufficient information even where it has not provided all information or documents requested.

Woodside has sought to provide sufficient information to individual members of nominated representative corporations (such as PBCs) by providing information to representative bodies and requesting dissemination with members. However, Woodside recognises consultation is voluntary and it cannot compel them to do so, nor would it be appropriate to seek to audit the representative entities for compliance with any request.

5.5.6 Reasonable period for consultation

Woodside seeks to consult in order to support preparation of its EP. Woodside recognises that what constitutes a reasonable period for consultation should be considered on a case-by-case basis, with reference to the nature, scale and complexity of the activity (Section 5.4.2).

5.5.7 Discharge of Regulation 25

Woodside's consideration and approach to discharging regulation 25 for relevant persons is discussed in Section 5.4.3. In addition to this, Woodside has considered the application of regulation 25 specific to Traditional Custodians based on the Tipakalippa Appeal.

In relation to Traditional Custodian relevant persons (and all relevant persons), Woodside has discharged its duty under regulation 25 of the Environment Regulations. Woodside considers that consultation under regulation 25 is complete (Section 5.4.3).

5.6 Providing feedback and assessment of merit of objections or claims

There are a number of ways in which feedback can be provided. Feedback can be provided through the Woodside feedback email or via the Woodside feedback toll free phone line as outlined in the Consultation Information Sheet and the Woodside website. Where appropriate, consultation may also be supported by phone calls or meetings. An EP feedback form is also available on Woodside's website enabling relevant persons to provide feedback on proposed activities, or to request additional information.

Woodside consults widely on its EPs and notes that feedback is received in various forms. Feedback that is considered inappropriate or that puts the environment, health, safety or wellbeing of Woodside employees or operations at risk will not be tolerated. Woodside respects people's rights to protest peacefully and lawfully but actions that put the environment, health, safety or wellbeing of Woodside employees or operations at risk go beyond those boundaries.

Woodside accepts feedback and engages in consultation in order to achieve the aims set out in Section 5.2. Woodside recognises that there are persons and organisations that take a view that Woodside's operations and/or growth projects should be stopped or at least delayed as far as possible. Whilst Woodside assesses the merits of objections or claims received, it acknowledges NOPSEMA's guidance in its brochure entitled Consultation on offshore petroleum environment plans information for the community, which states that relevant persons are free to respond on any matter and raise any concern, however this may not be able to

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

be considered if it is outside the scope or purpose of the EP and approval process, for example, statements of fundamental objection to offshore petroleum activities or information containing personal threats or profanities. Under regulation 34(g), there is no requirement for a relevant person to agree or confirm that they have been adequately consulted.

During consultation, relevant persons may seek to introduce other issues (such as agreements) that are not specific to EP consultation. While concepts of agreements may be associated with broader consultation processes, consultation for specific EPs can occur in parallel.

Feedback from relevant persons is reviewed and an assessment of the merits is made of information provided as well as objections or claims about the adverse impact of each activity to which the EP relates. This might, for instance, be done through a review of data and literature and for relevance to the nature and scale of the activity outlined in the EP. Consistent with the aim of consultation in Section 5.2, Woodside will consider information received when reviewing and designing measures to put in place to minimise harm to relevant persons and where reasonable or practical to further manage impacts and risks to ALARP and acceptable levels.

Woodside considers feedback during consultation from relevant persons and other persons Woodside chose to contact (see Section 5.3.4 and 5.3.7). This information is summarised in Appendix F, Table 1 and Table 2 of the EP and includes a statement of Woodside's response, or proposed response, if any, to each objection and claim.

In accordance with regulation 26(8), sensitive information (if any) in an EP, and the full text of any response by a relevant person to consultation under regulation 25, must be contained in the sensitive information part of the plan and not anywhere else in the plan.

5.7 Ongoing consultation

Consultation can continue to occur during the life of an EP, including after an EP has been accepted by NOPSEMA.

As per Woodside's ongoing consultation approach (refer to Section 7.10), feedback and comments received from relevant persons continue to be assessed and responded to, as required, throughout the life of an EP, including during its assessment and once accepted, in accordance with the intended outcome of consultation.

Should consultation feedback be received following the acceptance of an EP that identifies a measure or control that Woodside considers requires implementation or updates to meet the intended outcome of consultation, Woodside will apply its Management of Change and Revision process as appropriate (see Section 7.8).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6. ENVIRONMENTAL IMPACT AND RISK ASSESSMENT, PERFORMANCE OUTCOMES, STANDARDS AND MEASUREMENT CRITERIA

6.1 Overview

This section presents the impact and risk analysis and evaluation, EPOs, EPSs and MC for the Petroleum Activity, using the methodology described in Section 2 of this EP. Impacts and risks associated with the Petroleum Activity are summarised in Table 6-1 and evaluated throughout this section.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 6-1: Environmental impact analysis summary of planned and unplanned activities

Aspect	EP section	Risk rating				Acceptability of impact/risk
		Impact/ consequence	Potential impact/consequence level	Likelihood	Current risk rating	
Planned activities (routine and non-routine)						
Physical presence: disturbance to other marine users	Section 6.6.1	F	No lasting effect. Localised impact not significant to environmental receptor.	-	-	Broadly acceptable
Physical presence: disturbance to seabed	Section 6.6.2	F	No lasting effect. Localised impact not significant to environmental receptor.	-	-	Broadly acceptable
Routine and non-routine discharges: generation of noise from project vessels and helicopter operations	Section 6.6.3	F	No lasting effect. Localised impact not significant to environmental receptor.	-	-	Broadly acceptable
Routine and non-routine discharges: subsea fluids and fugitive hydrocarbons	Section 6.6.4	E	Slight and low-level impact on environmental feature/s or area/s of low significance attributes.	-	-	Broadly acceptable
Routine and non-routine discharges: vessel utility systems (bilge water, grey water, sewage, putrescible wastes and deck drainage water)	Section 6.6.5	F	No lasting effect. Localised impact not significant to environmental receptor.	-	-	Broadly acceptable
Routine atmospheric and greenhouse gas emissions: fuel combustion and cold venting	Section 6.6.6	F	No lasting effect. Localised impact not significant to environmental receptor.	-	-	Broadly acceptable
Routine and non-routine: external lighting on the project vessels	Section 6.6.7	E	Slight and low-level impact on environmental feature/s or area/s of low significance attributes.	-	-	Broadly acceptable
Unplanned activities (accidents, incidents, emergency situations)						
Unplanned hydrocarbon release: wellbore release	Section 6.7.2	D	Minor impact on environmental feature/s or area/s such as impact on feature of low significance with some ability to recover	1	M	Acceptable if ALARP

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Aspect	EP section	Risk rating				Acceptability of impact/risk
		Impact/ consequence	Potential impact/consequence level	Likelihood	Current risk rating	
Unplanned hydrocarbon release: vessel collision	Section 6.7.3	D	Minor impact on environmental feature/s or area/s such as impact on feature of low significance with some ability to recover	1	M	Acceptable if ALARP
Unplanned hydrocarbon release: hydrocarbon and chemical spills from vessel and subsea activities	Section 6.7.4	F	No lasting effect. Localised impact not significant to environmental receptor.	2	L	Broadly acceptable
Unplanned discharges: release of solid hazardous and non-hazardous wastes (including dropped objects)	Section 6.7.5	F	No lasting effect. Localised impact not significant to environmental receptor.	2	L	Broadly acceptable
Physical presence (unplanned): interactions with marine fauna	Section 6.7.6	E	Slight and low-level impact on environmental feature/s or area/s of low significance attributes.	1	L	Broadly acceptable
Physical presence (unplanned): introduction of invasive marine species	Section 6.7.7	D	Reputation: Minor, short-term local impact to reputation and brand or social licence to operate. Close scrutiny of asset level operations or future proposals	0	L	Broadly acceptable
Physical presence (unplanned): interaction with live infrastructure	Section 6.7.8	E	No lasting effect. Localised impact not significant to environmental receptor.	1	L	Broadly acceptable

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.2 Impacts and risks not deemed credible or outside the scope of this Environment Plan

During the ENVID, one risk was identified as either being outside the scope of this EP, or not relevant to the Petroleum Activity. This is described below.

6.2.1 Shallow/nearshore activities

The Petroleum Activity is in water depths between about 81 m and 128 m, about 120 km from the nearest town (Dampier). Consequently, risks and impacts associated with shallow and nearshore activities, such as anchoring and vessel grounding, were assessed as not credible.

6.2.2 Ongoing management of wells

After the intervention activities described in this EP are complete, the management of the wells will resume under the Okha FPSO Operations EP. Environmental impacts and risks associated with ongoing management of the wells, such as production of well fluids, including associated greenhouse gas (GHG) emissions, and maintenance of subsea well infrastructure is described and assessed under the accepted Okha FPSO Operations EP.

6.3 Cumulative impacts

Woodside has assessed the cumulative impacts of the Petroleum Activity in relation to other petroleum activities that could realistically result in overlapping temporal and spatial extents. The following has been identified:

- Infrastructure and activities relating to the Okha and Angel offshore facilities and the ongoing operations of subsea infrastructure (refer to Section 4.9.6).

Where relevant, cumulative impacts are considered in the risk and impact assessments in Sections 6.6 and 6.7.

6.4 Environmental performance outcomes, standards and measurement criteria

Section 21(7) of the Environment Regulations requires that an EP includes EPOs, EPSs and MC that address legislative and other controls to manage the environmental risks and impacts of the Petroleum Activity to ALARP and an acceptable level.

As defined in section 5 of the Environment Regulations, an EPO ‘for an activity, means a measurable level of performance required for the management of environmental aspects of the activity to ensure that environmental impacts and risks of the activity will be of an acceptable level’.

The EPOs, EPSs and MC specified in this EP are consistent with legislative requirements and Woodside’s standards and procedures. They have been developed based on the LCS, GP and PJ outlined in Section 2.3.5 and Section 2.3.6 as part of the acceptability and ALARP justification process. A breach of these EPOs or EPSs constitutes a ‘Recordable Incident’ under the Environment Regulations (refer to Section 7.11.4).

For the physical and biological receptors within the EMBA, Woodside has set EPOs that are consistent with the Matters of National Environmental Significance – Significant impact guidelines 1.1 (Department of the Environment, Water, Heritage and the Arts, 2013). EPOs are set so they are consistent with the principles of ESD as defined in section 3A of the EPBC Act, and demonstrated through the acceptability process (described in Section 2.4.2), which is applied to the aspects and receptors in Section 4. The EPOs for planned activities have been set at a level of environmental performance that considers the planned activities and associated level of environmental impact.

For social receptors, including fishing and other commercial activities, the EPOs that have been set reflect the requirements in section 280(2) of the OPGGS Act, in that the activities undertaken as part of developing the Petroleum Activity should not interfere with other marine users, to a greater extent than is necessary for the exercise of rights conferred by the titles granted.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.5 Presentation

The environmental impact and risk analysis and evaluation, demonstration of ALARP and acceptability, EPOs, EPSs and MC are presented in tabular form throughout this section, as shown in the example below. Italicised text in this example table denotes the purpose of each part of the table, with reference to the relevant sections of the Environment Regulations and this EP.

<table>
<tr><td colspan="14">Context
Description of the context for the impact/risk. Section 21(1), 21(2) and 21(3)</td></tr>
<tr><td colspan="2">Description of the activity – section 21(1)</td><td colspan="5">Description of the environment – sections 21(2)(3)</td><td colspan="7">Consultation – sections 25 and 24(b)</td></tr>
<tr><td colspan="14">Impact and risk evaluation summary
Summary of ENVID outcomes</td></tr>
<tr><td rowspan="2">Source of impact/risk
Section 21(1)</td><td colspan="6">Environmental value potentially impacted
Sections 21(2)(3)</td><td colspan="7">Evaluation
Sections 21(5)(6)</td></tr>
<tr><td>Marine sediment</td><td>Water quality</td><td>Air quality (incl odour)</td><td>Ecosystems/habitat</td><td>Species</td><td>Socioeconomic</td><td>Decision type</td><td>Consequence/impact</td><td>Likelihood</td><td>Risk rating</td><td>ALARP tools</td><td>Acceptability</td><td>Outcome</td></tr>
<tr><td>Summary of source of risk/impact</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td colspan="14">Description of source of impact or risk</td></tr>
<tr><td colspan="14">Description of the identified risk/impact including sources or threats that may lead to the impact/risk or identified event. Section 21(1).</td></tr>
<tr><td colspan="14">Impact or consequence assessment</td></tr>
<tr><td colspan="14">Environmental value(s) potentially impacted</td></tr>
<tr><td colspan="14">Discussion and assessment of the potential impacts to the identified environment value/s in accordance with sections 21(5) and 21(6).
Description of potential impacts to environmental values aligned to Woodside impacts and risk classifications (Section 2.3.6).</td></tr>
</table>

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Demonstration of ALARP				
Control considered	**Control feasibility (F) and cost/sacrifice (CS)[23]**	**Benefit in impact/risk reduction**	**Proportionality**	**Control adopted**
ALARP/hierarchy of control tools used – Section 2.3.5				
Summary of control considered to ensure the impacts and risks are continuously reduced to ALARP. *Section 21(5)(c).*	*Technical/logistical feasibility of the control.* *Cost/sacrifice required to implement the control (qualitative measure).*	*Qualitative commentary of impact/ risk that could be averted/environmental benefit gained if the cost/sacrifice is made and the control is adopted.*	*Proportionality of cost/sacrifice vs environmental benefit. If proportionate (benefits outweigh costs), the control will be adopted. If disproportionate (costs outweigh benefits), the control will not be adopted.*	*If control is adopted, reference to Control No. provided.*
ALARP statement: *Made based on the environmental impact/risk assessment outcomes, use of the relevant tools appropriate to the decision type (Section 2.3.4.2) and a proportionality assessment in accordance with* section *34(b).*				

Demonstration of acceptability
Acceptability statement: *Made based on applying the process described in Section 2.4 in accordance with* section *34(c).*

EPOs, EPSs and MC			
Environmental performance outcomes	**Controls**	**Performance standards**	**Measurement criteria**
EPO No. *S: Specific performance that addresses the legislative and other controls that manage the activity, and against which performance by Woodside in protecting the environment will be measured.* *M: Performance against the outcome will be measured through implementation of the controls via the MC.* *A: Achievability/feasibility of the outcome demonstrated via discussion of feasibility of controls in ALARP demonstration. Controls are directly linked to the outcome.* *R: The outcome will be relevant to the source of risk/impact and the potentially impacted environmental value.[24]* *T: The outcome will state the timeframe during which the outcome will apply or by which it will be achieved.*	*C No.* *Identified control adopted to ensure that the impacts and risks are continuously reduced to ALARP.* *Section 21(5)(c).*	*PS No.* *Statement of the performance required of a control measure.* *Section 21(7)(a).*	*MC No.* *Measurement criteria for determining whether the outcomes and standards have been met.* *Section 21(7)(c).*

[23] *Qualitative measure.*

[24] *Where impact/consequence descriptors are presented within EPOs, the descriptors are aligned with the definitions provided in the Woodside Risk Matrix (refer Section 2).*

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.6 Planned activities (routine and non-routine)

6.6.1 Physical presence: interaction with other marine users

Context		
Project vessels – Section 3.6	Socioeconomic – Section 4.9	Stakeholder consultation – Section 5

Impact evaluation summary

Source of impact	***Environmental value potentially impacted***						***Evaluation***						
	Marine sediment	Water quality	Air quality (incl odour)	Ecosystems/habitat	Species	Socioeconomic	Decision type	Consequence/impact	Likelihood	Risk rating	ALARP tools	Acceptability	Outcome
Presence of LWIV and support vessels excluding or displacing other marine users from the Operational area (commercial fishing, commercial shipping, tourism and recreation)						X	A	F	-	-	LCS GP	Broadly acceptable	EPO 1

Description of source of impact

An LWIV, supported by one or more dynamically positioned support vessels, will be in the Operational area temporarily to undertake the Petroleum Activity (refer to Section 3.6). The presence of these vessels and the LWIV in the Operational area presents an opportunity for interaction with third-party marine users. A temporary 500 m radius safety exclusion zone will be maintained around the LWIV. Marine users are requested to avoid this area during the LWI activities for safety purposes.

As described in Section 3.4, the duration of activities per well ranges from 14 to 35 days (refer to Table 3-3), and may be undertaken across separate campaigns depending on schedule, vessel availability, weather and operational requirements. Activities will be conducted 24 hours per day, seven days per week.

The temporary presence of the LWIV, support vessels and associated safety exclusion zone represents the primary source of interaction with other marine users within the Operational area.

Impact assessment

Environmental value(s) potentially impacted

Commercial fishing

Three Commonwealth fishery areas overlap the Operational area, including the Southern Bluefin Tuna Fishery, Western Skipjack Fishery and Western Tuna and Billfish Fishery (refer to Table 4-23). However, catch and effort data show no recorded fishing effort for these fisheries and there is no potential for interaction with the Petroleum Activity.

While 13 State commercial fisheries areas overlap the Operational area, four fisheries are active including the Mackerel Managed Fishery (Area 2), Pilbara Fish Trawl (Interim) Managed Fishery, Pilbara Trap Managed Fishery and Pilbara Line Fishery (Condition) (refer to Table 4-23), which have a potential for interaction with the Petroleum Activity.

The presence of temporary exclusion zones and vessels in the Operational area may restrict the use of the areas by the fishery, and any other commercial fisheries that were identified as having potential (but unlikely) to use the Operational area. Given the temporary exclusion zones are relatively small (500 m around the LWIV) and temporary, the area from which fishing vessels may be displaced at any one time is negligible when compared to the area available to fish.

Given the short duration of the Petroleum Activity (refer to Section 3.4), the temporary presence of the LWIV and support vessels in the Operational area may result in localised interference, including navigational avoidance and short-term displacement of any commercial fishing vessels in the immediate vicinity.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Displacement of recreational fishing

Tourism and recreation activity in the Operational area is expected to be infrequent due to the offshore location and water depths (refer to Section 4.9.4). There are no emergent features within the Operational area that would attract tourism or recreational use. No recreational or charter fishing operators have been identified as potentially occurring within the Operational area.

If tourism or recreational vessels were to transit through the Operational area, they may be temporarily excluded from the 500 m safety exclusion zone around the LWIV for the duration of the Petroleum Activity. Given this small area, the potential impact is considered temporary and localised.

Commercial shipping

Shipping near the Operational area is mainly related to the resources industry (refer to Section 4.9.5). To reduce the likelihood of interactions between commercial vessels and offshore facilities, AMSA has introduced shipping fairways within which commercial vessels are advised to navigate. The fairways are not mandatory, but AMSA strongly recommends commercial vessels remain within the fairways when transiting the region. Using shipping fairways is considered good seafaring practice, with Australian Ship Reporting System data from AMSA indicating cargo ships and tankers routinely navigate within the established fairways.

No recognised shipping lanes overlap the Operational area; the nearest fairway is about 38 km north-west of the Operational area (refer to Section 4.9.5).

The potential impacts associated with this Petroleum Activity may include displacement of vessels as they make slight course alterations to avoid the LWIV and support vessels. Considering the highly localised and temporary nature of the impact, no lasting effect on commercial shipping activities is anticipated.

Oil and gas

Other oil and gas facilities are in the vicinity of the Operational area (refer to Section 4.9.6). The CK4, LH3, WA7 and WA8 wells are part of the Woodside Okha facilities, and Okha FPSO and subsea production infrastructure are within the Operational area.

The WA7 and WA8 wells are the closest wells to the Okha FPSO, being about 950 m to the west and 950 m to the north of the Okha FPSO swing radius respectively. The Petroleum Activity will be managed within Woodside to avoid disrupting the Okha facility operations. There are not expected to be any impacts to oil and gas operators from the Petroleum Activity.

Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)[25]***	***Benefit in impact reduction***	***Proportionality***	***Control adopted***
Legislation, codes and standards				
Vessels comply with Marine Orders for safe vessel operations, specifically: • Marine Order 21 (Safety and emergency arrangements) • Marine Order 27 (Safety of navigation and radio equipment) • Marine Order 30 (Prevention of collisions).	F: Yes. CS: Minimal cost. Standard practice.	Compliance with Marine Orders 21, 27 and 30 is required under Australian regulations and is standard practice for commercial vessels as applicable to vessel size, type and class. Compliance reduces the likelihood of adverse interactions between other marine users and the Petroleum Activity.	Legislative requirement – must be adopted.	Yes C 1.1

[25] *Qualitative measure.*

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)[25]***	***Benefit in impact reduction***	***Proportionality***	***Control adopted***
Establishment of a 500 m safety exclusion zone around the LWIV.	F: Yes. CS: Minimal cost. Standard practice.	Establishment of a 500 m safety exclusion zone around LWIV and installation vessels reduces the likelihood of interaction with other marine users.	Benefits outweigh cost/sacrifice. Control is also standard practice.	Yes C 1.2
Good practice				
Notify AHO no less than four weeks prior to the commencement of the first activity, and then subsequently when vessels are undertaking activities within the Operational Area for more than three weeks at a time.	F: Yes. CS: Minimal cost. Standard practice.	Notification to AHO will enable them to generate navigation warnings (Maritime Safety Information Notifications and Notices to Mariners, including AUSCOAST warnings where relevant).	Benefits outweigh cost/sacrifice. Control is standard practice.	Yes C 1.3
Notify relevant government departments, fishing industry and recreational marine representative bodies (as requested) at least 10 days prior to commencement and following completion of first activity, and then subsequently when vessels are undertaking activities within the Operational Area for more than three weeks at a time. as requested.	F: Yes. CS: Minimal cost. Standard practice.	Communicating the Petroleum Activity to other marine users ensures they are informed and aware, reducing the likelihood of interfering with other marine users.	Benefits outweigh cost/sacrifice. Control is also standard practice.	Yes C 1.4
Notify AMSA's JRCC at least 24 to 48 hours, where operationally practicable, before operations commence.	F: Yes. CS: Minimal cost. Standard practice.	Communicating the Petroleum Activity to other marine users ensures they are informed and aware, reducing the likelihood of interfering with other marine users.	Benefits outweigh cost/sacrifice. Control is also standard practice.	Yes C 1.5
Professional judgement – Eliminate				
Limit well intervention activities to avoid peak shipping and peak commercial fishing activities.	F: No. Shipping occurs year-round and cannot be avoided. Concurrent activities with fishing seasons cannot be eliminated as exact timings for activities are not confirmed. CS: Not considered – control not feasible.	Not considered – control not feasible.	Not considered – control not feasible.	No

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)[25]***	***Benefit in impact reduction***	***Proportionality***	***Control adopted***
Eliminate use of vessels.	F: No. The use of vessels is required to conduct the Petroleum Activity. The number and type of vessels used for the Petroleum Activity are similar to other intervention activities undertaken in Australia. CS: Not considered – control not feasible.	Not considered – control not feasible.	Not considered – control not feasible.	No
Professional judgement – Substitute				
No controls identified.				
Professional judgement – Engineered solution				
No controls identified.				
ALARP statement: Based on the assessment outcomes, use of the relevant tools appropriate to the decision type (i.e. Decision Type A; Section 2.3.4.2) and Woodside's criteria for demonstrating ALARP (Section 2.4.1), Woodside considers the adopted controls appropriate to manage potential impacts associated with presence of the LWIV and support vessels during the Petroleum Activity. As no reasonably practicable additional or alternative controls were identified that would further reduce the impacts without disproportionate sacrifice, the impacts are considered ALARP.				

Demonstration of acceptability
Acceptability statement: The impact assessment has determined that, given the adopted controls, the presence of the LWIV and support vessels during the Petroleum Activity may result in temporary and localised impact with no lasting effect to commercial fishing, recreational fishing and shipping activity. Further opportunities to reduce the impacts and risks have been investigated above. The adopted controls are considered good oil field practice or industry best practice and meet AMSA and AHO expectations as advised during consultation. Based on the assessment outcomes, use of the relevant tools appropriate to the decision type (i.e. Decision Type A; Section 2.3.4.2) and Woodside's criteria for demonstrating acceptability (Section 2.4.2), Woodside considers the adopted controls appropriate to manage the impacts to a level that is broadly acceptable, and compliance with those controls demonstrates the EPOs are met.

EPOs, EPSs and MC			
EPOs	***Controls***	***Performance standards***	***Measurement criteria***
EPO 1 Prevent adverse interactions between LWIV and support vessels and other marine users during the Petroleum Activity.	C.1.1 Vessels comply with Marine Orders for safe vessel operations, specifically: • Marine Order 21 (Safety and emergency arrangements) • Marine Order 27 (Safety of navigation and radio equipment) • Marine Order 30 (Prevention of collisions).	PS 1.1.1 Contracted vessels comply with Marine Orders as required by vessel size, type and class.	MC 1.1.1 Marine verification records demonstrate compliance with relevant Marine Orders.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

EPOs, EPSs and MC			
EPOs	***Controls***	***Performance standards***	***Measurement criteria***
	C 1.2 Establishment of a 500 m safety exclusion zone around the LWIV and communicated to marine users.	PS 1.2.1 A 500 m safety exclusion zone established, communicated and maintained around the LWIV.	MC 1.2.1 Records demonstrate the 500 m safety exclusion zone has been established and details have been communicated to approaching third-party vessels.
	C.1.3 Notify AHO no less than four weeks prior to the commencement of the first activity, and then subsequently when vessels are undertaking activities within the Operational Area for more than three weeks at a time.	PS 1.3.1 Notification to AHO of activities and movements no less than four working weeks prior to the commencement of the first activity, and then subsequently when vessels are undertaking activities within the Operational Area for more than three weeks at a time.	MC 1.3.1 Records demonstrate AHO notifications are complete.
	C. 1.4 Notify relevant government departments, fishing industry and recreational marine representative bodies (as requested) at least 10 days prior to commencement and following completion of first activity, and then subsequently when vessels are undertaking activities within the Operational Area for more than three weeks at a time.	PS 1.4.1 Notification to relevant government departments, fishing industry and recreational marine representative bodies as requested and identified in Table 7-5 at least 10 days prior to commencement and following completion of first activity, and then subsequently when vessels are undertaking activities within the Operational Area for more than three weeks at a time.	MC 1.4.1 Consultation records demonstrate relevant persons and organisations have been notified before well intervention activities began.
	C 1.5 Notify AMSA's JRCC at least 24 to 48 hours, where operationally practicable, before operations commence.	PS 1.5.1 Notification to AMSA's JRCC at least 24 to 48 hours, where operationally practicable, before operations commence.	MC 1.5.1 Records demonstrate AMSA's JRCC was notified.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.6.2 Physical presence: disturbance to seabed

Context		
Remotely operated vehicles – Section 3.7.2	Physical environment – Section 4.4 Habitats and biological communities – Section 4.5 Cultural values and heritage – Section 4.9.1	Stakeholder consultation – Section 5

Impact evaluation summary

Source of impact	***Environmental value potentially impacted***						***Evaluation***						
	Marine sediment	Water quality	Air quality (incl odour)	Ecosystems/habitat	Species	Socioeconomic	Decision type	Consequence/impact	Likelihood	Risk rating	ALARP tools	Acceptability	Outcome
Disturbance to seabed from ROV operations	X	X		X			A	F	-	-	LCS GP ES	Broadly acceptable	EPO 2 EPO 3
Disturbance to seabed from placement and recovery of transponders and clump weights on seabed	X	X		X			A	F	-	-			
Disturbance to seafloor from equipment laydown	X	X		X			A	F	-	-			

Description of source of impact

ROVs

ROVs may be used during LWI activities for visual survey, transponder deployment and retrieval, cleaning and for intervention support. The use of ROVs may result in temporary seabed disturbance and suspension of sediment, causing increased turbidity as a result of working close to, or occasionally on, the seabed. ROVs and AUVs are typically deployed from a vessel using a crane or an A-frame. The footprint of a typical work class ROV is about 2.5 m by 1.7 m (4.25 m²).

Subsea cleaning, sediment and marine growth removal and other preparation activities

Subsea cleaning and preparation activities include removing marine growth from infrastructure such as the XTs (refer to Section 3.5.3). Removing marine growth may be done in various ways (water jetting, brush systems, acid). Methods that have the potential to impact the seabed include the use of high-pressure water or brush systems mounted on an ROV.

An ROV may be used to relocate sediment material around the well location to allow inspection or intervention works. Relocating sediment involves using an ROV-mounted suction pump to remove sediment that has built up around the well infrastructure. This will cause localised and temporary impacts to water quality from increased turbidity and may cause localised and temporary impacts to benthic habitats.

Underwater acoustic positioning – seabed equipment placement

An array of LBL or USBL transponders may be installed on the seabed to support LWI activities. Transponders may be deployed to the seabed either by a clump weight or mounted on a seabed frame:

- Standard clump weights (cement or steel) typically weigh about 80 kg.
- A typical seabed frame is 1.5 m × 1.5 m × 1.5 m in dimension and weighs about 40 kg.

On completion of the positioning operation, the array transponders moored by clump weight will be recovered by means of an acoustic release and the clump weights removed from the seabed. The transponders mounted on seabed frames will be removed by ROV.

Equipment laydown

Equipment such as ROV frames and baskets may be placed on the seafloor during LWI activities. Equipment laydown is temporary and all equipment will be removed once the activities are complete.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Localised seabed disturbance may occur if subsea XTs need to be wet parked. Placement of XTs on the seabed will result in temporary seabed disturbance and suspension of sediment, causing increased turbidity.

Impact assessment

Environmental value(s) potentially impacted

Seabed disturbance from the Petroleum Activity can be categorised into two potential impacts:

- direct physical disturbance of benthic habitat
- indirect disturbance to benthic habitats from sedimentation.

Physical disturbance to benthic habitats

Subsea cleaning activities and the placement of seabed equipment such as transponders, clump weights, frames or temporary intervention components are likely to result in localised and short-term physical disturbance of benthic habitats. ROV operations are likely to result in impacts ranging from localised to short term, physical modification to the seabed and localised disturbance to soft sediments.

The Operational area are expected to consist primarily of sandy substrate and soft sediments (refer to Section 4.5). Broad-scale bathymetric surveys around the Operational area show the seabed is relatively flat and featureless. Communities in the area are expected to largely consist of low-density sessile benthic biota and mobile epifauna.

Physical impacts from the Petroleum Activity are expected to be for the most part confined to sediment-burrowing infauna associated with the soft sediment seabed. Impacts to epifauna associated with hard substrate could occur but would represent a small proportion of the wider representative biota. ROV activities near the seafloor and associated sediment relocation activities may result in localised impacts to deepwater biota, as a result of elevated turbidity and the clogging of respiratory and feeding parts (turbidity) of filter-feeding organisms. However, elevated turbidity would only be expected to be localised and of no lasting effect, and is therefore not expected to have any significant impact on environment receptors, particularly given the low densities of benthic organisms at the water depths of the Operational area.

Water and sediment quality

Temporary increases in turbidity and suspended sediment concentrations may occur when ROVs work close to the seabed or when high-pressure water jetting is used to remove marine growth from infrastructure. These effects are expected to be localised to the immediate working area and short-lived, as disturbed sediments will rapidly settle once activities cease. Water jetting will be limited to what is necessary to complete cleaning.

Resuspended sediment loads are not likely to be significant due to the relatively small footprint of disturbance. Given the short nature of each activity, and the small footprint, any impacts to water and sediment quality are likely to be localised and of no lasting effect.

Key ecological feature – Ancient Coastline at 125 metre Depth Contour

The Operational Area Part 2 (LH3) overlaps the Ancient Coastline at 125 m Depth Contour KEF (Figure 4-11). Benthic habitat surveys in the region indicate benthic habitats within the KEF are characterised by sand interspersed with areas of rubble and outcroppings of limestone pavement (AIMS, 2014; RPS, 2011). Such habitats are widely distributed in the NWMR. No significant escarpments, species of conservation significance, emergent features or areas of high biological productivity characteristically associated with the Ancient Coastline at 125 m Depth Contour KEF have been observed in Operational Area Part 2 (LH3). As Operational Area Part 2 (LH3) only overlap a small portion of the KEF (see Figure 4-11) and values of the KEF have not been identified, the ecological functions of the KEF are not predicted to be impacted by the Petroleum Activity.

Cultural features and heritage values

Refer to Section 6.9 for an assessment of potential impacts to cultural features and heritage values from the Petroleum Activity. Control measures related to underwater cultural heritage have been captured in the tables below to demonstrate that impacts are reduced to ALARP and are of an acceptable level.

Cumulative impacts

Cumulative impacts are not expected. Seabed disturbance will be limited in extent and duration, and activities are spatially and temporally separated from other regional petroleum operations.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/ sacrifice (CS)[26]***	***Benefit in impact reduction***	***Proportionality***	***Control adopted***
Legislation, codes and standards				
None identified.				
Good practice				
Limit the area for laydown of equipment to a 500 m radius of the wells.	F: Yes. CS: Minimal cost. Standard practice.	Limiting area of laydown of equipment to a 500 m radius of the wells minimises the area over which seabed disturbance may occur.	Benefits outweigh cost/sacrifice.	Yes C 2.1
Report any potential underwater cultural heritage finds to relevant stakeholders and authorities in accordance with the Unexpected Finds Procedure, *Underwater Cultural Heritage Act* and the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984*.	F: Yes. CS: Minimal cost associated with the reporting process.	Meets legislative requirements and community expectations.	Benefits outweigh cost/sacrifice.	Yes C 3.1
Unexpected finds of potential UCH sites or features, including First Nations UCH, are managed in accordance with the Unexpected Finds Procedure set out in Section 7.2.3.	F: Yes. CS: Minimal cost associated with the reporting process.	Allows management of unexpected finds in accordance with legislative requirements, including UCH Guidance for Offshore Developments and the Guidelines to Assessing and Managing Impacts to Underwater Cultural Heritage in Australian Waters (DCCEEW, 2024a), under the *Underwater Cultural Heritage Act*, expert advice and community expectations.	Benefits outweigh cost/sacrifice.	Yes C 3.2
Environmental monitoring of the seabed before and after the Petroleum Activity to assess any impacts to the seabed.	F: Yes. CS: Significant. Monitoring of the seabed would have significant additional costs to obtain and analyse data with the spatial resolution to accurately assess changes to the seabed habitat.	Environmental monitoring would not result in any additional information about the seabed above what is provided by the Woodside Well Location and Site Appraisal Data Sheet. Although adoption of this control could be used to verify EPOs, alternative controls identified also allow demonstration that the environmental outcome has been met based on the nature of the activity (i.e. predictable impacts) and	Disproportionate – cost/sacrifice outweighs benefit to be gained.	No

[26] *Qualitative measure.*

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/ sacrifice (CS)[26]***	***Benefit in impact reduction***	***Proportionality***	***Control adopted***
		relatively low sensitivity of the area. Therefore, no additional reductions in likelihood or consequence would occur.		
Professional judgement – Eliminate				
Do not use ROV close to, or on, the seabed.	F: No. The use of ROVs (including work near or occasionally landed on the seabed) is critical, as the ROV is the main tool used to guide and manipulate equipment during well intervention activities. ROV usage is already limited to only that required to conduct the work effectively and safely. Due to visibility and operational issues, ROV work on or near the seabed is avoided unless necessary. CS: Not assessed, control not feasible.	Not considered – control not feasible.	Not considered – control not feasible.	No
Professional judgement – Substitute				
None identified.				
Professional judgement – Engineered solution				
None identified.				
ALARP statement: Based on the assessment outcomes, use of the relevant tools appropriate to the decision type (i.e. Decision Type A; Section 2.3.4.2) and Woodside's criteria for demonstrating ALARP (Section 2.4.1), Woodside considers the adopted controls appropriate to manage potential impacts associated with disturbance to seabed from the activity. As no reasonably practicable additional or alternative controls were identified that would further reduce the impacts without disproportionate sacrifice, the impacts are considered ALARP.				

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Demonstration of acceptability
Acceptability statement: The impact assessment has determined that, given the adopted controls, seabed disturbance may result in localised short-term impact not significant to environmental receptors. Further opportunities to reduce the impact have been investigated above. Based on the assessment outcomes, use of the relevant tools appropriate to the decision type (i.e. Decision Type A; Section 2.3.4.2) and Woodside's criteria for demonstrating acceptability (Section 2.4.2), Woodside considers the adopted controls appropriate to manage the impacts to a level that is broadly acceptable, and compliance with those controls demonstrates the EPOs are met.

EPOs, EPSs and MC			
EPOs	***Controls***	***Performance standards***	***Measurement criteria***
EPO 2 Seabed disturbance to be limited to planned activities and impacts described as part of the Petroleum Activity and will not occur outside the Operational area.	C 2.1 Limit the area for laydown of equipment to a 500 m radius of the well.	PS 2.1.1 Laydown of equipment occurs within a 500 m radius of the wells.	MC 2.1.1 Records demonstrate equipment laydown occurs within a 500 m radius of the wells.
EPO 3 No adverse impact to UCH[27] without a permit.	C 3.1 Review of existing survey data by a suitably qualified maritime archaeologist to inform areas for laydown and/or installation of equipment to avoid or where not possible, minimise physical impacts to cultural heritage areas or prospective areas.	PS 3.1.1 Existing survey data reviewed by a suitably qualified maritime archaeologist to inform areas for survey activities and/or positioning of equipment (e.g. geotechnical).	MC 3.1.1 Records demonstrate review of existing archaeological data completed prior to commencement of activities.
	C 3.2 Report any potential UCH finds to relevant stakeholders and authorities in accordance with the Unexpected Finds Procedure, *Underwater Cultural Heritage Act* and the *Aboriginal and Torres Strait Islander Heritage Protection Act*.	PS 3.2.1 Report any finds of potential UCH in accordance with the Unexpected Finds Procedure (set out in Section 7.2.3), including to the Australasian Underwater Cultural Heritage Database.	MC 3.2.1 Records of potential UCH finds reported to relevant authorities and stakeholders.
	C 3.3 Unexpected finds of potential UCH sites and features, including First Nations UCH, are managed in accordance with the Unexpected Finds Procedure, set out in Section 7.2.3.	PS 3.3.1 In the event a UCH site or feature is identified, implement the Unexpected Finds Procedure, set out in Section 7.2.3.	MC 3.3.1 No non-compliance with the Unexpected Finds Procedure.

[27] *Underwater cultural heritage is defined as any trace of human existence that has a cultural, historical or archaeological character and is located under water, in accordance with the Underwater Cultural Heritage Act.*

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.6.3 Routine and non-routine acoustic emissions

Context		
Project vessels – Section 3.6 Helicopters – Section 3.7 Underwater acoustic positioning – Section 3.5.2	Protected species – Section 4.6	Stakeholder consultation – Section 5

Impact evaluation summary

Source of impact	***Environmental value potentially impacted***						***Evaluation***						
	Marine sediment	Water quality	Air quality (incl odour)	Ecosystems/habitat	Species	Socioeconomic	Decision type	Consequence/impact	Likelihood	Risk rating	ALARP tools	Acceptability	Outcome
Generation of noise from LWIV and support vessels					X		A	F	-	-	LCS GP PJ	Broadly acceptable	EPO 4
Generation of atmospheric noise from helicopter transfers within the Operational area					X		A	F	-	-			
Generation of acoustic signals from positioning equipment (transponders)					X		A	F	-	-			

Description of source of impact

LWIV and support vessels will generate noise in the air and underwater, due to the operation of thruster engines, propeller cavitation, plugging operations, onboard machinery and other activities. These noises will contribute to and can exceed ambient noise levels, which range from around 90 dB re 1 µPa (root square mean sound pressure level (rms SPL)) under very calm, low wind conditions, to 120 dB re 1 µPa (rms SPL) under windy conditions (McCauley, 2005).

The following information describes the source sound levels for the LWIV, with support vessels. The most significant noise source will be the operation of thruster engines while operating the DP systems on the support vessels and LWIV.

Indicative timing for activities is provided in Section 3.4 and may occur throughout the year.

Vessel operations

Support vessels will not anchor within the Operational area due to water depth; therefore, vessels will use DP. The LWIV will have DP capability to assist with positioning where required. Vessels maintain DP for varying durations during the Petroleum Activity, depending on the activity being undertaken.

The main source of noise from a DP vessel relates to using thrusters McCauley (1998) measured underwater broadband noise equivalent to about 182 dB re 1 µPa at 1 m (rms SPL) from a support vessel holding station in the Timor Sea; similar noise levels are expected to be generated by support vessels used for this Petroleum Activity. The LWIV is expected to have a broadband source level of 181.0 dB re 1 μPa^2m^2. This is based on an installation vessel of greater length and a greater level of installed propulsion, the Deep Orient which JASCO has previously performed measurements of sound levels (Quijano and McPherson 2021).

Woodside commissioned JASCO (JASCO 2026) to undertake sound transmission loss modelling for the GWF4 Drilling and Subsea Installation activities to consider cumulative noise emissions. The scenarios considered included several permutations of support vessels and the MODU undertaking drilling activities, one of these scenarios is considered representatively conservative to inform the impact assessment for the Okha LWI activities.

The modelling study scenario considered the following sound-producing activities (four vessels) within close proximity (3 km) of each other in the Yodel field of 120 m water depth:

- a MODU drilling under DP (source level of 186.7 dB re 1 μPa^2m^2) being supplied by an OSV under DP (source level of 187.6 dB re 1 μPa^2m^2)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- a second OSV under DP on stand-by in the field (source level of 187.6 dB re 1 μPa^2m^2)
- an installation vessel under DP conducting subsea installation (source level of 181 dB re 1 μPa^2m^2)

The modelling is considered to be a conservative representation for the cumulative vessel activities associated with this Petroleum Activity as the modelled source levels are higher or equivalent and the modelled scenarios (and resulting distances to thresholds and effect criteria). The presence of more than four vessels in the Operational area is highly unlikely. The modelled scenario is also in a similar depth of water to the Operational area (80 m – 128 m) which is a key influence on sound propagation with deeper locations typically resulting in greater noise extents than shallower waters.

The modelling study indicated that the maximum extent from the source to SPL behavioural noise effect criteria for all marine mammals was predicted to be 14.9 km.

The modelling study indicated that exceedances of PTS and TTS thresholds for low frequency (LF) cetaceans may occur out to a maximum of 0.17 km and 4.33 km, respectively. For HF and VHF cetaceans, the maximum distances at which sound levels dropped below PTS and TTS thresholds were 0.10 km and 1.49 km respectively.

PTS and TTS thresholds are based on a cumulative metric that that reflects the dosimetric impact of noise levels over a 24 hour period based on the assumption that an animal is consistently exposed to such noise levels at a fixed position.

For turtles, the modelling indicated that the potential for PTS and TTS onset would be limited to within hundreds of meters for PTS and up to 3.89 km (TTS). However, marine turtles within the Operational Area are expected to be transient, and unlikely to remain within this vicinity 24- hours, and therefore PTS and TTS thresholds are not expected to be reached. Behavioural impacts to marine turtles from continuous noise sources generated by the Petroleum Activity are expected to be short-term and localised.

Generation of acoustic signals from positioning equipment (transponders)

An array of LBL or USBL transponders may be installed on the seabed for metrology and positioning (refer to Section 3.5.2). This is proposed within a radius of 500 m from the location of the wells for the duration of the Petroleum Activity.

Transponder emissions are intermittent and only active when positioning is needed. Each acoustic pulse has a duration of three to 40 milliseconds. Emission frequency depends on the operational mode:

- general positioning: one chirp every five seconds, typically for around four hours
- precise positioning: one chirp every one second, typically for around two hours.

Total active emission time is expected to be about six hours per well. When not actively positioning, all transponders remain silent.

Helicopter transfers

Helicopter activities may occur in the Operational area, including landing and take-off on the vessel helidecks. Sound emitted from helicopter operations is typically below 500 Hz (Richardson, et al., 1995). The peak received level diminishes with increasing helicopter altitude, but the duration of audibility often increases with increasing altitude. Richardson, et al. (1995) reports that helicopter sound is audible in air for four minutes before it passes over underwater hydrophones, but detectable underwater for only 38 seconds at 3 m depth and 11 seconds at 18 m depth. Received underwater noise levels of a Bell 212 helicopter flying at an altitude of 152 m have been measured by Jiminez-Arranz, et al. (2020) at 109 dB re 1 µPa (rms), while Berrow, et al. (2002) measured a Sikorsky air-sea rescue helicopter at 110 dB re 1 µPa at 91 m.

Impact assessment

Environmental value(s) potentially impacted

Receptors

The Operational area is in waters about 80 to 130 m deep (Section 4.4). The fauna associated with these areas are predominantly pelagic species of fish, with migratory species such as cetaceans, whale sharks and marine turtles in the area seasonally (Section 4.6.4.1). Noise interference is a key threat to multiple migratory and threatened cetaceans and marine turtles identified as potentially occurring within the Operational area.

Marine mammals

The Operational area does not intersect any BIAs for marine mammals. The pygmy blue whale migration BIA is about 43 km from the Operational area and the humpback whale migration BIA is about 34 km from the Operational area (refer to Figure 4-7 and Figure 4-8).

Marine reptiles

The Operational area is unlikely to represent important habitat for marine turtles, given the absence of potential nesting or foraging habitat (i.e. no emergent islands, reef habitat or shallow shoals) and the water depth (deeper than 50 m). The Recovery Plan for Marine Turtles (Commonwealth of Australia, 2017) specifies a 60 km internesting buffer for flatback turtles, and 20 km internesting buffer for green, hawksbill and loggerhead turtles. The 60 km internesting buffer for flatback turtles (Commonwealth of Australia, 2017) is based primarily on longshore movements in nearshore

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

coastal waters or travel between island rookeries and the adjacent mainland (Whittock, et al., 2016). Whittock, et al. (2016) defined suitable internesting habitat as water 0 to 16 m deep and within 5 to 10 km of the coastline, while unsuitable internesting flatback habitat was defined as waters >25 m deep and >27 km from the coastline. There is no evidence to date to indicate flatback turtles swim out to deep offshore waters during the internesting period (Whittock, et al., 2016).

A flatback turtle reproduction (internesting) BIA is located 18 km south of the Operational area (Figure 4-5). As inferred in the paragraph above and given the Operational area' distance from shore (>100 km), the presence of flatback turtles within the Operational area is likely to be restricted to individual turtles infrequently transiting the area.

Fish, sharks and rays

Whale sharks may traverse offshore NWS waters, including the Operational area, during their migrations to and from Ningaloo Reef, and a BIA for foraging whale sharks overlaps the Operational area (Figure 4-4). This BIA is centred on the 200 m isobath and whale sharks are most likely to be present in July to November. Whale shark presence within the Operational area is expected to be limited to individuals, and their presence would be transitory and of a short duration.

There are no known fish aggregation areas in the Operational area.

Potential impact of noise

Elevated underwater noise can affect marine fauna, including cetaceans, fish, turtles, sharks and rays, in three main ways (Richardson, et al., 1995; Simmonds, et al., 2004):

- by causing direct physical effects on hearing or other organs; hearing loss may be temporary (temporary threshold shift (TTS); referred to as auditory fatigue), or permanent (permanent threshold shift (PTS); injury)
- by masking or interfering with other biologically important sounds, including vocal communication, echolocation, signals and sounds produced by predators or prey
- through disturbance leading to behavioural changes or displacement from important areas (e.g. BIAs); the occurrence and intensity of disturbance is highly variable and depends on a range of factors relating to the animal and situation.

Exposure to sufficiently intense sound may lead to an increased hearing threshold. If this shift is reversed and the hearing threshold returns to normal, the effect is called a TTS. Southall, et al. (2007) defined TTS as a threshold shift of 6 dB above the normal hearing threshold. If the threshold shift does not return to normal, PTS has occurred. Threshold shifts can be caused by acoustic trauma from a very intense sound of short duration, as well as from exposure to lower-level sounds over longer time periods (Houser, et al., 2017).

Marine mammals

Marine mammals, particularly cetaceans, rely heavily on underwater sound for communication, social behaviour, navigation, predator and prey detection and reproduction (Weilgart, 2007; Erbe, 2012). Anthropogenic underwater noise may result in masking, behavioural disturbance, TTS or PTS, physiological stress and, in extreme situations, physical injury (Erbe, 2012).

The thresholds that could result in a behavioural response for cetaceans as a result of continuous (e.g. vessel) noise are presented in Table 6-2. As discussed within Accomando, et al. (2025) and National Marine Fisheries Service (NMFS, 2024), intense noise exposures can cause auditory injury (without PTS occurring). Table 6-2 thresholds have been adopted by the United States National Oceanic and Atmospheric Administration (NOAA), including updated thresholds for auditory injury, which includes PTS and TTS, adopted in October 2024 (NMFS, 2024). The adopted thresholds are based on best data available and published in peer-reviewed literature, and represent conservative internationally accepted and applied impact evaluation thresholds for continuous (non-impulsive) and impulsive sound sources. Table 6-2 includes continuous and impulsive thresholds.

Table 6-2: Thresholds for permanent threshold shift, temporary threshold shift and behavioural response onset for low, high and very high frequency cetaceans

Hearing group	Impulsive					Continuous		
	PTS onset		*TTS onset*		*Behaviour response*	*PTS onset*	*TTS onset*	*Behaviour response*
	SEL_{24h}	*PK*	SEL_{24h}	*PK*	*PK*	SEL_{24h}	SEL_{24h}	*SPL*
Low frequency cetaceans	183	222	168	216	160	197	177	120
High frequency cetaceans	193	230	178	224	160	201	181	120
Very high frequency cetaceans	159	202	144	196	160	181	161	120

Sources: PTS and TTS – NMFS (2024); behavioural response – NOAA (2019).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Sound exposure level accumulated from multiple impulses over 24 hours (SEL_{24h}) expressed as dB re 1 $\mu Pa^2.s$; PK and SPL expressed as dB re 1 µPa.

Frequency-specific hearing sensitivity differs among marine mammals, influencing how they are affected by noise exposure. To predict the effects of noise exposure on different groups of cetaceans, blue whales, humpback whales and other large mysticete (baleen) whales are categorised as low-frequency cetaceans, while odontocetes (toothed whales and dolphins) are categorised as high-frequency or very-high-frequency cetaceans (Southall, et al., 2019).

For continuous noise, only frequency-weighted sound exposure level (SEL) metrics are provided in the literature for PTS and TTS impacts, while for impulsive noise, thresholds have been defined for both SEL and peak (PK) SPL. Behavioural response metrics are provided rms SPL. Estimated SEL provides a metric that integrates cumulative exposures. For PTS and TTS to occur, 24 hours is a suitable timeframe to estimate SEL, while the PK and rms SPL metrics do not depend on duration of exposure.

, The potential for received levels to exceed weighted SEL thresholds defined for PTS or TTS for marine mammals is considered very low, due to their mobility and ability to avoid the sound sources. It is not credible that a cetacean would remain in close proximity to the vessels for the continuous 24 hour period required to have an impact.

The cetacean behavioural threshold may be exceeded up to a maximum distance of 14.9 km however this does not enter any BIAs or reach within ~ 20 km of one and therefore would only be expected to impact individuals transiting near the Operational area. The Petroleum activity is short term and the cetaceans have no restrictions in movement in the open ocean environment.

Transponders are the only source of impulsive noise planned during the Petroleum Activity. The typical frequencies of 18 to 26 kHz produced by the transponders are most audible to high-frequency cetaceans, such as toothed whales and dolphins, rather than low-frequency cetaceans, and the source levels (180 to 206 dB re 1 µPa at 1 m SPL) rapidly attenuate within a very short distance from the source, such that PTS or TTS are not considered credible. Based on empirical spreading loss estimates measured by Warner & McCrodan (2011), received levels from USBL transponders are expected to exceed the cetacean behavioural response threshold for impulsive sources (160 dB) out to about 42 m.

Considering proximity of the pygmy blue whale and humpback whale migration BIAs to the Operational area, it is possible individuals may transit in and around the Operational area during migratory periods. However, only transient individuals or small groups are expected and impacts are anticipated to be limited to behavioural disturbance / avoidance behaviour. Migrating pygmy blue whales are unlikely to occur in the Operational area in high numbers, with observed and modelled distributions of pygmy blue whales occurring further offshore in deeper water (Double, et al., 2014; Thums, et al., 2022). The pygmy blue whale migration BIA is also about 43 km from the closest Operational Area. The Operational area are surrounded by open water, with no restrictions (e.g. shallow waters, embayments) to an animal's ability to avoid the activities. No impacts, beyond behavioural are predicted to occur from LWIV or support vessels' noise on individuals using these areas. The potential for impacts from underwater noise is therefore not inconsistent with the requirements of the Conservation Management Plan for the Blue Whale (Commonwealth of Australia, 2015a); refer to Section 6.8.

Helicopter noise would only be relevant during take-off and landing. Underwater transmission from helicopter engines is minimal due to reflection at the sea surface, and cetaceans are unlikely to be near the LWIV during these operations because of ongoing vessel noise. Therefore, impacts to marine mammals from helicopter noise are unlikely.

Marine turtles

The Recovery Plan for Marine Turtles (Commonwealth of Australia, 2017) notes there is limited information available about the impact of noise on marine turtles, and the impact of noise on turtle stocks may vary depending on whether exposure is short (acute) or long term (chronic). Electro-physical studies have indicated the best hearing range for marine turtles is 100 to 700 Hz (Bartol & Musick, 2003). McCauley, et al. (2000) observed the behavioural response of caged green and loggerhead turtles to impulsive sound (an approaching seismic airgun). For received levels above 166 dB re 1 µPa SPL, the turtles increased their swimming activity, and above 175 dB re 1 µPa they began to behave erratically, which was interpreted as an agitated state. Conservatively, the 166 dB re 1 µPa SPL was used as the threshold level for a behavioural disturbance response (McCauley, et al., 2000) within the impact assessment. No quantitative (numerical) thresholds have been developed for behavioural effects from continuous sources (e.g. vessel noise) on marine turtles. However, Popper, et al. (2014) propose qualitative impact criteria for near-field, intermediate and far-field exposures. Accomando, et al. (2025) presented revised thresholds for auditory injury and TTS for impulsive and continuous sound exposures (Table 6-3). The thresholds in Table 6-3 are considered appropriate for the assessment of impacts on marine turtles from impulsive and continuous acoustic discharges from the Petroleum Activity.

Table 6-3: Thresholds for permanent threshold shift, temporary threshold shift and behavioural response onset in marine turtles for impulsive and continuous noise

Hearing group	Impulsive			Continuous			
	Auditory injury	***TTS***	***Behaviour***	***Auditory injury***	***TTS***	***Masking***	***Behaviour***

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

	SEL_{24h}	PK	SEL_{24h}	PK	SPL	SEL_{24h}	SEL_{24h}		
Marine turtles	184	230	169	224	166	198	178	(N) High (I) Moderate (F) Low	(N) Moderate (I) Moderate (F) Low

Source: Auditory injury and TTS thresholds – Accomando, et al. (2025); behavioural response threshold (impulsive) – McCauley, et al. (2000); behavioural and masking response thresholds (continuous) – Popper, et al. (2014).

Note: The sound units provided in the table above for continuous noise are based on relative risk (high, medium and low) for marine turtles at three distances from the source, defined in relative terms as near (N – tens of metres), intermediate (I – hundreds of metres) and far (F – thousands of metres) (after Popper, et al. 2014).

Given the thresholds outlined in Table 6-3, it is reasonable to expect marine turtles may demonstrate avoidance or attraction behaviour to the noise generated by the Petroleum Activity. Potential impacts from predicted noise levels from the LWIV and support vessels and helicopters will be limited to temporary and localised changes in behaviour at the individual level, which are considered temporary with no lasting effect. It is not credible that a turtle would remain in close proximity to the vessels for the continuous 24 hour period required to have an impact.

Based on empirical spreading loss estimates measured by Warner & McCrodan (2011), received levels from USBL transponders are expected to exceed the marine turtle behavioural response threshold for impulsive sources (160 dB) out to about 36 m. Transponders typically operate at frequencies of 21 to 31 kHz, which is well outside the peak hearing frequency range of turtles (0.1 to 2 kHz). Therefore, no impacts are expected to occur.

Sharks, rays and fish

All fish species can detect noise sources, although hearing ranges and sensitivities vary substantially between them. Sensitivity to sound pressure seems to be functionally correlated in fishes to the presence and absence of gas-filled chambers in the sound transduction system. These enable fishes to detect sound pressure and extend their hearing abilities to lower sound levels and higher frequencies (Ladich & Popper, 2004). Based on their morphology, Popper, et al. (2014) classified fishes into three animal groups:

- fishes with swim bladders whose hearing does not involve the swim bladder or other gas volumes
- fishes whose hearing does involve a swim bladder or other gas volume
- fishes without a swim bladder that can sink and settle on the substrate when inactive.

Sound exposure criteria applicable to continuous sound sources are presented in Table 6-4. Popper, et al. (2014) propose relative risk criteria (high, moderate, low) for injury, impairment and behavioural effects to fishes at three distance categories: near (N – tens of metres from the source), intermediate (I – hundreds of metres from the source), and far (F – kilometres from the source).

Table 6-4: Impact thresholds to fish, sharks and rays for continuous noise

Receptor	Mortality potential mortal injury	Impairment			Behaviour
		Recoverable injury	TTS	Masking	
Fish: no swim bladder	(N) Low (I) Low (F) Low	(N) Low (I) Low (F) Low	(N) Moderate (I) Low (F) Low	(N) High (I) High (F) Moderate	(N) Moderate (I) Moderate (F) Low
Fish: swim bladder not involved in hearing	(N) Low (I) Low (F) Low	(N) Low (I) Low (F) Low	(N) Moderate (I) Low (F) Low	(N) High (I) High (F) Moderate	(N) Moderate (I) Moderate (F) Low
Fish: swim bladder involved in hearing	(N) Low (I) Low (F) Low	170 dB SPL for 48 hours	158 dB SPL for 12 hours	(N) High (I) High (F) High	(N) High (I) Moderate (F) Low
Fish eggs and fish larvae	(N) Low (I) Low (F) Low	(N) Low (I) Low (F) Low	(N) Low (I) Low (F) Low	(N) High (I) Moderate (F) Low	(N) Moderate (I) Moderate (F) Low

Note: The sound units provided in Table 6-4 include relative risk (high, medium and low) for fish (all types) at three distances from the source, defined in relative terms as near (N – tens of metres), intermediate (I – hundreds of metres) and far (F – thousands of metres) (Popper, et al., 2014).

None of the noise sources are expected to result in mortality of fish, of any type described by Popper, et al. (2014). Pelagic fish species, including sharks and rays, may display behavioural responses, such as avoidance of the area, near the LWIV and support vessels. While continuous noise levels associated with vessels may exceed recoverable

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

injury and TTS thresholds for Type 3 species, for pelagic species, it is unlikely individuals will remain within areas of exceeded noise levels. The Operational area are not known to be important spawning or aggregation habitat for commercially caught targeted species. Therefore, no impacts to fish stocks are expected. Transponders' typical operating frequencies of 21 to 31 kHz are well outside the hearing frequency range of fish. Therefore, no impacts are expected.

A foraging BIA for whale sharks overlaps the Operational area (Figure 4-4). As a cartilaginous fish lacking a swim bladder, whale sharks are categorised as a Type 1 fish. Thresholds for mortality or injury from impulsive noise (more than 213 dB re 1 μPa².s, Popper, et al. (2014)) are greater than any noise source of the Petroleum Activity. Type 1 fish are considered a low risk of mortality or injury from continuous noise sources (Popper, et al., 2014) and thresholds for TTS (193 dB re 1 μPa².s) exceed predicted continuous noise source levels from the Petroleum Activity. In summary, impacts to whale sharks foraging within the BIA are not expected.

Cultural features and heritage values

Refer to Section 6.9 for an assessment of potential impacts to cultural features and heritage values from the Petroleum Activity. Related control measures that demonstrate that impacts are reduced to ALARP and are of an acceptable level have been captured in Section 6.9.

Cumulative sound sources

Cumulative noise may occur due to the presence the Okha FPSO, which operates with continuous noise sources for production, processing and offloading activities. The LWI activities will introduce additional noise from the LWIV and up to three support vessels. Modelling for cumulative noise from Okha Operations and the Petroleum activity (four vessels) has been considered above, with the presence of more than the 4 vessels, including the Okha FPSO, in the Operational area being highly unlikely.

For potential cumulative impacts of noise from the Petroleum activity and the subsea infrastructure in the area, noise modelling (JASCO Applied Sciences, 2024) has considered underwater noise emissions from operation of wellheads at Woodside's seabed assets and evaluated the potential for accumulated SEL over a 24-hour period. The maximum distances from the noise source to where the marine mammal behavioural response criterion of 120 dB re 1 μPa (SPL) was not exceeded was predicted to be less than 200 m. Noise is not predicted to ensonify the entire water column at or above 120 dB re 1 μPa (SPL) and overlap and of the Petroleum activity noise from vessels.

The additional noise in the area from the Petroleum activity will be short term (14 to 35 days per well). Cumulative impacts from the two activities are considered to be behavioural impacts to individuals only with no BIAs present in close proximity (as described in the sections above), and temporary with no lasting effect.

Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)[28]***	***Benefit in impact reduction***	***Proportionality***	***Control adopted***
Legislation, codes and standards				
Implement EPBC Regulations 2025 Part 8 Division 8.1 Interacting with cetaceans, which includes[29]: • Vessels will not travel faster than 6 knots within 300 m of a cetacean (caution zone) • Vessels will not approach closer than 50 m for a dolphin or 100 m for a whale (except animals bow riding).	F: Yes. CS: Minimal cost. Standard practice.	EPBC Regulations 2025 Part 8 Division 8.1 includes requirements relating to the speed vessels can travel within particular distances of cetaceans. Reducing the travel speed of vessels can also reduce the sound levels that are produced, reducing the potential impact on cetaceans from vessels.	Legislative requirement – must be adopted.	Yes C 4.1

[28] *Qualitative measure.*

[29] *For safety reasons, the distance requirements are not applied for a vessel holding station or with limited manoeuvrability, e.g. loading, back-loading, bunkering, close standby cover for overside working and emergency situations.*

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)[28]***	***Benefit in impact reduction***	***Proportionality***	***Control adopted***
• If the cetacean shows signs of being disturbed, support vessels will immediately withdraw from the caution zone at a constant speed of less than 6 knots.				
Vessels will not deliberately approach greater than 8 knots within 250 m of a whale shark and not allow the vessel to approach closer than 30 m of a whale shark.	F: Yes. CS: Minimal cost. Standard practice.	Complying can potentially reduce the underwater noise footprint of a vessel.	Benefit outweighs cost/sacrifice.	Yes C 4.2
Good practice				
Vessels will not travel faster than 6 knots within 300 m of a turtle (caution zone). If the turtle shows signs of being disturbed, vessels will immediately withdraw from the caution zone at a constant speed of less than 6 knots.	F: Yes. CS: Minimal cost. Standard practice.	Implementation will reduce the likelihood of a collision with a turtle. The consequence of a collision is unchanged.	Benefits outweigh cost/sacrifice. Control is also standard practice.	Yes C 4.3
Use of dedicated marine fauna observers (MFOs) on vessels for the duration of the Petroleum Activity to watch for whales and provide direction on and monitor compliance with Part 8 of the EPBC Regulations 2025.	F: Yes. However, activity support vessel bridge crews already maintain a constant watch during operations in compliance with the Woodside Marine – Charterers Instructions, on the requirements of vessel and whale interactions. In the event of a cetacean (or other sensitive fauna) near vessels, it is unlikely DP (the most significant source of underwater noise expected during the Petroleum Activity) will be deactivated, given it is a safety-critical requirement for vessels to hold station. As such, an MFO implementing management or shutdown zones is considered to be ineffective. CS: Additional cost of MFOs.	As support vessel bridge crews already maintain a constant watch during operations, additional MFOs would not further reduce the likelihood or consequence of impact.	Disproportionate – cost/sacrifice outweighs benefit to be gained.	No

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)[28]***	***Benefit in impact reduction***	***Proportionality***	***Control adopted***
Undertake site-specific acoustic modelling.	F: Yes; however, the generation of noise from these sources is already well understood and cannot be eliminated due to operating requirements. CS: Additional cost of modelling.	As noise cannot be eliminated due to operating requirements, modelling would not further reduce the likelihood or consequence of impact, noting that no activities of significant noise generation are proposed.	Disproportionate – cost/sacrifice outweighs benefit to be gained.	No
Professional judgement – Eliminate				
Remove support vessel on standby at the Petroleum Activity location.	F: No. Support vessel required as per LWIV Safety Case, particularly for maintaining the 500 m safety exclusion zone around the LWIV during LWI. CS: Introduces unacceptable safety risk.	Not considered – control not feasible.	Not considered – control not feasible.	No
Eliminate noise from the LWIV, support vessels, helicopters, and positioning transponders.	F: No. The generation of noise from these sources cannot be eliminated due to operating requirements. Note: Operating vessels on DP may be a safety-critical requirement. CS: Inability to conduct the Petroleum Activity. Loss of project.	Not considered – control not feasible.	Not considered – control not feasible.	No
Professional judgement – Substitute				
None identified.				
Professional judgement – Engineered solution				
None identified.				
ALARP statement: Based on the assessment outcomes, use of the relevant tools appropriate to the decision type (i.e. Decision Type A; Section 2.3.4.2) and Woodside's criteria for demonstrating ALARP (Section 2.4.1), Woodside considers the adopted controls appropriate to manage potential impacts associated with routine and non-routine acoustic emissions. As no reasonably practicable additional or alternative controls were identified that would further reduce the impacts without disproportionate sacrifice, the impacts are considered ALARP.				

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Demonstration of acceptability
Acceptability statement: The impact assessment has determined that, given the adopted controls, routine acoustic emissions may result in localised impact not significant to environmental receptors and of no lasting effect. Further opportunities to reduce the impact have been investigated above. The impacts are consistent with good oil field practice and industry best practice. Relevant recovery plans and conservation advice have been considered during the impact assessment, and the Petroleum Activity is not considered to be inconsistent with the overall recovery objectives and actions of these recovery plans and conservation advice (Section 6.8). Based on the assessment outcomes, use of the relevant tools appropriate to the decision type (i.e. Decision Type A; Section 2.3.4.2) and Woodside's criteria for demonstrating acceptability (Section 2.4.2), Woodside considers the adopted controls appropriate to manage the impacts to a level that is broadly acceptable, and compliance with those controls demonstrates the EPOs are met.

EPOs, EPSs and MC			
EPOs	***Controls***	***Performance standards***	***Measurement criteria***
EPO 4 No injury of, or mortality to, EPBC Act listed marine fauna as a result of noise generated by the Petroleum Activity.	C 4.1 Implement EPBC Regulations 2025 Part 8 Division 8.1 Interacting with cetaceans, which includes[30]: • Vessels will not travel faster than 6 knots within 300 m of a cetacean (caution zone) and not approach closer than 100 m from a whale. • Vessels will not approach closer than 50 m for a dolphin or 100 m for a whale (except animals bow riding). • If the cetacean shows signs of being disturbed, support vessels will immediately withdraw from the caution zone at a constant speed of less than 6 knots.	PS 4.1.1 Compliance with EPBC Regulations 2025 Part 8 Division 8.1 Interacting with cetaceans (Regulations 8.05 and 8.06) to minimise impacts from underwater noise emissions.	MC 4.1.1 Records demonstrate no breaches of the EPBC Regulations 2025 Part 8 Division 8.1 Interacting with cetaceans.
	C 4.2 Vessels will not deliberately approach greater than 8 knots within 250 m of a whale shark and not allow the vessel to approach closer than 30 m of a whale shark	PS 4.2.1 When within 250 m of a whale shark, vessels will not travel greater than 8 knots and vessels will not approach closer than 30 m to a whale shark.	MC 4.2.1 Records demonstrate actions taken (including recording speed) when whale shark is sighted.
	C 4.3 Vessels will not travel faster than 6 knots within 300 m of a turtle (caution zone). If the turtle shows signs of being disturbed, vessels will immediately withdraw from the caution zone at a constant speed of less than 6 knots[31]	PS 4.3.1 When within 300m of a turtle, vessels will not travel greater than 6 knots.	MC 4.3.1 Records demonstrate actions taken (including recording speed) when a turtle is sighted.

[30] For safety reasons, the distance requirements are not applied for a vessel holding station or with limited manoeuvrability, e.g. loading, back-loading, bunkering, close standby cover for overside working and emergency situations.

[31] For safety reasons, the distance requirements are not applied for a vessel holding station or with limited manoeuvrability, e.g. loading, back-loading, bunkering, close standby cover for overside working and emergency situations.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.6.4 Routine and non-routine discharges: subsea fluids and fugitive hydrocarbons

Context		
Subsea intervention activities – Section 3.5	Physical environment – Section 4.4 Habitats and biological communities – Section 4.5	Stakeholder consultation – Section 5

Impact evaluation summary

Source of impact	***Environmental value potentially impacted***						***Evaluation***						
	Marine sediment	Water quality	Air quality (incl odour)	Ecosystems/habitat	Species	Socioeconomic	Decision type	Consequence/impact	Likelihood	Risk rating	ALARP tools	Acceptability	Outcome
Routine and non-routine discharges of subsea fluids and fugitive hydrocarbons	X	X		X			A	F	-	-	GP PJ	Broadly acceptable	EPO 5
Routine and non-routine discharge of chemicals used for removal of marine growth	X	X		X			A	F	-	-			
Release across isolation valves from the manifold during XT replacement		X			X		A	E	-	-			

Description of source of impact

Subsea fluids (well intervention fluids, control fluids and other subsea fluids)

Subsea fluids released during LWI activities include those during pressure/leak testing, valve functioning, flushing, hot-stab connection or changeout, XT recovery and installation and TRSV remediation (as identified in Table 3-5). Typical discharges during the LWI activities are included in Section 3.5.

Wireline pressure-containing equipment onboard includes a grease system comprised of a readily biodegradable vegetable-based oil. During wireline operations, about 50 mL/min would be applied through the wellbore (~25 L for a single run) and some may be released to the environment under normal operations.

An emergency shutdown may be implemented if the LWIV needs to rapidly shut in the well (refer to Section 3.8.2). An emergency shutdown isolates the well by closing WCP valves and disconnecting umbilicals, leaving the XT and WCP/PCE in a secure condition. This may result in the release of small volumes of fluids or gases from the umbilical or upper PCE at the disconnection points (<50 L).

During a drift-off or drive-off event, the LWIV will autonomously separate from the WCP via breakaway connections, and the system will shut in the well if an emergency shutdown has not already been initiated. This may result in a slightly larger release of trapped fluids from the umbilicals or PCE, generally <1 m^3, before the system isolates.

As presented in Table 3-5, during removal of the hydraulic flying lead from the XT, it may be possible for trapped fluids and gas to be released to the environment. Based on the estimated volume of the hydraulic flying leads, this release is estimated to be up to ~100 L and comprised predominantly of hydraulic fluid.

Overall, subsea fluid discharges associated Petroleum Activity are expected to be intermittent, low volume and consistent with standard LWI activities.

Fugitive Hydrocarbons

As presented in Table 3-5, during removal of the XT cap, and XT, finite trapped volumes of hydrocarbons (Cossack light crude and gas) may be released to the environment. The volume estimated under the XT cap at each well is up to 1000 m^3 of gas and 0.5 m^3. As described in in Table 3-5, a small amount of hydrocarbons remaining in hydraulic flying leads may also drain to the environment following disconnection from XT.

Release across isolation valves at the manifold during XT replacement

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

As presented in Table 3-5, the XT valves and manifold valves will be closed during the XT replacement. While these valves shall be tested to verify their integrity prior to removing the XT, fluids and gas from the production and gas lift jumpers may pass the valves due to their age and condition. It is expected to take up to 32- hours to changeout an XT. Over this time, up to 4.20 m^3 of reservoir fluids containing water and hydrocarbons could be released gradually from the 6" production jumper and 2.5" gas lift jumper at CK4 and up to 0.98 m^3 could be released from the 2.5" production jumper and 2.5" gas lift jumper at LH3.

Marine growth removal

It may be necessary to remove marine growth from the XTs and tree-cap interfaces using mechanical or chemical methods (refer to Section 3.5.3). Marine growth may be removed by ROV using high-pressure water jetting or brushes. Where chemical removal is needed to dissolve calcium-based deposits, sulfamic, citric acid or equivalent (about 500 L per well) may be applied. These activities may result in small, localised discharges of acid-treated marine growth and disturbed biological material.

Impact assessment

Environmental value(s) potentially impacted

Water Quality

Subsea control fluids are water-based hydraulic fluids containing about 3% active ingredients. Modelling for another offshore drilling project indicates a release of subsea control fluids during function testing is expected to reach a dilution of 3,000 times within a maximum displacement of the plume within 98 m distance from the release site (BP Azerbaijan, 2013). Based on this information, concentrations of subsea control fluid are expected to be about 10 ppm within 100 m of each well. Using a conservative ocean current speed of 0.1 m/s, fluids would be expected to travel 100 m (and thus reach concentrations of 10 ppm) in about 16 minutes. Changes in water quality would comprise the presence of low-toxicity contaminants for a short duration and extent in the water column above the seabed. Given the small volumes associated with this discharge and limited exposure times due to rapid dilution, any potential impact to this aspect is expected to be localised and short term. There is potential for some toxins in the control fluid to accumulate in the sediment, but due to the very small volumes and rapid dispersal, it is considered localised and of no lasting effect.

The wireline grease is comprised primarily of vegetable-based oils and is considered non-toxic to aquatic organisms. It contains no Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention) sub (phase-out) components and is readily biodegradable (>70% biodegradation over 28 days). Given the relatively small volumes of potential discharges, low toxicity, readily biodegradable nature and rapid dispersion in the open ocean environment of Operational area, any potential impacts to water quality from these discharges are likely to be localised and of no lasting effect.

The use of water jetting and acid washing to remove marine growth on subsea infrastructure will result in temporary suspension of organic matter and localised increase in turbidity. Water jetting will be limited to what is necessary to clean infrastructure for LWI to take place. Due to the very minor quantities of acid used, the limited duration and rapid dispersion in the water column, impacts to the marine environment are expected to be localised and of no lasting effect.

During removal of the XT cap, it may be possible for a finite trapped volume of hydrocarbons (Cossack light crude and gas) to be released to the environment. The volume estimated under the XT cap may be up to 1000 m^3 gas and 0.5 m^3 liquid hydrocarbons as well as approximately 10 L of other well fluids (e.g. control fluids) per well. Releases are expected to disperse and dissolve within the water column. Toxic impacts are expected to be of short duration and highly localised. Impacts are likely be restricted to small organisms such as plankton and larvae within the water column.

During XT changeout fluids and gases are also expected to be released to the environment, which may include Cossack light crude and gas, control and preservation fluids. Release is expected to occur rapidly at first, as the XT is removed, and then to reduce. The degree of reduction will vary depending on the subsea equipment and valve condition. Given the valve integrity will be confirmed to meet relevant Woodside standards prior to XT changeout, contents of associated jumpers are expected to release gradually following removal of the old XT until installation of the new XT, which is expected to take up to 32-hours. These discharges are expected to disperse and dissolve within the water column due to buoyancy, water currents and water depth. These discharges have potential for slight, localised decrease in water quality at planned discharge locations and potential impacts on marine biota.

Marine Sediments

Accumulation of contaminants in sediments depends primarily on the volume and concentration of particulates in discharges or constituents that adsorb onto seawater particulates, the area over which those particulates could settle onto the seabed (dominated by current speeds and water depths), and the resuspension, bioturbation, and microbial decay of those particulates in the water column and on the seabed.

Given the subsea discharges are expected to rapidly mix in the water column and become diluted, accumulation in sediments at a measurable level is not expected to occur.

Key Ecological Features

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Although the Ancient Coastline at 125 m Depth Contour KEF overlaps Operational Area Part 2 (LH3), the values and sensitivities of this KEF occur on a broad scale outside of Operational Area Part 2. As described in the consequence evaluation above, the LWI discharges within the Operational area is not expected to result in a lasting effect to water quality, and no change in sediment quality is predicted. Therefore these discharges are unlikely to cause a change in habitats or communities at a measurable level and will not change the viability of the population or ecosystem.

Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)[32]***	***Benefit in impact reduction***	***Proportionality***	***Control adopted***
Legislation, codes and standards				
None identified.				
Good practice				
Fluids and additives intended or likely to be discharged to the marine environment will have an environmental assessment completed before use, to ensure the impacts associated with use are ALARP and acceptable.	F: Yes. CS: Minimal cost. Standard practice.	Environmental assessment of chemicals will reduce the consequence of impacts resulting from discharges to the marine environment, by ensuring chemicals have been assessed for environmental acceptability. Planned discharges are required for the safe execution of activities and therefore no reduction in likelihood can occur.	Benefits outweigh cost/sacrifice.	Yes C 5.1
Where practicable, flush infrastructure before intervention / disconnection activities to reduce volume and concentration of hydrocarbons released to the environment.	F. Yes CS: Minor. Standard Practice.	Reduces the volumes and concentration of hydrocarbons release to the environment.	Benefit outweighs cost/sacrifice.	C 5.2
Professional judgement – Eliminate				
None identified.				
Professional judgement – Substitute				
None identified.				
Professional judgement – Engineered solution				
Subsea isolations conform to the relevant internal Woodside standards which include: • Using a double block isolation • If it is not practicable to establish a double block isolation, then – One effective, proven and monitored barrier	F: Yes. CS: Minimal cost. Standard practice.	Criteria for isolation mitigates a leak across isolation valves from the manifold during XT replacement.	Benefit outweighs cost/sacrifice.	Yes C 5.3

[32] *Qualitative measure.*

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)[32]***	***Benefit in impact reduction***	***Proportionality***	***Control adopted***
(single block isolation) shall be in place, with the following conditions: ▪ The residual risks must be shown to be ALARP by a documented isolation risk assessment. Procedures and response plans for the activity must be developed and implemented and address all applicable hazards appropriately, including provision for closing additional isolation valves.				
Capture hydrocarbons under the XT cap prior to its removal.	F: No. Due to design of the XT, there is no technically feasible option to capture the fluids under the XT cap prior to its removal. CS: Not considered – control not feasible.	Not considered – control not feasible.	Not considered – control not feasible.	No
ALARP statement: Based on the assessment outcomes, use of the relevant tools appropriate to the decision type (i.e. Decision Type A; Section 2.3.4.2) and Woodside's criteria for demonstrating ALARP (Section 2.4.1), Woodside considers the adopted controls appropriate to manage potential impacts associated with subsea routine and non-routine discharges. As no reasonably practicable additional or alternative controls were identified that would further reduce the impacts without disproportionate sacrifice, the impacts are considered ALARP.				

Demonstration of acceptability
Acceptability statement: The impact assessment has determined that, given the adopted controls, any subsea discharges during LWI may result in localised and low-level impact on environmental feature(s) or area(s) of low significance. Based on the assessment outcomes, use of the relevant tools appropriate to the decision type (i.e. Decision Type A; Section 2.3.4.2) and Woodside's criteria for demonstrating acceptability (Section 2.4.2), Woodside considers the adopted controls appropriate to manage the impacts to a level that is broadly acceptable, and compliance with those controls demonstrates the EPOs are met.

EPOs, EPSs and MC			
EPOs	***Controls***	***Performance standards***	***Measurement criteria***
EPO 5 Impacts from routine and non-routine LWI subsea discharges will be limited to planned	C 5.1 Fluids and additives intended or likely to be discharged to the marine environment will have an environmental assessment	PS 5.1.1 All chemicals, planned to be used and intended or likely to be discharged to the marine environment	MC 5.1.1 Records demonstrate chemical selection, assessment and

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

EPOs, EPSs and MC			
EPOs	***Controls***	***Performance standards***	***Measurement criteria***
activities and impacts described as part of the Petroleum Activity.	completed before use to ensure the impacts associated with use are ALARP and acceptable.	reduced to ALARP using the chemical assessment process.	approval process is followed.
	C 5.2 Where practicable, flush infrastructure before intervention / disconnection activities to reduce volume and concentration of hydrocarbons released to the environment.	PS 5.2.1 Before intervention / disconnection, subsea infrastructure containing hydrocarbons are flushed to the Okha FPSO facility (where practicable) to a hydrocarbon concentration where further dilution provides disproportionate cost to environmental benefit.	MC 5.2.1 Records demonstrate subsea infrastructure flushing (to Okha FPSO facility) where practicable.
	C 5.3 Subsea isolations conform to the relevant internal Woodside standards which include: • Using a double block isolation • If it is not practicable to establish a double block isolation, then – One effective, proven and monitored barrier (single block isolation) shall be in place, with the following conditions: ▪ The residual risks must be shown to be ALARP by a documented isolation risk assessment. Procedures and response plans for the activity must be developed and implemented and address all applicable hazards appropriately, including provision for closing additional isolation valves.	PS 5.3.1 Establish appropriate subsea isolations in accordance with the relevant Woodside standards.	MC 5.3.1 Records demonstrate isolations are implemented and compliant with the relevant internal Woodside standards. MC 5.3.2 Where a single isolation was used records demonstrate that during testing of valves the pass rate was within the acceptable limit and the estimated pass rate is documented.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.6.5 Routine and non-routine discharges: vessel utility systems (bilge water, grey water, sewage, putrescible wastes and deck drainage water)

Context		
Project vessels – Section 3.6	Physical environment – Section 4.4 Habitats and biological communities – Section 4.5	Stakeholder consultation – Section 5

Impact evaluation summary

Source of impact	***Environmental value potentially impacted***						***Evaluation***						
	Marine sediment	Water quality	Air quality (incl odour)	Ecosystems/habitat	Species	Socioeconomic	Decision type	Consequence/impact	Likelihood	Risk rating	ALARP tools	Acceptability	Outcome
Routine discharge of sewage, greywater and putrescible waste		X					A	F	-	-	LCS PJ	Broadly acceptable	EPO 6
Routine discharge of deck water, drainage systems and bilge water		X					A	F	-	-			
Routine discharge of brine or cooling water to the marine environment		X					A	F	-	-			
Non-routine discharge of firefighting media		X					A	F	-	-			

Description of source of impact

The LWIV and support vessels routinely generate or discharge:

- small volumes of treated sewage, putrescible wastes and grey water to the marine environment (impact assessment based on approximate discharge of 15 m³ per vessel per day), using an average volume of 75 L per person per day and a maximum of 200 persons on board; however, it is noted vessels such as support vessels will have considerably less persons on board
- routine or periodic discharge of relatively small volumes of bilge water from bilge tanks that receive fluids from many parts of the LWIV and support vessels; bilge water can contain water, oil, detergents, solvents, chemicals, particles and other liquids, solids or chemicals
- variable water discharge from the LWIV and support vessels' decks directly overboard or via deck drainage systems; sources could include rainfall events and deck activities such as cleaning and wash-down of equipment and decks
- cooling water from machinery engines or mud cooling units and brine water produced during the desalination process of reverse osmosis to produce potable water onboard the LWIV and support vessels.

Non-routine LWIV and support vessels' discharges may include firefighting media. The LWIV and support vessels may be equipped with firefighting foam systems that typically supply 3% aqueous film forming foam (AFFF) concentrates. These concentrates may be mixed with seawater and discharged where helideck testing requirements (typically annual) fall within the on-hire period, and in an emergency.

Environmental risks relating to the unplanned disposal or discharges from the LWIV and support vessels are addressed in Section 6.7.4 to 6.7.5.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Impact assessment

Environmental value(s) potentially impacted

Water quality

Sewage, greywater and putrescible waste

The principal environmental impact associated with the ocean disposal of sewage, greywater and putrescible waste is eutrophication, which can result from the addition of nutrients such as phosphates and nitrates. Other constituents of these discharges may include ammonia, faecal coliforms, volatile organics, phenols, surfactants and trace metals.

Offshore monitoring during previous Woodside campaigns (e.g. Torosa-4 appraisal drilling) demonstrated a 10 m^3 sewage discharge diluted to about 1% of its original concentration within 50 m of the discharge point (Woodside, 2011). No elevation in nutrient or contaminant parameters (e.g. nitrogen, phosphorus, metals) was detected above background at 50 m, 100 m or 200 m. Similar behaviour is expected for this Petroleum Activity, due to:

- the offshore, open-ocean location
- short duration of vessel presence at each well (refer to Section 3.4 for duration at each well)
- high mixing and dispersive environment of the NWS
- transient nature of vessels, aiding dispersion.

Studies in Australian offshore waters show nutrient enrichment from vessel sewage in exposed open ocean areas is significantly less impactful than in enclosed or semi-enclosed marine environments (McIntyre & Johnston, 1975).

Given the small volumes involved, rapid dilution, and the naturally high assimilative capacity of the NWS, impacts to water quality from sewage, greywater and putrescible wastes are expected to be localised, temporary and with no lasting effect.

Deck drainage and bilge water

Deck drainage and treated bilge water from the LWIV and support vessels may contain trace hydrocarbons, detergents, oils, cleaning agents, rust particles or suspended solids. These substances may cause a slight, short-lived increase in turbidity or a minor decline in water quality immediately adjacent to the discharge point.

Deck drainage from general operations (washdown, rainfall runoff, minor fluid residues) is discharged intermittently and in very small volumes relative to the receiving environment.

Impacts from deck and bilge discharges are expected to be highly localised, rapidly diluted and without lasting effect.

Brine or cooling water

The key physicochemical stressors that are associated with reject brine and cooling water discharge include salinity, pH, temperature and chemical toxicity.

Water quality of the surrounding environment may be altered by adding chemicals and increasing salinity. Scale inhibitors and biocides are commonly used within the systems described above to prevent fouling. Scale inhibitors are typically low molecular weight phosphorous compounds that are water soluble, and only have acute toxicity to marine organisms about two orders of magnitude higher than typically used in the water phase. The biocides typically used in the industry are highly reactive and degrade rapidly.

The potential impacts on water quality due to cooling water discharge include chlorine toxicity and increased water temperatures.

Reject brine water is typically 20 to 50% higher in salinity to the surrounding water and will sink through the water column, where it will be rapidly mixed with receiving waters and dispersed by ocean currents, decreasing in salinity rapidly as distance from the source increases.

Generally, reject brine and cooling water containing chemical additives are inherently safe at the low dosages used. They are usually consumed in the inhibition process, so there is little or no residual chemical concentration remaining upon discharge.

Given the very small scale of brine and cooling-water discharges associated with the LWIV and support vessels (significantly lower than FPSOs), potential effects are limited to the area immediately adjacent to the discharge point.

Impacts are assessed as localised and temporary, with no lasting effect.

Firefighting media

AFFFs typically comprise a mix of organic and fluorinated surfactants. However, novel and emerging AFFF products may also comprise fluorine-free formulations. When discharged in bodies of water, both fluorine-containing and fluorine-free AFFF formulations may deplete dissolvable oxygen content. However, when diluted in low concentrations such as in the event of helideck system testing, or use in an emergency to suppress fire, these foams are considered to have relatively low toxicity (Department of Environmental and Heritage Protection, 2016). Further, concerns regarding toxicity of AFFF discharges are typically associated with land and waterways near sites with frequent or prolonged applications. This includes military sites such as defence areas and civilian sites such as airports and industrial areas (Moody, et al., 2000; Hu, et al., 2016). The non-routine discharge of AFFF in open water environment

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

of the Operational area during helideck system testing or in the emergency event of a fire are not consistent with these conditions.

Given the toxicological effects of AFFFs are associated with sites of frequent or prolonged applications and the notion that non-routine AFFF discharges during the Petroleum Activity would be expected to rapidly disperse in the open water environment of the Operational area, it is expected any impacts would be localised and short term in nature.

Additionally, potential impacts of AFFF discharge through helideck system testing or in an emergency are outweighed by the environmental, health and safety benefits that are achieved by preventing more severe adverse impacts that could result from an uncontrolled emergency.

Marine fauna

Discharge of food waste into the marine environment has the potential to attract some opportunistic marine fauna, including fish and seabirds, to the area in response to the increased food availability or indirectly because of attraction of prey species. However, given the small quantities of food waste to be disposed, and the temporary nature of the activity, any attraction is likely to be localised, temporary and of no lasting effect.

It is possible marine fauna transiting the localised area may come into contact with LWIV and support vessel discharges (e.g. marine turtles, humpback whales, whale sharks) as they traverse the Operational area (see Section 4.6 for presence). While the likely presence of marine fauna varies at different times of the year depending on migration, foraging and breeding patterns in the region, the potential for impact remains low due to the localised nature of discharges and rapid dilution in the open ocean waters of the Operational area.

Key ecological feature – Ancient Coastline at 125 m Depth Contour

The Operational Area Part 2 overlaps the Ancient Coastline at 125 m Depth Contour KEF (Figure 4-11). Given the water depths and open ocean environment, impacts to the values of the KEF are not expected. As such, no significant impacts from the planned discharges that are listed above are anticipated because of the minor quantities involved, the expected localised mixing zone, and high level of dilution into the open-water marine environment.

Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/ sacrifice (CS)[33]***	***Benefit in impact reduction***	***Proportionality***	***Control adopted***
Legislation, codes and standards				
Marine Order 95 (Marine pollution prevention – garbage) as appropriate to vessel class, which includes the following requirements: • maintenance of a Garbage Log Book • discharge of putrescible waste not permitted within the Operational area (i.e. <3 NM from land) • discharges of greywater are permitted.	F: Yes. CS: Minimal cost. Standard practice.	No reduction in likelihood or consequence would result. Marine Orders required under Australian regulations; implementation is standard practice for commercial vessels as applicable to vessel size, type and class. Marine Orders 91, 95 and 96 reduce the potential impact of marine wastewater discharges on water quality.	Legislative requirement – must be adopted.	Yes C 6.1
Marine Order 96 (Marine pollution prevention – sewage) as appropriate to vessel class, which includes the following requirements: • a valid International Spill Pollution Prevention Certificate • an AMSA-approved sewage treatment plant	F: Yes. CS: Minimal cost. Standard practice.			Yes C 6.2

[33] *Qualitative measure.*

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/ sacrifice (CS)[33]***	***Benefit in impact reduction***	***Proportionality***	***Control adopted***
• a sewage commuting and disinfecting system • a sewage holding tank sized appropriately to contain all generated waste (black and grey water) • discharge of sewage that is not comminuted or disinfected only occurring at more than 12 NM from the nearest land • discharge of sewage that is comminuted or disinfected using a certified approved sewage treatment plant only occurring at more than 3 NM from the nearest land • sewage discharged at a moderate rate while the vessel is proceeding (>four knots).				
Marine Order 91 (Marine pollution prevention – oil) as relevant to vessel class, which includes mandatory measures for processing oily water before discharge: • Machinery space bilge/ oily water shall have International Maritime Organization (IMO)-approved oil filtering equipment (oil/water separator) with an online monitoring device to measure OIW content to be less than 15 ppm before discharge. • IMO-approved oil filtering equipment shall also have an alarm and an automatic stopping device or be capable of recirculating if OIW concentration exceeds 15 ppm. • A deck drainage system shall be capable of controlling the content of discharges for areas of high risk of fuel, oil, grease or hazardous chemical contamination. • There shall be a waste oil storage tank available, to restrict oil discharges.	F: Yes. CS: Minimal cost. Standard practice.			Yes C 6.3

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/ sacrifice (CS)[33]***	***Benefit in impact reduction***	***Proportionality***	***Control adopted***
• If machinery space bilge discharges cannot meet the oil content standard of less than 15 ppm without dilution or be treated by an IMO-approved oil/water separator, they will be contained onboard and disposed of onshore. • A valid International Oil Pollution Prevention Certificate.				
Vessel firefighting system (portable or in-built) to comply with Marine Order 15 (Construction – fire protection, fore detection and fire extinction) as applicable to vessel class including: • For vessels constructed on or after 1 January 2026, no use or storage of extinguishing media containing PFOS. • For vessels constructed before 1 January 2026, no use or storage of extinguishing media containing PFOS, beyond the date of first survey on or after 1 January 2026.	F: Yes. CS: Minimal cost. Standard practice.	Marine Orders required under Australian regulations; implementation is standard practice for commercial vessels as applicable to vessel size, type and class. Marine Order 15	Benefit outweighs cost/sacrifice.	Yes C 6.4
Good practice				
None identified.				
Professional judgement – Eliminate				
Store, transport and treat or dispose of sewage, greywater, putrescible and bilge wastes onshore.	F: No. Would present additional safety and hygiene hazards resulting from storing, loading and transporting the waste material. CS: Not considered – control not feasible.	Not considered – control not feasible.	Not considered – control not feasible.	No
Professional judgement – Substitute				
None identified.				
Professional judgement – Engineered solution				
None identified.				

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/ sacrifice (CS)[33]***	***Benefit in impact reduction***	***Proportionality***	***Control adopted***
ALARP statement: Based on the assessment outcomes, use of the relevant tools appropriate to the decision type (i.e. Decision Type A; Section 2.3.4.2) and Woodside's criteria for demonstrating ALARP (Section 2.4.1), Woodside considers the adopted controls appropriate to manage potential impacts associated with impacts of planned routine discharges from LWIV and support vessels. As no reasonably practicable additional or alternative controls were identified that would further reduce the impacts without disproportionate sacrifice, the impacts are considered ALARP.				

Demonstration of acceptability
Acceptability statement: The impact assessment has determined that, given the adopted controls, routine and non-routine discharges from the LWIV and support vessels may result in localised impacts not significant to environmental receptors with no lasting effect. Based on the assessment outcomes, use of the relevant tools appropriate to the decision type (i.e. Decision Type A; Section 2.3.4.2) and Woodside's criteria for demonstrating acceptability (Section 2.4.2), Woodside considers the adopted controls appropriate to manage the impacts to a level that is broadly acceptable, and compliance with those controls demonstrates the EPOs are met.

EPOs, EPSs and MC			
EPOs	***Controls***	***Performance standards***	***Measurement criteria***
EPO 6 LWIV and support vessel discharges shall meet requirements defined by Marine Orders	C 6.1 Marine Order 95 (Marine pollution prevention – garbage) as appropriate to vessel class, which includes the following requirements: • maintenance of a Garbage Log Book • discharge of putrescible waste not permitted within Operational Area (i.e. <3 NM from land) • discharges of greywater are permitted.	PS 6.1.1 LWIV and support vessels are compliant with Marine Order 95 (Marine pollution prevention – garbage).	MC 6.1.1 Records demonstrate LWIV and support vessels are compliant with Marine Order 95.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

EPOs, EPSs and MC			
EPOs	***Controls***	***Performance standards***	***Measurement criteria***
	C 6.2 Marine Order 96 (Marine pollution prevention – sewage) as appropriate to vessel class, which includes the following requirements: • a valid International Spill Pollution Prevention Certificate • an AMSA-approved sewage treatment plant • a sewage commuting and disinfecting system • a sewage holding tank sized appropriately to contain all generated waste (black and grey water) • discharge of sewage that is not comminuted or disinfected only occurring at more than 12 NM from the nearest land • discharge of sewage that is comminuted or disinfected using a certified approved sewage treatment plant only occurring at more than 3 NM from the nearest land • sewage discharged at a moderate rate while the vessel is proceeding (>four knots).	PS 6.2.1 LWIV and support vessels compliant with Marine Order 96 (Marine pollution prevention – sewage) as appropriate to vessel class.	MC 6.2.1 Records demonstrate LWIV and support vessels are compliant with Marine Order 96.
	C 6.3 Marine Order 91 (Marine pollution prevention – oil), as relevant to vessel class requirements, which includes mandatory measures for processing oily water before discharge: • Machinery space bilge or oily water shall have IMO-approved oil filtering equipment (oil/water separator) with an online monitoring device to measure OIW content to be less than 15 ppm before discharge. • IMO-approved oil filtering equipment shall also have an alarm and an automatic stopping device or be capable of recirculating if OIW concentration exceeds 15 ppm. • A deck drainage system shall be capable of controlling the content of discharges for areas of high risk of fuel, oil, grease or hazardous chemical contamination.	PS 6.3.1 Deck drainage and bilge water will meet the oil content standard of <15 ppm without dilution.	MC 6.3.1 Records demonstrate discharge specifications are met for LWIV and support vessels.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

EPOs, EPSs and MC			
EPOs	***Controls***	***Performance standards***	***Measurement criteria***
	• There shall be a waste oil storage tank available, to restrict oil discharges. • If machinery space bilge discharges cannot meet the oil content standard of less than 15 ppm without dilution or be treated by an IMO-approved oil/water separator, they will be contained onboard and disposed of onshore. • A valid International Oil Pollution Prevention Certificate.		
	C 6.4 Vessel firefighting system (portable or in-built) to comply with Marine Order 15 (Construction – fire protection, fore detection and fire extinction) as applicable to vessel class including: • For vessels constructed on or after 1 January 2026, no use or storage of extinguishing media containing PFOS. • For vessels constructed before 1 January 2026, no use or storage of extinguishing media containing PFOS, beyond the date of first survey on or after 1 January 2026.	PS 6.4.1 Vessel firefighting systems comply with Marine Order 15 requirements related to the use and storage of firefighting foams containing PFOS.	MC 6.4.1 Marine assurance records demonstrate vessels' firefighting systems comply with Marine Order 15 requirements related to the use and storage of firefighting foams containing PFOS.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.6.6 Routine atmospheric and greenhouse gas emissions: fuel combustion and cold venting

Context		
Subsea intervention activities – Section 3.5 Project vessels – Section 3.6	Socioeconomic and cultural – Section 4.9	Stakeholder consultation – Section 5

Impact evaluation summary

Source of impact	***Environmental value potentially impacted***						***Evaluation***						
	Marine sediment	Water quality	Air quality (incl odour)	Ecosystems/habitat	Species	Socioeconomic	Decision type	Consequence/impact	Likelihood	Risk rating	ALARP tools	Acceptability	Outcome
Exhaust emissions from internal combustion engines and incinerators on LWIV, support vessels and helicopters			X				A	F	-	-	LCS GP PJ	Broadly acceptable	EPO 7
Cold venting of residual gas			X				A	F	-	-			
Small volume gas releases subsea			X				A	F	-	-			

Description of source of impact

Internal combustion engines and incinerators

Atmospheric emissions will be generated by the LWIV, support vessels and helicopters from internal combustion engines (including all equipment and generators, which may be powered by diesel or liquefied natural gas) and incineration activities (including onboard incinerators) during the Petroleum Activity. Emissions associated with these operations will include sulfur dioxide, nitrogen oxides, ozone depleting substances, carbon dioxide, particulates and volatile organic compounds (VOCs). The LWIV and support vessels will use marine diesel oil to power vessel engines, waste incinerators, generators and mobile and fixed plant and equipment for the duration of the Petroleum Activity.

The Petroleum Activity is expected to take between 14 to 35 days at each well (activities will take place 24 hours, seven days a week); refer to Section 3.4 for durations per well.

The LWIV will be accompanied by at least one, but up to three, support vessels. Support vessels with DP capability will primarily be used to for supply, but may perform other support duties as required.

It is estimated an LWIV could consume up to about 50 t/d of marine diesel. Emissions from support vessels are significantly lower than from the LWIV because of lower fuel use and more intermittent operation.

Helicopters may be used occasionally to transfer personnel or urgent freight between shore and the LWIV. Total aviation fuel use over the Petroleum Activity is estimated to be around 10,000 L. Compared with marine fuel combustion, helicopter emissions represent a very small proportion of the overall emissions profile. Emissions will be released at altitude along flight paths and are rapidly diluted.

GHG emission sources and quantities relating to fuel combustion are as summarised in Table 6-5. Calculations are based on the emission factors for fuel combustion for transport energy, as stipulated in the National Greenhouse and Energy Reporting (Measurement) Determination 2008.

Table 6-5: Greenhouse gas emissions sources and quantities

Source	GHG emission volumes (tonnes of carbon dioxide equivalents)
LWIV operations	8,826
Support vessel operations	1,370

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Helicopter operations	22
Total estimated GHG emission	**10,218**

Cold venting and small hydrocarbon gas releases

Small volumes of gas may be released directly to the atmosphere during intervention and cold commissioning, including:

- cold commissioning/residual gas venting: up to ~5000 m³ of gas per well during depressurisation of small-bore lines and equipment
- hydrocarbon releases after XT cap removal: volumes of trapped gas/vapour up to 1000 m³ may be released when the tree cap is removed to access the XT
- emergency shutdown/drift-off scenarios: small volumes of gas and fluid (<1 m^3) in umbilicals and upper PCE may be released as the system depressurises.

These releases are non-routine and short duration. Given the quantities and expected rapid atmospheric dispersion, they contribute only marginally to the overall emissions footprint.

Impact assessment

Environmental value(s) potentially impacted

Fuel combustion has the potential to result in localised, temporary reduction in air quality and contribution to GHG emissions. Given the short duration and the offshore location of the Petroleum Activity (>100 km north-west of Dampier), which will lead to the rapid dispersion of the low volumes of atmospheric emissions, the potential impacts are expected to be localised and of no lasting effect.

Atmospheric emissions generated from vessel fuel combustion and minor cold-venting during the well intervention activities have the potential to cause direct impacts to seabirds if individuals are within the immediate vicinity of concentrated releases. Extended exposure to elevated air pollutants has been shown to cause respiratory distress and illness in birds (Sanderfoot & Holloway, 2017). One BIA for wedge-tailed shearwater breeding overlaps the Operational area (Operational Area Part 1 only), with the breeding period occurring from August to April (Section 4.6.4). Given there are no significant releases of atmospheric emissions from the Petroleum Activity and the support vessels will be moving, facilitating dispersion in an open offshore environment, extended emissions exposure will not occur to any marine fauna species. Injury or mortality to fauna as a result of atmospheric releases are not expected.

GHG emissions from the Petroleum Activity are estimated based on fuel use assumptions for the LWIV and support vessels. Calculated GHG emission estimates represent <0.001% of Australia's total emissions estimated from 2024 (446.4 megatons of carbon dioxide equivalents (DCCEEW, 2024b)).

Demonstration of ALARP

Control considered	*Control feasibility (F) and cost/sacrifice (CS)*[34]	*Benefit in impact reduction*	*Proportionality*	*Control adopted*
Legislation, codes and standards				
Marine Order 97 (Marine pollution prevention – air pollution), which details requirements for: • International Air Pollution Prevention Certificate, as required by vessel class • use of low sulphur fuel when available • Shipboard Energy Efficiency Management Plan,	F: Yes. CS: Minimal cost. Standard practice.	Marine Order 97 is required under Australian regulations; implementation is standard practice for commercial vessels as applicable to vessel size, type and class. Marine Order 97 reduces air pollution from vessels.	Legislative requirement – must be adopted.	Yes C 7.1

[34] *Qualitative measure.*

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)[34]***	***Benefit in impact reduction***	***Proportionality***	***Control adopted***
where required by vessel class • onboard incinerator to comply with Marine Order 97.				
Good practice				
Contracting strategy and evaluation for hire of support vessels includes consideration of vessel emissions parameters and low carbon or alternative fuels.	F: Yes. CS: Fuel cost is considered in the evaluation of responses, allowing for competitive consideration of low carbon alternatives.	Minimise cost and emissions through eco-efficiency approach, recognising cost of fuel and carbon emissions over the contract term.	Benefits outweigh cost/sacrifice.	Yes C 7.2
Pass rate across venting valves to be tested prior to • Xmas tree cap removal: If pass rate meets maximum pass rate criteria, continue with Xmas tree cap removal. • If pass rate exceeds maximum pass rate criteria, conduct a risk assessment prior to Xmas tree cap removal.	F: Yes. CS: Minimal cost. Standard practice.	Implementing pass rate requirement will ensure release of gas from Xmas tree cap removal is acceptable.	Benefits outweigh cost/sacrifice.	Yes C 7.3
Professional judgement – Eliminate				
Do not combust fuel.	F: No. There are no project vessels that do not use internal combustion engines. CS: Not considered – control not feasible.	Not considered – control not feasible.	Not considered – control not feasible.	No
Do not vent during removal of the tree cap.	F: No. Gas may be trapped in the tree and must be vented when valves are open to access tree and undertake intervention safely. CS: Not considered – control not considered feasible.	Not considered – control not feasible.	Not considered – control not feasible.	No
Professional judgement – Substitute				
None identified.				

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)[34]***	***Benefit in impact reduction***	***Proportionality***	***Control adopted***
Professional judgement – Engineered solution				
None identified.				
ALARP statement: Based on the assessment outcomes, use of the relevant tools appropriate to the decision type (i.e. Decision Type A; Section 2.3.4.2) and Woodside's criteria for demonstrating ALARP (Section 2.4.1), Woodside considers the adopted controls appropriate to manage potential impacts associated with routine atmospheric and GHG emissions. As no reasonably practicable additional or alternative controls were identified that would further reduce the impacts without disproportionate sacrifice, the impacts are considered ALARP.				

Demonstration of acceptability
Acceptability statement: The impact assessment has determined that, given the adopted controls, routine atmospheric and GHG emissions from fuel combustion and venting may result in localised impacts not significant to environmental receptors and of no lasting effect. The adopted controls are considered consistent with legislation, codes and standards, and professional judgment and meet the requirements of Australian Marine Orders. Based on the assessment outcomes, use of the relevant tools appropriate to the decision type (i.e. Decision Type A; Section 2.3.4.2) and Woodside's criteria for demonstrating acceptability (Section 2.4.2), Woodside considers the adopted controls appropriate to manage the impacts to a level that is broadly acceptable, and compliance with those controls demonstrates the EPOs are met.

EPOs, EPSs and MC			
EPOs	***Controls***	***Performance standards***	***Measurement criteria***
EPO 7 Emissions to atmosphere associated with fuel combustion, incineration, flaring and venting limited to those necessary to complete the Petroleum Activity.	C 7.1 Marine Order 97 (Marine pollution prevention – air pollution), which details requirements for: • International Air Pollution Prevention Certificate, as required by vessel class • use of low sulphur fuel when available • Shipboard Energy Efficiency Management Plan, where required by vessel class • onboard incinerator to comply with Marine Order 97.	PS 7.1.1 LWIV and support vessels compliant with Marine Order 97 (Marine pollution prevention – air pollution) to restrict emissions to those necessary to perform the Petroleum Activity. Vessel marine assurance process conducted before contracting vessels, to ensure suitability and compliance with vessel combustion certification and Marine Order requirements.	MC 7.1.1 Marine assurance inspection records demonstrate compliance with Marine Order 97.
	C 7.2 Contracting strategy and evaluation for hire of vessels includes consideration of vessel emissions parameters and low carbon/alternate fuels.	PS 7.2.1 Contracting strategy for vessel hire to be implemented including evaluation of vessel emissions parameters and low carbon/alternate fuels.	MC 7.2.1 Contracting strategy demonstrates evaluation of vessel emissions parameters and low carbon/alternate fuels.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

EPOs, EPSs and MC			
EPOs	***Controls***	***Performance standards***	***Measurement criteria***
	C 7.3 Pass rate across venting valves to be tested prior to Xmas tree cap removal: • If pass rate meets maximum pass rate criteria, continue with Xmas tree cap removal. • If pass rate exceeds maximum pass rate criteria, conduct a risk assessment prior to Xmas tree cap removal.	PS 7.3.1 Venting valve pass rate testing procedure to be in place, including maximum pass rate criteria.	MC 7.3.1 Records demonstrate testing of venting valves completed.
			MC 7.3.2 Records demonstrate risk assessments completed for wells where pass rate exceeded maximum pass rate criteria.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.6.7 Routine and non-routine: external lighting on the project vessels

Context		
Project vessels – Section 3.6	Protected species – Section 4.6 Socioeconomic environment – Section 4.9	Stakeholder consultation – Section 5

Impact evaluation summary

Source of impact	*Environmental value potentially impacted*						*Evaluation*						
	Marine sediment	Water quality	Air quality (incl odour)	Ecosystems/habitat	Species	Socioeconomic	Decision type	Consequence/impact	Likelihood	Risk rating	ALARP tools	Acceptability	Outcome
External light emissions onboard LWIV and support vessels					X		A	E	-	-	GP PJ	Broadly acceptable	EPO 8

Description of source of impact

Routine light emissions include light sources that alter the ambient light conditions in an environment. The LWIV and support vessels will routinely use external lighting to navigate and conduct safe operations at night throughout the Petroleum Activity. External light emissions from the LWIV and support vessels are typically managed to maintain good night vision for crew members. Lighting will also be used to communicate the vessel's presence to other marine users (i.e. navigation and warning lights). Lighting is required for safely operating LWIV and support vessels and cannot reasonably be eliminated.

The LWIV and support vessels that may be needed for the Petroleum Activity are outlined in Section 3.6. External lighting is on vessel decks, with most external lighting directed towards working areas such as the main decks. These areas are typically <20 m above sea level for the LWIV and support vessels. Indicative timing for activities is provided in Section 3.4 and may occur throughout the year.

Lighting from the LWIV and support vessels may appear as a direct light source from an unshielded lamp with direct line of sight to the observer or through sky glow. Direct lighting falling upon a surface is referred to as light spill. Sky glow is the diffuse glow caused by light that is screened from view, but through reflection and refraction creates a glow in the atmosphere.

The visibility and extent of these light sources depend on lighting height above sea level, weather, sea state and cloud cover. Previous monitoring of similar vessel types has shown that while lights may be visible at long distances under clear conditions, light density (Lux) reduces rapidly with increasing distance. Measurements undertaken in Woodside's 2014 monitoring program indicated mobile offshore drilling unit navigational lighting attenuated to <1.00 Lux at about 300 m and 0.03 Lux at about 1.4 km, values comparable to natural deep-twilight and quarter-moon conditions. Based on these data, light spill from the LWIV and support vessels is expected to attenuate to <1.00 Lux within several hundred metres of the source.

Underwater lighting will be generated intermittently when ROVs or AUVs undertake inspection, marine growth removal, transponder deployment or subsea tool positioning. Due to rapid attenuation of light under water and the directional nature of ROV lighting, underwater light will remain localised to the immediate vicinity of the ROV and subsea structures (i.e. within metres).

Impact assessment

Environmental value(s) potentially impacted

Lighting from the LWIV and support vessels may appear from direct unshielded light sources or through skyglow. Where direct light falls upon the ocean, this area of light is referred to as light spill. Skyglow is the diffused glow reflected and refracted in the atmosphere, caused by light that is screened from view.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Receptors that have important habitat within a 20 km buffer of the Operational area were considered as having potential for interaction, based on recommendations of the National Light Pollution Guidelines for Wildlife Including Marine Turtles, Seabirds and Migratory Shorebirds (DCCEEW, 2023). The 20 km buffer provides a precautionary limit based on observed effects of skyglow on marine turtle hatchlings (15 to 18 km) and fledgling seabirds grounded in response to artificial light 15 km away (DCCEEW, 2023).

Light emissions can affect fauna in two main ways:

- Behavioural: many organisms are adapted to natural levels of lighting, the natural changes associated with the day and night cycle, and the night-time phase of the moon. Artificial lighting has the potential to create a constant level of light at night that can override these natural levels and cycles.
- Orientation interference: organisms such as marine turtles and birds may also use lighting from natural sources to orient themselves in a certain direction at night. In instances where an artificial light source is brighter than a natural source, the artificial light may act to override natural cues, leading to disorientation.

Marine fauna expected within the Operational area are predominantly pelagic fish and zooplankton. The Operational area overlap or are within 20 km of BIAs and habitat critical areas, which are sensitive to light emissions. Specifically:

- a wedge-tailed shearwater breeding/foraging BIA, which overlaps the Operational area (Figure 4-10)
- a flatback turtle reproduction (internesting) BIA, 18 km south of the Operational area (Figure 4-5).

Marine turtles

Light emissions interacting with turtle nesting behaviour is widely considered detrimental because of its ability to alter important nocturnal activities, including choice of nesting sites and hatchlings' orientation or navigation to the sea (Witherington & Martin, 2003).

The most significant risk to marine turtles from artificial lighting is the potential disorientation of hatchlings after they emerge from nests, although the behaviour of breeding adult turtles can also be affected (DCCEEW, 2023). The Recovery Plan for Marine Turtles in Australia 2017–2027 (Commonwealth of Australia, 2017) considers light pollution a threat to hatchling orientation, survivability/predation and sea-finding behaviours, and can disrupt nesting behaviours of mature females.

Hatchlings

Turtle hatchlings emerge from the nest and orient towards the sea. After entering the water, hatchlings use wave direction and currents to orient and travel into offshore waters. Impacts to the sea-finding behaviour of hatchlings are more common for light sources behind a beach, as lighting offshore will orient emerging hatchlings towards the sea. Sea-finding behaviour of hatchlings is also impacted by light type and intensity, with broader spectrum or 'whiter' light sources (e.g. light emitting diodes and metal halide lamps) having more of an impact on hatchling sea-finding orientation compared to a narrow spectrum of light, such as low pressure sodium lighting (Gomez Isaza, et al., 2025).

Artificial light at close distances can impact hatchling dispersal once they are in the water. Light spill may 'entrap' hatchling swimming behaviour. During the early part of their offshore dispersal, hatchlings exhibit slower swimming speeds, reducing the success of their seaward dispersion and causing them to spend more time in the predator-rich nearshore waters (Thums, et al., 2016; Truscott, et al., 2017; Wilson, et al., 2018).

Flatback turtle hatchlings do not undertake oceanic migrations offshore to deep, pelagic waters. Instead, juveniles grow to maturity in shallow coastal waters close to their natal beaches (Musick & Limpus, 1996). The nearest turtle nesting beach is Dampier Archipelago, more than 90 km away from the Operational area. At this distance, skyglow and light spill from the LWIV and support vessels will not reach any nesting beach and impacts to hatchlings are not anticipated.

Adults

Artificial lighting may affect where turtles choose to emerge to the beach, the success of nest construction, whether nesting is abandoned, and the seaward return of adults (Salmon, et al., 1995; Witherington, 1992; Pendoley Environmental, 2020). However, such lighting impacts typically arise from residential and industrial development overlapping the coastline, rather than from offshore activities.

The internesting period is the duration between each successive clutch during that season. The females remain close to rookeries or beaches; therefore, designated and defined buffer zones have been gazetted immediately seaward from nesting beaches. While the flatback turtle reproduction (internesting buffer) BIA is 18 km south of the Operational area, this represents offshore habitat used by adults for resting and movement between nesting events, not a light-sensitive life stage, and marine turtles do not use light cues to guide internesting behaviours (Pendoley, 2000). To date, there is no evidence to suggest internesting turtles are attracted to light from offshore vessels (Pendoley Environmental, 2020b). As such, light emissions from the facility and vessels are unlikely to result in displacement of, or behavioural changes to, individuals in these life stages. Given the water depth of the Operational area and lack of preferred foraging habitat, marine turtles are expected to be present in very low numbers only over the area where light could be visible from the Petroleum Activity.

Light emissions from the LWIV and support vessels are unlikely to result in more than localised behavioural disturbance to transient individuals, with slight and short-term effect to the species.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Seabirds

Artificial lighting can attract and disorient seabird species, resulting in behavioural changes such as circling of light sources or disrupted foraging, or injury and mortality near the light source as a result of collision (Gatson, et al., 2014).

The most vulnerable life stages for seabirds and migratory shorebirds are nesting adults or fledglings. Nesting or fledgling seabirds and migratory shorebirds are vulnerable to artificial lighting within 20 km of the nesting location (DCCEEW, 2023). A breeding BIA for the wedge-tailed shearwater overlaps the Operational area (Operational Area Part 1 only) (see Figure 4-10). The nearest potential seabird roosting habitat is over 100 km southeast of the Operational area.

Adult shearwaters are vulnerable to artificial lighting during the breeding cycle, when returning to and leaving the nesting colony to maintain nesting sites or to forage. Foraging wedge-tailed shearwaters may be attracted to sources of light emissions to feed on fish drawn to the light; however, the species feeds predominantly during the day, in association with pelagic predators (Catry, et al., 2009). Most foraging trips are short, with single-day foraging trips significantly more common than any other length, with birds returning to nesting and roosting sites between trips. The numbers of wedge-tailed shearwaters in the Operational area at night is expected to be low, given the primarily diurnal foraging behaviour, and behavioural impacts to the species are considered to be highly unlikely. Given the foraging behaviours of roosting shearwaters, artificial light from the Operational area is not predicted to disrupt critical breeding behaviours within important nesting habitat or displace seabirds from nesting habitat.

Fledgling shearwaters are predominantly impacted by onshore lighting sources, which can override sea-finding cues and attract fledglings further inland, preventing them from reaching the sea (Mitkus, et al., 2018). Artificial light can also impact important behaviour of nesting adults (e.g. attending adult nests, maintaining nest sites) or confuse shearwater species, resulting in injury or mortality from birds colliding with structures (Cianchetti-Benedetti, et al., 2018). Given the offshore location of the Operational area, about 100 km from the nearest landfall, impacts to the survivability of fledglings from artificial lighting from the Petroleum Activity are not expected.

Fish

Lighting from ROV, LWIV and support activities during the Petroleum Activity may result in the localised aggregation of fish. These aggregations of fish due to light are considered localised and temporary and any long-term changes to fish species composition or abundance is considered highly unlikely. This localised increase in fish extends to those comprising the whale shark's diet. However, as a large proportion of the diet comprises krill and other planktonic larvae, it is unlikely a light source would lead to a significant increase in whale shark abundance in the vicinity of the LWIV or support vessels. Similarly, any localised impacts to marine fish are not expected to impact on any commercial fishers in the area.

Cultural features and heritage values

Refer to Section 6.9 for an assessment of potential impacts to cultural features and heritage values from the Petroleum Activity. Related control measures that demonstrate that impacts are reduced to ALARP and are of an acceptable level have been captured in Section 6.9.

Cumulative impacts

Cumulative lighting may occur due to the presence of other infrastructure and activities associated with the CWLH fields, particularly the Okha FPSO which operates with continuous lighting for production, processing and offloading activities. The CK4, LH3, WA7 and WA8 wells form part of this existing production system, and the local ambient light regime in the broader CWLH area is therefore influenced by the Okha FPSO and associated field operations.

The LWI activities will introduce additional light sources from the LWIV and up to three support vessels. However, these additional light sources will be short term (14 to 35 days per well, refer to Section 3.4), temporary and limited in number. Lighting on these vessels will primarily consist of navigation lights and operational deck lighting that is needed for safe marine operations and will cease once the well intervention is completed and vessels depart.

Since the wider Operational area already experience ongoing operational lighting from the Okha FPSO and associated infrastructure and the Petroleum Activity represents only a temporary increase in lighting that is restricted to the duration of the Petroleum Activity, the contribution of LWI related lighting is not expected to be significant. In addition, the CWLH fields are more than 100 km from the nearest turtle nesting beaches. Cumulative impacts are not anticipated.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)[35]***	***Benefit in impact reduction***	***Proportionality***	***Control adopted***
Legislation, codes and standards				
None identified.				
Good practice				
Lighting is limited to the minimum required for navigational and safety requirements, except in emergency events.	F: Yes. CS: Minimal cost. Standard practice.	Reduces impact to as low as reasonably practicable.	Benefit outweighs cost/sacrifice.	Yes C 8.1
Implement Woodside's Offshore Seabird Management Plan (SBMP), which includes: • standardisation and maintenance of record keeping and reporting of seabird interactions • procedures on seabird intervention, care and management • regulatory reporting requirements for seabirds (unintentional death of or injury to seabirds that constitute MNES) • a scalable, adaptive management process, should impacts to nocturnal seabirds be detected.	F: Yes. CS: Minimal cost. Standard practice.	The SBMP is Woodside's process to manage the impacts of artificial light emissions during petroleum activities. It is designed to minimise the likelihood of impacts to seabirds from light emissions. If impacts to seabirds are identified, implementing the SBMP provides controls that can manage the Petroleum Activity such that ongoing impacts are mitigated.	Benefit outweighs cost/sacrifice.	Yes C 8.2
Professional judgement – Eliminate				
Restrict the Petroleum Activity to daylight hours, eliminating the need for external work lights.	F: Yes. Restricting the Petroleum Activity to daylight hours is technically feasible, although not considered to be reasonably practicable. CS: Significant cost sacrifice. Limiting the Petroleum Activity to daylight hours would significantly increase the duration of the Petroleum Activity, and therefore result in	Negligible reduction in consequence, given the duration, nature of the activity and the distance from sensitivities (e.g. turtle nesting beaches).	Disproportionate – cost/sacrifice outweighs benefit to be gained.	No

[35] *Qualitative measure.*

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)[35]***	***Benefit in impact reduction***	***Proportionality***	***Control adopted***
	additional impacts from other sources, such as interference with other marine users, noise, vessel discharges, or potential for unplanned risks.			
Professional judgement – Substitute				
Substitute external lighting with light sources designed to minimise impacts to seabirds, shorebirds and marine turtles: • Use intermittent lights instead of fixed. • Use motion sensors to turn lights on only when needed. • Use luminaires with spectral content appropriate for the species present. • Avoid high-intensity light of any colour.	F: Yes. Replacing external lighting with the alternative lighting is technically feasible, although is not considered to be practicable. CS: Significant cost sacrifice. Retrofitting all external lighting on the vessels would result in considerable cost and time expenditure. Considerable logistical effort to source enough inventory of the range of light types aboard vessels.	Given the distance from sensitivities (e.g. turtle nesting beaches) and the potential impacts to marine turtles, nesting seabirds and fledglings during this Petroleum Activity, implementation of alternative vessel lighting would not result in a reduction of consequence. Potential for minor reduction in impacts to individual foraging seabirds that may transit the Operational area, as outlined in the National Light Pollution Guidelines (DCCEEW, 2023).	Disproportionate – cost/sacrifice outweighs benefit to be gained.	No
Professional judgement – Engineered solution				
None identified.				
ALARP statement: Based on the assessment outcomes, use of the relevant tools appropriate to the decision type (i.e. Decision Type A; Section 2.3.4.2) and Woodside's criteria for demonstrating ALARP (Section 2.4.1), Woodside considers the adopted controls appropriate to manage potential impacts associated with routine and non-routine vessel lighting. As no reasonably practicable additional or alternative controls were identified that would further reduce the impacts without disproportionate sacrifice, the impacts are considered ALARP.				

Demonstration of acceptability
Acceptability statement: The impact assessment has determined that, given the adopted controls, planned light emissions from the Petroleum Activity may result in localised and low-level impacts to species with no lasting effect. A breeding BIA for the wedge-tailed shearwater overlaps the Operational area. Conservation advice and the National Light Pollution Guidelines (DCCEEW, 2023) were considered during the impact evaluation and the Petroleum Activity is determined to be consistent with these. Based on the assessment outcomes, use of the relevant tools appropriate to the decision type (i.e. Decision Type A; Section 2.3.4.2) and Woodside's criteria for demonstrating acceptability (Section 2.4.2), Woodside considers the adopted controls appropriate to manage the impacts to a level that is broadly acceptable, and compliance with those controls demonstrates the EPOs are met.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

EPOs, EPSs and MC			
EPOs	***Controls***	***Performance standards***	***Measurement criteria***
EPO 8a No impacts to marine fauna from light emissions greater than that caused by the minimum required for safe work and navigation. EPO 8b No displacement of marine turtles from habitat critical during nesting and internesting periods and marine turtles' biologically important behaviour can continue in biologically important areas. EPO 8c No adverse effects greater than a change to behaviour, with no lasting effect to seabirds from artificial light emissions during the Petroleum Activity.	C 8.1 Implement the Woodside Offshore SBMP, which includes: • standardisation and maintenance of record keeping and reporting of seabird interactions • procedures on seabird intervention, care and management • regulatory reporting requirements for seabirds (unintentional death of or injury to seabirds that constitute MNES) • a scalable, adaptive management process, should impacts to nocturnal seabirds be detected.	PS 8.1.1 Implement the Woodside Offshore SBMP.	MC 8.1.1 Records demonstrate Woodside's Offshore SBMP was implemented, as required.
	C 8.2 Lighting is limited to the minimum required for navigational and safety requirements, except in emergency events.	PS 8.2.1 Lighting is limited to that required for safe work and navigation.	MC 8.2.1 Inspection records demonstrate lighting was limited to the minimum required for safe working and navigation.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.7 Unplanned activities (accidents, incidents, emergency situations)

6.7.1 Quantitative spill risk assessment methodology

As part of the risk identification process, Woodside identified the range of credible hydrocarbon spill scenarios that may occur during the Petroleum Activity.

Quantitative hydrocarbon spill modelling was undertaken by RPS (RPS, 2019; RPS, 2025), on behalf of Woodside, using a three-dimensional (3D) hydrocarbon spill trajectory and weathering model, Spill Impact Mapping and Analysis Program (SIMAP), which is designed to simulate the transport, spreading and weathering of specific hydrocarbon types under the influence of changing meteorological and oceanographic forces. Near-field subsurface discharge modelling was performed using OILMAP, which predicts the droplet sizes that are generated by the turbulence of the discharge as well as the centreline velocity, buoyancy, width and trapping depth (if any) of the rising gas and oil plumes. The OILMAP output parameters were used as input into SIMAP.

The algorithms in the SIMAP model are based on the best available scientific knowledge and are updated when necessary, in response to significant advances in knowledge. Recent improvements were implemented to the entrainment algorithm, which were adjusted to implement the findings of published data based on field research performed during the Macondo spill event in the Gulf of Mexico (Spaulding, et al., 2017; Li, et al., 2017; French McCay, et al., 2018).

A stochastic modelling scheme was followed in this study, whereby SIMAP was applied to repeatedly simulate the defined credible spill scenarios using different samples of current and wind data. These data samples were selected randomly from an historic time-series of wind and current data representative of the study area. Results of the replicate simulations were then statistically analysed and mapped to define contours of percentage probability of contact at identified thresholds around the hydrocarbon release point. The simulations that show something unusual or unexpected make an important contribution to the overall outcomes and fate of the hydrocarbon.

The model simulates surface releases and uses the unique physical and chemical properties of a hydrocarbon type to calculate rates of evaporation and viscosity change, including the tendency to form OIW emulsions. Moreover, the unique transport and dispersion of surface slicks and in-water components (entrained and dissolved) are modelled separately. Thus, the model can be used to understand the wider potential consequences of a spill, including direct contact of hydrocarbons due to surface slicks (floating hydrocarbon) and exposure of organisms to entrained and dissolved aromatic hydrocarbons in the water column. The model also calculates the accumulation of hydrocarbon mass that arrives on each section of shoreline over time, considering any mass that is lost to evaporation and subsequent removal by current and wind forces.

During each simulation, the SIMAP model records the location (by latitude, longitude and depth) of each particle (representing a given mass of hydrocarbons) on or in the water column, at regular time steps. For any particles that contact a shoreline, the model records the accumulation of hydrocarbon mass that arrives on each section of shoreline over time, less any mass that is lost to evaporation and subsequent removal by current and wind forces.

The collective records from all simulations are then analysed by dividing the study region into a 3D grid. For surface hydrocarbons (floating oil), the sum of the mass in all hydrocarbon particles located within a grid cell, divided by the area of the cell, provides hydrocarbon concentration estimates in that grid cell at each model output time interval. For entrained and dissolved aromatic hydrocarbon particles, concentrations are calculated at each time step by summing the mass of particles within a grid cell and dividing by the volume of the grid cell. The process is also subject to spreading filters that are applied to represent the expected mass distribution of each distinct particle. The concentrations of hydrocarbons calculated for each grid cell, at each time step, are then analysed to determine whether concentration estimates exceed defined threshold concentrations.

Hydrocarbon spill modelling assessments by RPS undergo initial sensitivity modelling to determine appropriate time to add to the simulation after cessation of the spill. The amount of time after the spill is based on the time needed for the modelled concentrations to practically drop below threshold concentrations anywhere in the model domain in the test cases. This assessment is done by post-processing the sensitivity test results and analysing time-series of median and maximum concentrations in the water and on the surface.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.7.1.1 Worst case scenarios

As part of the risk identification process, Woodside identified the range of credible hydrocarbon spill scenarios that may occur from the petroleum activities. In assessing the potential impacts of an unplanned hydrocarbon release, representative worst-case scenarios (in terms of volume and location) were identified. They include:

- Scenario 1: An intervention wellbore seabed release of 550 m^3 of Cossack light crude from the CK4 or LH3 wells, over a duration of 12 hours (refer to Section 6.7.2).
- Scenario 2: A tree changeout wellbore seabed release of 45 m^3 of Cossack light crude from the CK4 or LH3 wells, instantaneously (refer to Section 6.7.2).
- Scenario 3: A loss of containment from an 8-inch production flowline within the Okha subsea system releasing 414 m^3 of Cossack light crude, over a duration of 12 hours (refer to Section 6.7.2).
- Scenario 4: A short-term (instantaneous) surface release of 250 m^3 of marine diesel from the CK4 or LH3 wells, representing a worst-case loss of fuel tank integrity after a vessel collision (refer to Section 6.7.3).
- Scenario 5: A short-term (instantaneous) seabed release of 441 m3 of Cossack light crude from a dropped object rupturing the 8-inch production flowline, which holds the largest liquid hydrocarbon inventory within the Okha subsea system. Note, this hydrocarbon release scenario and associated controls are included within Section 6.7.5 of the accepted Okha FPSO Operations EP.

6.7.1.2 Environment that may be affected (EMBA) and hydrocarbon contact thresholds

The outputs of the quantitative hydrocarbon spill modelling are used to assess the environmental consequence by delineating which areas of the marine environment could be exposed to hydrocarbon levels that exceed selected hydrocarbon threshold concentrations if a credible hydrocarbon spill scenario occurs. The summary of the locations where hydrocarbon thresholds could be exceeded by any of the simulations modelled is defined as the EMBA.

The EMBA covers a larger area than the area that is likely to be affected during any single spill event, as the model was run for various weather and metocean conditions. The EMBA represents the total extent of all the locations where hydrocarbon thresholds could be exceeded from all modelling runs. Furthermore, as the weathering of different fates of hydrocarbons (surface, entrained and dissolved) differs due to the influence of the metocean mechanism of transportation, a different EMBA is presented for each hydrocarbon fate. Together, these EMBAs define the spatial extent for the existing environment described in Section 4.

The spill modelling outputs are presented as areas that meet threshold concentrations for surface, entrained and dissolved hydrocarbons for the modelled scenarios. Surface spill concentrations are expressed as grams per square metre (g/m2), with entrained and dissolved aromatic hydrocarbon concentrations expressed as parts per billion (ppb). An additional threshold has been included to define the boundary within which socio-cultural impacts may occur, based on visible surface oil (1 g/m^2) impacting on the visual amenity of the marine environment. Each hydrocarbon threshold is presented in Table 6-6 and described in below.

Table 6-6: Thresholds applied to the quantitative hydrocarbon spill risk modelling results

Hydrocarbon Type	Ecological hydrocarbon thresholds				Socio-cultural hydrocarbon thresholds	
	Surface Hydrocarbon (g/m^2)	***Entrained hydrocarbon (ppb)***	***Dissolved aromatic hydrocarbon (ppb)***	***Accumulated hydrocarbons (g/m^2)***	***Surface Hydrocarbon (g/m^2)***	***Accumulated hydrocarbons (g/m^2)***
Cossack light crude	10	1,000	10	100	1	10
Diesel	10	1,000	10	100	1	10

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.7.1.2.1 Surface hydrocarbon threshold concentrations

The spill modelling outputs defined the EMBA for surface hydrocarbons resulting from a spill (contact on surface waters) using a threshold of ≥10 g/m² (dull metallic colours) based on the relationship between film thickness and appearance (Bonn Agreement 2015) (Table 6-7).

This threshold concentration is used to define an area within which ecological impacts to the marine environment may occur from surface hydrocarbons. It represents the minimum oil thickness (0.01 mm) at which ecological impacts (e.g. to birds and marine mammals) are expected to occur.

Thresholds for registering biological impacts resulting from contact of surface slicks have been estimated by different researchers at about 10–25 g/m² (French et al. 1999; Koops et al. 2004; NOAA 1996). Potential impacts of surface slick concentrations in this range for floating hydrocarbons may include harm to seabirds through ingestion from preening of contaminated feathers, or the loss of the thermal protection of their feathers. The 10 g/m² threshold is the reported level of oiling to instigate impacts to seabirds and is also applied to other wildlife, though it is recognised that 'unfurred' animals, where hydrocarbon adherence is less, may be less vulnerable. 'Oiling' at this threshold is taken to be of a magnitude that can cause a response from the most vulnerable wildlife such as seabirds. Due to weathering processes, surface hydrocarbons will have a lower toxicity due to change in their composition over time. Potential impacts to shoreline sensitive receptors may be markedly reduced in instances where there is extended duration until shoreline contact.

Woodside recognises that hydrocarbons may be present beyond the ecological impact EMBA, at concentrations that may be visible but are not expected to cause ecological impacts. The threshold for visible surface oil (1 g/m²) has therefore been used to define an additional boundary within which socio-cultural impacts to the visual amenity of the marine environment may occur. This area is referred to as the socio-cultural EMBA. Potential impacts to socio-cultural values assessed within these EMBAs include:

- protected areas
- national and Commonwealth Heritage listed places
- tourism and recreation
- fisheries.

Table 6-7: The Bonn Agreement oil appearance code

Appearance (following Bonn visibility descriptors)	Mass per area (g/m²)	Thickness (µm)	Volume per area (L/km²)
Discontinuous true oil colours	50 to 200	50 to 200	50,000 to 200,000
Dull metallic colours	5 to 50	5 to 50	5000 to 50,000
Rainbow sheen	0.30 to 5.00	0.30 to 5.00	300 to 5,000
Silver sheen	0.04 to 0.30	0.04 to 0.30	40 to 300

6.7.1.2.2 Dissolved hydrocarbon threshold concentration

Dissolved hydrocarbons present a narcotic effect resulting from uptake into the tissues of marine organisms. This effect is additive, increasing with exposure concentration or with time of exposure (French-McCay 2002; NRC 2005). The dissolved aromatic threshold of 10 ppb has been selected as a threshold to approximate the potential toxic effects, particularly sublethal effects to sensitive species (French-McCay 2026).

Dissolved hydrocarbons represent the bioavailable fraction of oil in the water column and are therefore the most appropriate metric for assessing potential toxic effects to marine organisms. Toxicity studies consistently demonstrate that adverse biological effects are driven by exposure to dissolved oil components, rather than total oil mass or the physical presence of oil droplets, because only dissolved hydrocarbons can cross biological membranes and interact with target tissues. Acute toxicity datasets and species sensitivity distributions show that the majority of marine species experience no acute effects at dissolved hydrocarbon concentrations at or below 10 ppb, indicating that this concentration is protective of more than 95% of species for acute exposures (French-McCay 2026; Negri et al. 2021; Bejarano et al. 2017).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Experimental and modelling studies demonstrate that toxic effects may begin to occur in the most sensitive species and life stages at dissolved concentrations on the order of 10 ppb, including early biological and sub-lethal responses (French-McCay 2026; Bejarano et al. 2014; McGrath et al. 2018). As such, 10 ppb represents a lower-bound, biologically meaningful exposure value, rather than an arbitrary screening threshold. Use of this concentration is therefore appropriate for identifying ecological features that may be affected by dissolved oil and for assessing potential environmental consequences, while avoiding the implication that widespread or severe toxicity is expected. The 10 ppb dissolved hydrocarbon exposure value thus provides a conservative yet scientifically grounded basis for impact assessment of the dissolved-phase hydrocarbon fate.

As dissolved hydrocarbons are within the water column and not visible, impacts to socio-cultural receptors are expected to be associated with ecological impacts. Therefore, dissolved hydrocarbons at this threshold also represent the level at which socio-cultural impacts may occur. The application of this threshold is conservative as the 10 ppb is an instantaneous value while ecological studies are based on an exposure duration of typically 48 to 96 hours and therefore accounts for uncertainty in consequence from hydrocarbons spills on ecological, social, economic and cultural features of the environment.

6.7.1.2.3 Entrained hydrocarbon threshold concentrations

Entrained hydrocarbons in the water column consist of oil droplets containing a mixture of soluble, semi-soluble and insoluble compounds. The toxicologically relevant fraction of entrained oil is limited to the proportion of hydrocarbons that are able to dissolve from droplets into the surrounding water, with multiple experimental and modelling studies demonstrating that toxicity is driven by the dissolved fraction, rather than by droplet mass, and that dissolved hydrocarbons typically represent a small proportion (on the order of ~1%) of fresh oil, with these soluble components lost rapidly as oil weathers (Forth et al. 2017; Redman & Parkerton 2015; French-McCay 2026). Consequently, entrained oil droplets increasingly comprise non-bioavailable material over time, and entrained hydrocarbon concentrations are therefore a poor proxy for toxicity at low concentrations (Forth et al. 2017; Parkerton et al. 2018).

Given this established relationship between oil composition, dissolution processes and weathering, entrained oil concentrations must be substantially higher than dissolved effect thresholds before biologically meaningful exposure is plausible. French-McCay et al. (2018) demonstrate a direct correlation between entrained oil mass and the dissolved fraction derived from it, indicating that entrained concentrations two orders of magnitude greater than dissolved concentrations are required to represent equivalent exposure potential. On this basis, an entrained hydrocarbon exposure value of 1,000 ppb represents a scientifically justified lower-bound threshold for identifying ecological features that may be affected by entrained oil and for assessing potential environmental consequences. This threshold appropriately reflects the limited bioavailability and declining toxicity of entrained oil droplets, while remaining conservative for impact assessment purposes (French-McCay et al. 2018; Negri et al., 2024).

As entrained hydrocarbons are within the water column and not visible, impacts to socio-cultural receptors are expected to be associated with ecological impacts. Therefore, entrained hydrocarbons at this threshold also represent the level at which socio-cultural impacts may occur. The application of this threshold is conservative as the 1,000 ppb is an instantaneous value whereas laboratory-based ecological studies typically assess toxicity over exposure durations of 48 to 96 hours, such that use of an instantaneous exposure value provides a precautionary margin to account for uncertainty in the assessment of potential ecological, social, economic and cultural consequences of hydrocarbon spills.

6.7.1.2.4 Accumulated hydrocarbon threshold concentrations

Owens et al. (1994) define accumulated hydrocarbon <100 g/m² to have an appearance of a stain on shorelines. French-McCay (2009) defines accumulated hydrocarbons ≥100 g/m² to be the threshold that could impact the survival and reproductive capacity of benthic epifaunal invertebrates living in intertidal habitat. A threshold of ≥100 g/m² has been adopted as the threshold for shoreline accumulation and has been included in the EMBA.

Woodside recognises that hydrocarbons may be present beyond the ecological impact EMBA at low concentrations that may be visible but are not expected to cause ecological impacts. The threshold for visible shoreline accumulation (10 g/m²) has therefore been used to define an additional boundary within which socio-cultural impacts to the visual amenity of the marine environment may occur.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.7.1.3 Operational and scientific monitoring

A planning area for scientific monitoring is also described in Annex C of the Oil Spill Preparedness and Response Mitigation Assessment (OSPRMA) (Appendix G). This planning area has been set with reference to a low exposure values of 1 g/m^2 for surface hydrocarbons, 10 g/m^2 for accumulated hydrocarbons, and 10 ppb for both entrained and dissolved.

An operational scientific monitoring program may be activated following a release event with the potential to contact sensitive environmental receptors. This would consider receptors at risk (ecological and socio-economic) and any identified pre-emptive baseline areas for the worst-case credible spill scenario or other identified unplanned hydrocarbon releases associated with the operational activities.

6.7.1.4 Hydrocarbon characteristics

Table 6-8 summarises the characteristics of the hydrocarbons used as the basis for the modelling studies, then used to assess credible hydrocarbon spills. More detail about the characteristics of these hydrocarbons is provided in the next subsections.

The hydrocarbon used in the worst case scenario spill modelling was Cossack Light Crude which is produced from the CK4 well. The two Wanaea wells would release Wanaea Crude in a wellbore release and LH3 would release Hermes Crude.

The existing Cossack Light Crude spill modelling is considered conservative relative to the credible release scenarios from the Wanaea and Hermes wells because the modelled release volume (773 m³) exceeds the maximum estimated release volume (550 m³) by approximately 41%. Although compositional differences may result in some variation in plume behaviour, the larger release volume and similar API gravities support the use of the existing modelling as a conservative basis for assessment of potential environmental impacts. Cossack Light Crude has a higher reported wax content than Wanaea, which may support increased persistence, and has the lowest reported GOR of the three crude types, which is expected to result in a greater proportion of hydrocarbons remaining in the liquid phase relative to the other crude oils.

Table 6-8: Characteristics of the hydrocarbon types used for modelling and ecotoxicological studies

Hydrocarbon type	Density (g/m³)	Viscosity (cP)	Component	Volatile (%)	Semi-volatile (%)	Low volatility (%)	Residual (%)	Aromatics (%)
			Boiling point (°C)	<180	180 to 265	265 to 380	>380	Of whole oil <380
Cossack (Okha) light crude	0.7875 at 15°C	1.4 at 20°C	% total	52.2	20.5	12.0	15.3	14.5
			% aromatics	3.7	1.3	9.5	-	-
Marine diesel	0.829 at 25°C	4.0 at 25°C	% total	6	34.6	54.4	5	3
			% aromatics	1.8	1.0	0.2	-	-

6.7.1.4.1 Cossack light crude

Cossack Light Crude (API 48.1) contains a moderate proportion (15.3% by mass) of hydrocarbon compounds that will not evaporate at atmospheric temperatures. These compounds will persist in the marine environment.

The unweathered mixture has a dynamic viscosity of 1.40 cP. The pour point of the whole oil (-24°C) ensures it will remain in a liquid state over the annual temperature range observed on the NWS.

The mixture is composed of hydrocarbons that have a wide range of boiling points and volatilities at atmospheric temperatures, and which will begin to evaporate at different rates on exposure to the atmosphere.

Evaporation rates will increase with temperature, but in general about 52.2% of the oil mass should evaporate within the first 12 hours (boiling point <180°C); a further 20.5% should evaporate within the first

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

24 hours (180°C < boiling point <265°C); and a further 12.0% should evaporate over several days (265°C < boiling point <380°C).

Selective evaporation of the lower boiling-point components will lead to a shift in the physical properties of the remaining mixture, including an increase in the viscosity and pour point. Although removal of the volatile compounds through evaporation and dissolution will result in an increase in density of the remaining oil, the mixture is unlikely to solidify or sink as it weathers.

The whole oil has low asphaltene content (<0.05%), indicating a low propensity for the mixture to take up water to form water-in-oil emulsion over the weathering cycle.

Soluble aromatic hydrocarbons contribute about 14.5% by mass of the whole oil, with a moderate proportion (7.4%) in the C4 to C10 range of hydrocarbons. These compounds will evaporate rapidly, reducing the potential for dissolving a proportion of them into the water.

In terms of weathering, modelling indicates a moderate proportion of Cossack light crude will tend to persist on the sea surface (about 15% after seven days) during calm wind conditions, with negligible levels of entrainment (<0.5%) and around 75% of the spilled volume expected to evaporate within the first 24 hours (Figure 6-1). For variable strength winds, modelling indicates a higher percentage of Cossack light crude is likely to entrain and dissolve in the water column. About 24 hours after the spill, around 24% of the oil mass is forecast to have entrained and a further 66% is forecast to have evaporated, leaving only a small percentage (around 0.5%) of the oil floating on the sea surface (Figure 6-2).

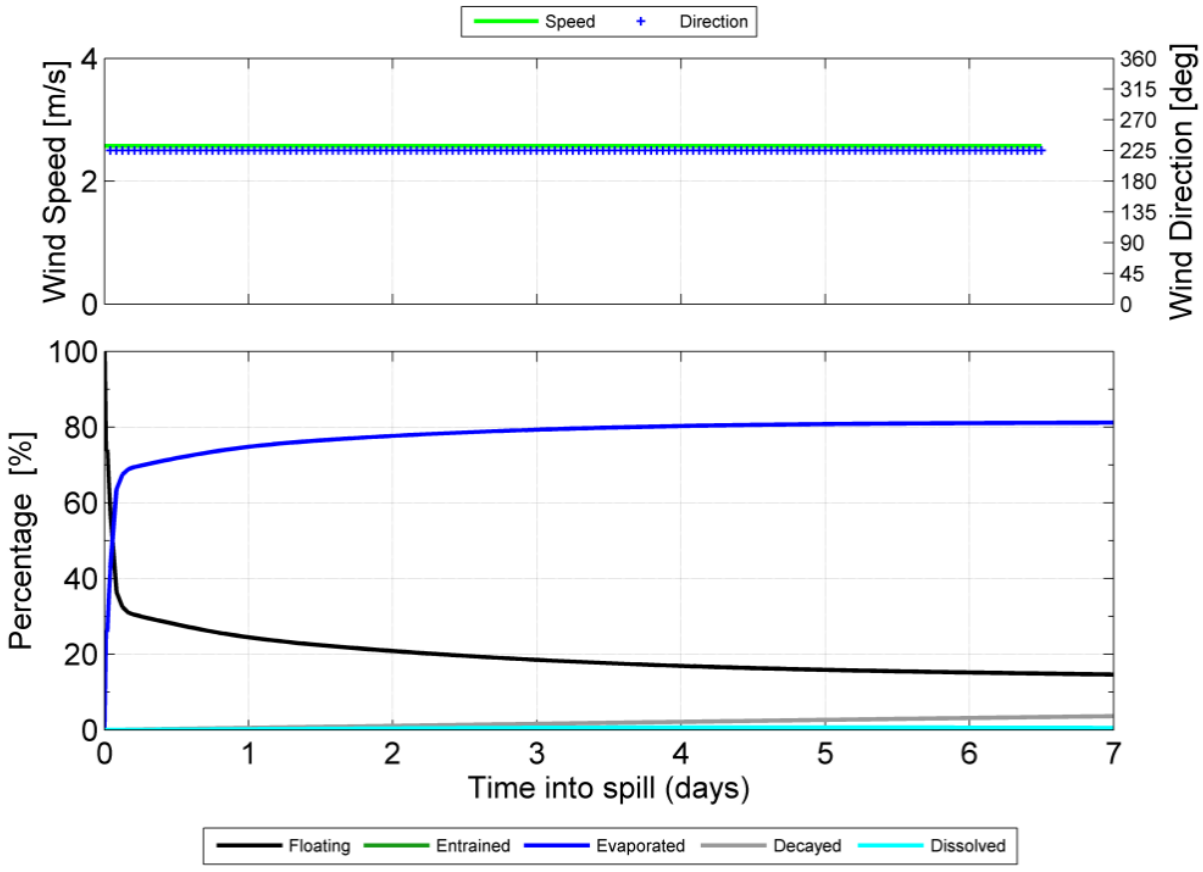


Figure 6-1: Proportional mass balance plot representing the weathering of Cossack light crude spilled onto the water surface as a one-off release (50 m³ over one hour) and subject to a constant five knots (2.6 m/s) wind at 27°C water temperature and 25°C air temperature

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

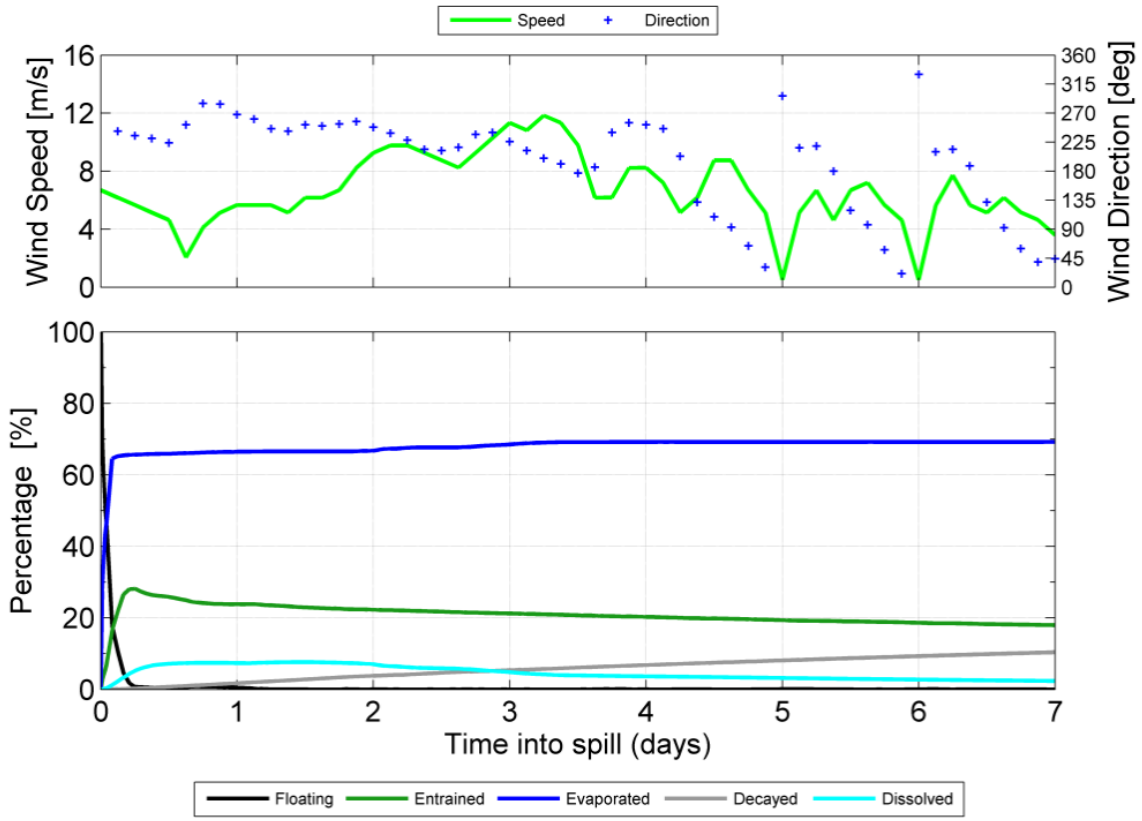


Figure 6-2: Proportional mass balance plot representing the weathering of Cossack light crude spilled onto the water surface as a one-off release (50 m³ over one hour) and subject to variable wind at 27°C water temperature and 25°C air temperature

6.7.1.4.2 Marine diesel

Marine diesel is a processed oil that is formulated entirely from the products of distillation. As in, it does not contain residues of distillation that are added to heavier fuel oils. This product is more accurately described as marine gas oil (MGO). Like all oils, MGO is a complex mixture of hydrocarbon compounds that vary by volatility and solubility. The physical and chemical properties of MGO will determine the way this oil behaves in the marine environment. SIMAP calculations account for the initial density and viscosity of the whole, unweathered oil mixture as well as the volatility and solubility of component hydrocarbons summarised as pseudo-components. Multiple grades of MGO are commercially available, which vary in viscosity and the proportion of longer-chain hydrocarbons (ExxonMobil; online source). The modelling applied specifications from assays of distillate marine fuel grade MGO, which is the most common fuel oil used by small to moderate sized vessels in warm water and temperate environments.

MGO fuels, in general, have relatively low viscosity and density and will consequently spread rapidly as a floating film on calm seas. This spreading will enhance the rate of evaporation of the more volatile components, but evaporation will then slow as the mixture evolves towards higher proportions of the low-volatile and non-volatile components.

The residual compounds (boiling point >380°C) will resist evaporation and will require the slower process of degradation (photo and biological) to degrade. The residual mixture will be composed of long-chain alkanes, cycloalkanes and other hydrocarbon compounds with complex molecular structures that will be subject to microbial degradation over the longer term (weeks to tens of weeks after release).

The low viscosity of MGO fuels requires relatively low wave energy to break up floating slicks and suspend MGO as droplets mixed into the wave-affected layer of the ocean surface. These suspended droplets will be buoyant but will remain suspended when there is enough wave energy. Waves generated by wind speeds as low as six to seven knots on the open ocean will start to suspend films of floating MGO. Entrainment rates will increase significantly as sea conditions become more energetic. One effect of suspension will be reduction of the evaporation rates of the component hydrocarbons.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

In addition to being volatile, the aromatic components, present at a relatively low proportion of the unweathered mixture (about 3%), are soluble and may dissolve into the water column from slicks and entrained droplets. Both the solubility and volatility of these compounds vary with the complexity of the hydrocarbon molecules. Around 1.8% of the mixture is contributed by mono-aromatic hydrocarbon compounds that are both highly volatile and highly soluble, and will tend to evaporate rapidly either directly from slicks, or from the water if they first dissolve from the slicks. Semi-volatile (di-aromatic hydrocarbons) and low-volatile components (polyaromatic hydrocarbons) contribute around 1.2% of the unweathered mixture that will tend to persist in solution if they dissolve.

In terms of weathering, the mass balance forecast for the constant, low-wind case (Figure 6-3) for the marine diesel specifications indicates rapid evaporation of the mixture over the first 12 hours, then progressively slower evaporation over the following days. About 38% of the oil is predicted to evaporate within the first 12 hours and another about 2% over the next 12 hours. Around 5% of the remaining mass would evaporate over the next six days. A relatively small (about 2%) conversion of the mass to simpler compounds by microbial and photo-degradation is indicated over the first week for these conditions.

Under the stronger and more variable-wind case (Figure 6-4), where wind speeds exceeding eight knots were allowed for at times, significant entrainment of marine diesel into the water column is indicated. About 24 hours after the spill, around 74% of the oil mass is forecast to have entrained and a further 26% is forecast to have evaporated, leaving only a small proportion of the oil floating on the water surface (<1%). The entrained component remained sub-surface under the conditions imposed. The increased level of entrainment in the variable-wind case will result in a higher dissolution of the soluble compounds, with dissolved hydrocarbons forecasted at about 0.5% of the original mass after 12 hours in comparison to <0.01% in the low-wind case.

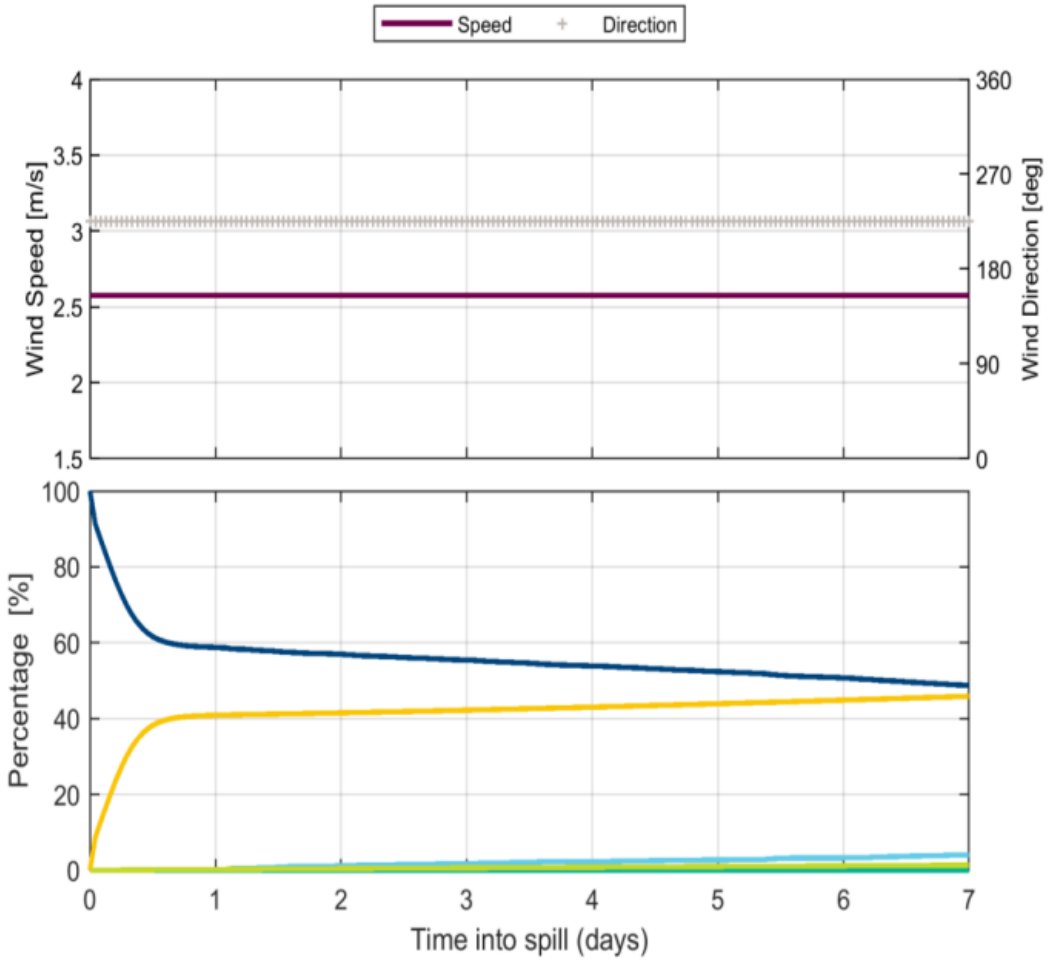


Figure 6-3: Proportional mass balance plot representing the weathering of marine diesel spilled onto the water surface as a one-off instantaneous release of 50 m³ and subject to a constant 5 kn (2.6 m/s) wind at 27°C water temperature and 25°C air temperature

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

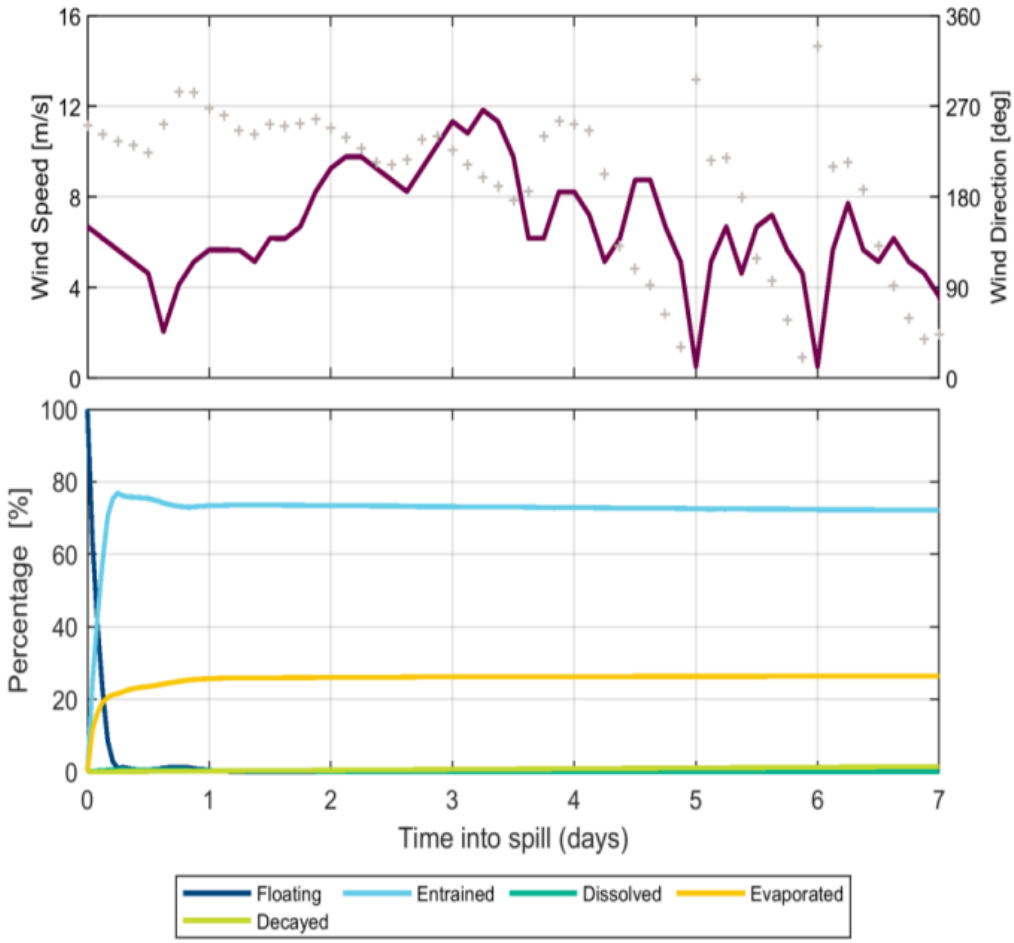


Figure 6-4: Proportional mass balance plot representing the weathering of marine diesel spilled onto the water surface as a one-off release of 50 m³ and subject to variable wind at 27°C water temperature and 25°C air temperature

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.7.2 Unplanned hydrocarbon release: wellbore release

Context		
Subsea intervention activities – Section 3.5	Physical environment – Section 4.4 Biological environment – Section 4.5 Protected species – Section 4.6 Socioeconomic environment – Section 4.9	Stakeholder consultation – Section 5

Risk evaluation summary

Source of risk	***Environmental value potentially impacted***						***Evaluation***						
	Marine sediment	Water quality	Air quality (incl odour)	Ecosystems/habitat	Species	Socioeconomic	Decision type	Consequence/impact	Likelihood	Risk rating	ALARP tools	Acceptability	Outcome
Loss of hydrocarbons to marine environment due to wellbore release during LWI		X		X	X	X	B	D	1	M	LCS GP PJ RBA CV SV	Acceptable if ALARP	EPO 9

Description of source risk

Background

Woodside has identified a loss of wellbore release as a credible spill scenario. A wellbore release is an uncontrolled release of reservoir hydrocarbon or other well fluids to the environment.

The Well Operations Management Plan (WOMP) explains the appropriate standards and practices, within Our WMS, which are used to manage well integrity and loss of containment risks. The key governing process used to reduce loss of containment risk to ALARP include:

- well lifecycle management
- drilling and completions standards and practices
  - 52B44X4Q6TL2-1706284801-5694 Well Barrier Standard
  - W1000SG0100 Engineering Standard Subsea Isolation
  - 52B44X4Q6TL2-1706284801-8226 Wells Risk Management Standard
  - RWKSCU3PSW7Z-1416383262-1383 Wells Capability and Training Guidance

Industry experience

A risk assessment by AMSA of oil spills in Australian ports and waters (Det Norske Veritas, 2011) concluded that:

- overall national exceedance frequency for oil spills from offshore drilling in Australia is 0.033 for spills of more than one tonne per year, decreasing to 0.008 for spills of more than 100 tonnes per year
- probability of a blowout from a well intervention is one times 10-4 (0.0001, or 0.01%), considerably lower than drilling activities (International Association of Oil and Gas Producers, 2010).

Woodside has a good history of implementing industry standard practice in well design and construction. In the company's 60-year history, it has not experienced any well loss of containment events that have resulted in significant releases or significant environmental impacts.

Therefore, in accordance with the Woodside Risk Matrix, a wellbore release event corresponds to a 'highly unlikely' event as it has occurred many times in the industry, but not in the company.

Credible scenarios – wellbore releases

The credible scenarios for wellbore releases are summarised in Table 6-9 and defined further below.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 6-9: Summary of worst-case subsea wellbore release scenarios

Scenario	*Hydrocarbon*	*Duration*	*Depth*	*Total oil release volume*
Intervention wellbore release	Cossack light crude	12 hours	Seabed	550 m^{3*}
Well suspension wellbore release		Instantaneous		117 m^{3*}
CK4 SCSSV control line loss of containment		Instantaneous		42 m^3

**Whilst the scenario is from any of the wells, the worst-case volume from the LH3 well.*

Intervention wellbore release

With LWI using a LWIV there is no rigid riser connecting the vessel to the wellhead. This means there is no credible scenario in which the vessel could put sufficient load onto the Xmas Tree or Wellhead to cause complete structural failure of the lower well control package, tree or wellhead. It is possible if an umbilical or guidewire snagged during a drive off that the upper well control package could be damaged. For this scenario to occur the below three specific events would have to occur simultaneously:

1. XT valves: production master valve is locked open, pressure safety valve open (manual)
2. vessel drives off [**Event 1**: Vessel DP drift/drive off]
3. guidewires and umbilical weak-link shear (per design)
4. parted guidewire or umbilical snags on lubricator [**Event 2**: GW/Umbilical Snags]
5. lubricator yields and ruptures above WCP
6. guidewire winch brakes fail (wire pays out)/umbilical hoses part
7. subsea intervention device control system (emergency shutdown) fails to close WCP valves [**Event 3**: subsea intervention device system failure]
8. XT and subsea intervention device WCP integrity maintained but valves open
9. surface-controlled subsurface safety valve Hold Open Sleeve (HoS) installed (TRSV will not close)
10. well fluids spill into ocean from ruptured lubricator
11. vessel regains control and ROVs close XT and/or subsea intervention device WCP valves within 12 hours.

The 12 hour response time is based on the LWIV and one of the two available ROVs being operable and able to return to the well to manually close valves once the cause of the DP event is addressed, or the use of a vessel equipped with a suitable ROV in the region.

The volume that could be released over the 12-hour period has been conservatively estimated as a maximum of 550m^3 Cossack light crude based on reservoir modelling for a worst case well blowout from the highest flowing well in the CWLH fields, being LH-3. This volume represents a conservative loss of containment from any of the wells (CK4. LH3, WA7 and WA8).

Well suspension wellbore release

Each well will undergo well suspension with qualified and tested suspension plugs. The plugs placement will be determined to give ALARP LOC risk, and will include both deep and shallow isolations. Wells will be suspended with qualified and tested suspension plugs with the plugs placed to ensure barrier envelopes remain independent. The suspension configuration will be completed as part of the development of the WOMP.

During tree recovery the crane or drill pipe hook load is managed to ensure additional load is not transferred into the wellhead. With the LWI vessel on location there is no credible scenario where a third-party vessel could snag the wellhead. Dropped objects do not present a risk that could result in a release from the wells.

Failure of either of the shallow plugs would result in the loss of the annulus and tubing contents which has been calculated as a maximum for all four wells of 117m^3 of Cossack light crude (LH3 well). This volume represents a conservative loss of containment from any of the wells. Note this release does not apply to WA-7 and WA-8 as they will not have a XT changeout and the integrity of the upper barrier (i.e. the XT) is uncompromised.

Sustained release from the reservoir would require the failure of multiple barriers (suspension plugs/XT). This is not considered credible.

SCSSV Control Line Loss of Containment

During XT change out there is the potential for a loss of containment (gas/ well fluids mix) through TRSV poppet (located on top of Tubing Hanger) when the XT is not present. The worst-case spill volume is based on a release of the total inventory of gas/ well fluids in annulus and tubing connected to the SCSSV control line leak path, which equates to 42m^3 of Cossack light crude.

Flowline Loss of Containment

As described in Section 6.7.8 the worst-case credible hydrocarbon release scenario from a dropped object is a rupture of the 8-inch production flowline, which holds the largest liquid hydrocarbon inventory within the Okha subsea system.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

This could result in a release of up to 414 m^3 of Cossack light crude. This hydrocarbon release scenario and associated controls are included within Section 6.7.5 of the accepted Okha FPSO Operations EP.

Quantitative hydrocarbon spill modelling – wellbore release

Spill modelling was undertaken by RPS on behalf of Woodside, to determine the fate of hydrocarbon released from the wellbore release scenario given it is the worst case volume (RPS, 2026). Table 6-10 presents the modelling inputs for the wellbore release scenario. Given the distance of the wells to one another (2 km to 16 km from one another) and similar water depths and sensitivities, the modelling is considered representative of a spill in any location of the Operational area.

Modelling was undertaken over all seasons to address the potential for the activity timing over any time of year. The overall EMBA for the scenario is based on stochastic modelling, which compiles data from 200 hypothetical worst-case spills under various weather and metocean conditions. This is considered to provide a conservative estimate of the EMBA and the potential impacts from the identified worst-case credible release volumes for loss of containment scenarios.

Table 6-10: Modelling inputs – loss of containment

Scenario	*Depth*	*Hydrocarbon*	*Modelled location*	*Spill duration*	*Total volume*
Intervention wellbore release (LWIV)	Seabed	Cossack light crude	CK4 well location	12 hours	550 m^3

Refer to Section 6.7.1 for the quantitative spill risk assessment methodology and Section 6.7.1.4.1 for a description of Cossack light crude characteristics used to model this scenario.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Consequence assessment
Environmental value(s) potentially impacted

Environment that may be affected

The overall EMBA for the Petroleum Activity is based on stochastic modelling, which compiles data from multiple hypothetical worst-case spill simulations under a variety of weather and metocean conditions (as described in Section 6.7.1).

As the weathering of different fates of hydrocarbons (surface, entrained and dissolved) differs due to the influence of the metocean transport mechanism, a different area is discussed for each hydrocarbon fate. These fates have been outlined below.

Surface hydrocarbons

The modelled surface hydrocarbons are forecast to drift in all directions, with the most likely directions of travel being to the north-east and south-west of the release site. The trajectory will depend on wind and current conditions at the time and may extend up to 43 km from the release site at the 1 g/m^2 threshold (sociocultural impact threshold). At the 10 g/m^2 and 50 g/m^2 thresholds, surface hydrocarbons may extend up to 38 km and 16 km from the release site, respectively.

Modelling results indicate no contact with sensitive receptors by surface (floating) hydrocarbons above the ecological impact threshold of 10 g/m² or sociocultural impact threshold of 1 g/m² at probabilities of 1% or greater.

Entrained hydrocarbons

Quantitative spill modelling results for entrained hydrocarbons are shown in Table 6-11. The modelled entrained hydrocarbons are forecast to potentially drift in all directions, with the most likely directions of travel being to the north-east and south-west of the release site. At the 1000 ppb threshold, entrained hydrocarbons may extend up to 32 km, from the release site.

Modelling results indicate no contact with sensitive receptors by entrained hydrocarbons above the ecological impact threshold of 1000 ppb at probabilities of 1% or greater.

Dissolved hydrocarbons

Quantitative spill modelling results for dissolved hydrocarbons are shown in Table 6-11. The modelled dissolved hydrocarbons at or above 10 ppb are forecast to potentially drift in all directions, with the most likely directions of travel being to the north-east and south-west of the release site, extending up to approximately 662 km from the release site. Contact by dissolved aromatic hydrocarbons at concentrations equal to or greater than 10 ppb is predicted to be greatest at Montebello AMP (2% probability) (Table 6-11).

Accumulated hydrocarbons

Modelling results indicate no contact with sensitive receptors by accumulated shoreline hydrocarbons above the ecological impact threshold of 100 g/m² at probabilities of 1% or greater, nor above the socio-cultural threshold of 10 g/m².

Consequence assessment summary

Table 6-11 presents the full extent of the EMBA. As in, the sensitive receptors and their locations that may be exposed to hydrocarbons (surface, entrained and dissolved) at or above the set threshold concentrations in the unlikely event of a wellbore release during the Petroleum Activity. Details of these receptors are outlined in Section 4. Modelling indicates the spill will remain offshore. The potential biological and ecological impacts of an accidental hydrocarbon release as a result of a wellbore release during the Petroleum Activity are presented in the next sections.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 6-11: Key receptor locations and sensitivities potentially contacted above impact thresholds by the wellbore release scenario with summary hydrocarbon spill contact (table cell values correspond to probability of contact [%])

Environmental setting	Receptor	Environmental, social, cultural, heritage and economic aspects presented as per the Environmental Risk Definition (Woodside's Risk Management Procedure)																											Probability of hydrocarbon contact and fate (%)[1]					
		Physical		*Biological*																			*Socioeconomic and cultural*							*Sociocultural hydrocarbon thresholds*		*Ecological hydrocarbon thresholds*			
		Water and sediment quality		*Marine primary producers*			*Other communities/habitats*							*Protected species*									*Other species*													
		Open water – pristine	Marine sediment – pristine	Coral reef	Seagrass beds/macroalgae	Mangroves	Spawning/nursery areas	Open water – productivity/upwelling	Non-biogenic reefs	Offshore filter feeders or deepwater benthic communities	Nearshore filter feeders	Sandy shores	Estuaries/tributaries/creeks/lagoons (including mudflats)	Rocky shores	Cetaceans – migratory whales	Cetaceans – dolphins and porpoises	Dugongs	Pinnipeds (sea lions and fur seals)	Marine turtles (foraging and internesting areas and significant nesting beaches)	Sea snakes	Whale sharks	Sharks and rays	Seabirds and migratory shorebirds	Pelagic fish populations	Resident/demersal fish	Fisheries – commercial	Fisheries – traditional	Tourism and recreation	Protected areas/heritage – European and Indigenous/UCH	Offshore oil and gas Infrastructure (topside and subsea)	Surface hydrocarbon (1 to 10 g/m²)	Accumulated hydrocarbon (1 to 10 g/m²)	Surface hydrocarbon (>10 g/m²)	Entrained hydrocarbon (≥1000 ppb)	Dissolved hydrocarbon (≥10 ppb)	Accumulated hydrocarbons (>100 g/m²)
Australian Marine Park	Montebello	✓	✓	✓			✓	✓							✓	✓			✓	✓	✓	✓	✓	✓	✓	✓		✓	✓		-	-	-	-	2	-
	Gascoyne	✓	✓												✓	✓			✓	✓	✓	✓	✓	✓	✓	✓		✓	✓		-	-	-	-	1.5	-
Reefs, shoals and banks	Rankin Bank	✓	✓	✓			✓	✓		✓					✓	✓	✓		✓	✓		✓	✓	✓	✓	✓		✓			-	-	-	-	1	-
	Wilcox Shoal	✓	✓	✓	✓		✓	✓		✓						✓	✓		✓	✓		✓	✓	✓	✓			✓			-	-	-	-	1	-

✓= Sensitivity potentially contacted above impact thresholds.

Note 1: Probabilities greater than 1.

N.B. The probability is based on stochastic modelling hypothetical worst-case spill simulations under a variety of weather and metocean conditions. Hydrocarbons cannot accumulate on open ocean, submerged receptors, or receptors not fully emergent.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Summary of potential impacts to environmental value(s)
Summary of potential impacts to the physical environment
Water quality
Large volume releases of hydrocarbons have the potential to result in increased concentration of dissolved hydrocarbons. The concentrations of hydrocarbons in the water column will decrease over time once the release has stopped, due to processes such as dispersion, dilution, physical and biological degradation, and evaporation.
Marine sediment quality
Studies of hydrocarbon concentrations in deep-sea sediments in the vicinity of a catastrophic well blowout indicate hydrocarbon from the blowouts can be incorporated into sediments (Romero, et al., 2015). Mechanisms for hydrocarbon contamination of sediments include sedimentation of hydrocarbons and direct contact between submerged plumes and the seabed (Romero, et al., 2015). In the event of a major hydrocarbon release at the seabed, modelling indicates a pressurised release of hydrocarbon would form droplets that would be transported into the water column to the surface (i.e. transported away from the seabed). As a result, the extent of potential impacts to the seabed area at and around the release site would be largely confined to a localised footprint. Marine sediment quality would be reduced because of hydrocarbon contamination for a small area within the immediate release site for a long to medium term, as hydrocarbons in sediments typically undergo slower weathering and degradation (Diercks, et al., 2010; Liu, et al., 2012). Floating and entrained hydrocarbons could sink after extensive weathering and adsorption of sediment particles, which could result in hydrocarbons deposited to the seabed in areas distant from the release location. Such hydrocarbons are expected to be less toxic due to the weathering process.
Summary of potential impacts to protected species
Cetaceans
A range of cetaceans were identified as potentially occurring within the Operational area and wider EMBA (Section 4.6.3). In the event of a wellbore release, surface, entrained and dissolved hydrocarbons exceeding environmental impact threshold concentrations may drift across habitat for cetaceans. Migratory routes and BIAs of cetaceans considered to be MNES may be affected, including humpback whales and pygmy blue whales (northbound and southbound), and southern right whales (migration). Cetaceans that have direct physical contact with surface, entrained or dissolved aromatic hydrocarbons may suffer surface fouling, ingestion of hydrocarbons (from prey, water and sediments), aspiration of oily water or droplets, and inhalation of toxic vapours (Deepwater Horizon Natural Resource Damage Assessment Trustees, 2016). This may result in irritation of sensitive membranes such as the eyes, mouth, digestive and respiratory tracts, and organs. Other potential impacts include impairment of the immune system, neurological damage (Helm, et al., 2015), reproductive failure, other adverse health effects such as lung disease and poor body condition, and mortality (Helm, et al., 2015). Physical contact with hydrocarbons is likely to have biological consequences for these species. Given cetaceans maintain thick skin and blubber, external exposure to hydrocarbons may result in irritation to skin and eyes. Hydrocarbons may also be ingested, particularly by baleen whales (e.g. pygmy blue and humpback), which feed by filtering large volumes of water. Geraci (1988) identified behavioural disturbance through avoidance of spilled hydrocarbons in several species of cetacean, suggesting cetaceans can detect surface slicks. However, observations during spills have recorded larger whales (both mysticetes and odontocetes) and smaller delphinids travelling through and feeding in oil slicks. During the Deepwater Horizon spill, cetaceans were routinely seen swimming in surface slicks offshore and nearshore (Deepwater Horizon Natural Resource Damage Assessment Trustees, 2016). In a review of the impacts of large-scale hydrocarbon spills on cetaceans, it was found exposure to oil from the Deepwater Horizon resulted in increased mortality to cetaceans in the Gulf of Mexico (Deepwater Horizon Natural Resource Damage Assessment Trustees, 2016) and long-term population-level impacts to killer whales were linked to the Exxon Valdez tanker spill (Matkin, et al., 2008). Cetacean populations that reside within the EMBA may be susceptible to impacts if they interact with an area affected by a hydrocarbon spill. Such species are more likely to occupy coastal waters; refer to the 'Mainland and islands (nearshore waters)' section below for more information. Suitable habitat for oceanic toothed whales (e.g. sperm whales) and dolphins is broadly distributed throughout the region and, as such, impacts are unlikely to affect an entire population. Other species identified in Section 4.6.3 may also have transient interactions with the EMBA; refer to Table 4-9 for the list of receptor locations for cetaceans. Pygmy blue, humpback and southern right whales are known to migrate seasonally through the wider EMBA; however, the migration BIAs in the region for these species do not overlap the Operational area (refer to Figure 4-7 Figure 4-8 and Figure 4-9). A wellbore release in May to November would coincide with humpback whale migration through the waters off the Pilbara and the North West Cape. A wellbore release in April to August or October to January would coincide with pygmy blue whale migration along the Pilbara Coast. Pygmy blue, humpback and southern right whales are baleen whales, so are most likely to be significantly impacted by toxic effects when feeding.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Summary of potential impacts to environmental value(s)
However, feeding during migrations is low level and opportunistic, with most feeding occurring in the Southern Ocean. Pygmy blue and humpback whales are baleen whales, so are most likely to be significantly impacted by toxic effects when feeding. However, feeding during migrations is low level and opportunistic, with most feeding occurring in the Southern Ocean. Fresh hydrocarbons (i.e. typically in the vicinity of the release location) may have a higher potential to cause toxic effects when ingested, while weathered hydrocarbons are considered less likely to result in toxic effects. As such, the risk of ingestion of hydrocarbons is low. Pygmy blue, humpback and southern right whale migrations are protracted through time and space (i.e. the whole population will not be within the EMBA), and as such, a spill from a wellbore release is unlikely to affect an entire population. The humpback whale calving BIA in Camden Sound is not predicted to be contacted above threshold concentrations. Hydrocarbons above threshold levels are not predicted to extend into Exmouth Gulf, which is a resting BIA for humpback whales during their southern migration. Whilst dissolved hydrocarbons at the 10 ppb threshold may contact the southern right whale resting area, this area is a significant distance from the Operational Area (390 km south-west). In the event of a wellbore release, the spill may impact individual cetaceans that have direct contact with hydrocarbons within the spill-affected area, but the consequences to marine turtle populations are likely to be minor with some ability to recover over the short-term.
Marine turtles
Adult sea turtles exhibit no avoidance behaviour when they encounter hydrocarbon spills (Aichinger Dias, et al., 2017). Therefore, contact with surface slicks or entrained hydrocarbon can result in hydrocarbons adhering to body surfaces (Gagnon & Rawson, 2010) irritating mucous membranes in the nose, throat and eyes, leading to inflammation and infection (NOAA, 2010). Oiling can also irritate and injure skin, which is most evident on pliable areas such as the neck and flippers (Lutcavage, et al., 1995). A stress response associated with this exposure includes an increase in the production of white blood cells, and even a short exposure to hydrocarbons may affect the functioning of the salt gland (Lutcavage, et al., 1995). Hydrocarbons in surface waters may also impact turtles when they surface to breathe, as they may inhale toxic vapours. Their breathing pattern, involving large ‘tidal’ volumes and rapid inhalation before diving, results in direct exposure to petroleum vapours, which is the most toxic component of the hydrocarbon spill (Milton & Lutz, 2003). This can lead to lung damage and congestion, interstitial emphysema, inhalant pneumonia, and neurological impairment (Gagnon & Rawson, 2010). Contact with entrained hydrocarbons can result in hydrocarbons adhering to body surfaces, irritating mucous membranes in the nose, throat and eyes, and leading to inflammation and infection (NOAA, 2010). The Operational area are unlikely to represent important habitat for marine turtles as there is an absence of potential nesting or foraging habitat for turtles (i.e. no emergent islands, reef habitat or shallow shoals) and the water is deep (around 80 m to 130 m). Stochastic spill modelling indicates that while shoreline accumulation of hydrocarbons is not predicted, some marine turtle habitats may be exposed to entrained hydrocarbons and dissolved aromatic hydrocarbons above threshold concentrations. Therefore potential sublethal exposure risks may be present in the water column, particularly in nearshore foraging and internesting areas. It is acknowledged there are nesting and foraging sites along the mainland coast and islands of the region, and numerous BIAs and habitat critical areas overlap the EMBA (Section 4.6.2). There is also potential for marine turtles to be at submerged shoals such as Rankin Bank, which has the potential to be contacted by dissolved hydrocarbons above the threshold concentration. The shoals and banks may be foraging habitat for marine turtles, given the coral and filter feeding biota associated with these areas. In the event of a wellbore release, the spill may impact individual marine turtles that have direct contact with hydrocarbons within the spill-affected area, but the consequences to marine turtle populations are likely to be minor with some ability to recover over the short-term.
Sea snakes
Impacts to sea snakes from direct contact with hydrocarbons are likely to result in similar physical effects to those recorded for marine turtles. They may include damage to the dermis and irritation to mucus membranes of the eyes, nose and throat (International Tanker Owners Pollution Federation, 2011). They may also be impacted when they return to the surface to breathe and inhale the toxic vapours associated with the hydrocarbons, resulting in damage to their respiratory system. In general, sea snakes frequent the waters of the continental shelf area around offshore islands and potentially submerged shoals (water depths <100 m; see ‘Submerged shoals’ below). Though sea snakes may be in the Operational area and are in the wider EMBA, their abundance is not expected to be high in the deepwater and offshore environment. In the event of a wellbore release, the spill may impact individual sea snakes that have direct contact with hydrocarbons within the spill-affected area, but the consequences to marine turtle populations are likely to be minor with some ability to recover over the short-term.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Summary of potential impacts to environmental value(s)
Sharks, sawfish and rays
Hydrocarbon contact may affect whale sharks through ingesting entrained or dissolved hydrocarbons, particularly if feeding. The Operational area and EMBA overlap the whale shark foraging BIA identified in Section 4.6.1 and Figure 4-4, within which whale sharks are seasonally present between April and October. Impacts to sharks and rays may occur through direct contact with hydrocarbons, or through contamination of the tissues and internal organs, either through direct contact or through consuming prey. As gill-breathing organisms, sharks and rays may be vulnerable to toxic effects of dissolved hydrocarbons entering the body via the gills, and entrained hydrocarbons via coating of the gills, which inhibits gas exchange. Whale sharks are versatile feeders, filtering large amounts of water over their gills and catching planktonic and nektonic organisms (Jarman & Wilson, 2004). Whale sharks at Ningaloo Reef have been observed using two strategies: passive subsurface ram-feeding and active surface feeding (Taylor, 2007). Passive feeding involves swimming slowly at the surface with the mouth wide open. During active feeding, sharks swim high in the water, with the upper part of the body above the surface and the mouth partially open (Taylor, 2007). Individuals in the worst-affected spill areas could ingest toxic amounts of entrained or dissolved aromatic hydrocarbons into their body. Large amounts of ingested hydrocarbons may affect endocrine and immune systems in the longer term. The presence of hydrocarbons may displace whale sharks from the area where they normally feed and rest. Whale sharks may also be affected indirectly by surface, entrained or dissolved aromatic hydrocarbons by contaminating their prey. The preferred food of whale sharks are fish eggs and phytoplankton, which are abundant in the coastal waters of Ningaloo Reef in late summer and autumn, driving the annual arrival and aggregation of whale sharks in this area. If the spill event occurred during the spawning season, this important food supply (in worst spill-affected areas of the reef) may be diminished or contaminated. The contamination of their food supply and the subsequent ingestion of this prey by the whale shark may also result in long-term impacts from bioaccumulation. Other migratory and resident shark species, including oceanic whitetip (*Carcharhinus longim*anus), shortfin and longfin mako (*Isurus oxyrinchus, I. paucus*) and grey nurse (*Carcharias taurus*) sharks may occur within the EMBA (refer to Table 4-4). These species may be exposed to hydrocarbons through dermal contact, gill absorption, or ingestion of contaminated prey. The west coast population of grey nurse shark is listed as vulnerable and migratory, and while congregation or aggregation is known to occur within the EMBA, the likelihood of significant population-level impacts is low due to the transient nature of exposure and the ability of pelagic species to avoid surface slicks. Rays, including reef manta (*Mobula alfredi*) and giant manta (*M. birostris*), are also listed as migratory and are known to occur within the EMBA (refer to Table 4-4). These species may be exposed to hydrocarbons through dermal contact or ingestion during filter feeding. Sawfish species, including green (*Pristis zijsron*), dwarf (*P. clavata*) and freshwater (*P. pristis*), are listed as vulnerable and migratory and are known to occur within the EMBA (refer to Table 4-4). While these benthic species may be considered sensitive to sediment contamination, sediment quality is not expected to be significantly affected by a surface marine diesel release. Given the deep water depths of the Operational area (about 80 to 130 m), surface, entrained and dissolved hydrocarbons are confined to the upper layers of the water column and are not predicted to reach or accumulate in benthic sediments. Therefore, impacts to sawfish are expected to be limited to potential water column exposure and are predicted to be minor and temporary. In the event of a wellbore release, the spill may impact individual sharks, sawfish and rays that have direct contact with hydrocarbons within the spill-affected area, but the consequences to sharks, sawfish and rays populations are likely to be minor with some ability to recover over the short-term.
Seabirds and migratory shorebirds
Offshore waters in the EMBA are potential foraging grounds for seabirds associated with the coastal roosting and nesting habitat. There are confirmed foraging grounds off Ningaloo and the Barrow/Montebello/Lowendal Islands Group. Foraging and reproduction BIAs for multiple seabirds and migratory shorebirds overlap with the EMBA (see Section 4.6.4 and Table 4-13). Seabirds and migratory birds are particularly vulnerable to contact with floating hydrocarbons, which may mat feathers. This may lead to hypothermia from loss of insulation, and to ingestion of hydrocarbons when preening to remove hydrocarbons; both impacts could result in mortality (Hanson, et al., 2007). These floating hydrocarbons are expected to be confined to within 38 km of the release at the 10 g/m^2 threshold. Seabirds generally do not exhibit avoidance behaviour to floating hydrocarbons. Physical contact with surface slicks is by several exposure pathways, primarily immersion, ingestion and inhalation. Such contact with hydrocarbons could result in (AMSA, 2003; International Petroleum Industry Environmental Conservation Association (IPIECA), 2004): • plumage fouling and hypothermia (loss of thermoregulation) • decreased buoyancy and consequent increased potential to drown • inability to fly or feed • anaemia

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Summary of potential impacts to environmental value(s)
• pneumonia • irritation of eyes, skin, nasal cavities and mouths. Seabirds generally do not exhibit avoidance behaviour to floating hydrocarbons; exposure may occur through immersion, ingestion or inhalation. Contact with hydrocarbons can result in plumage fouling, hypothermia, reduced buoyancy, impaired flight and feeding ability, and irritation of mucous membranes, with potential for mortality (AMSA, 2013; IPIECA, 2004). Longer-term impacts may include developmental abnormalities in chicks and reduced reproductive success. While the EMBA indicates surface hydrocarbons are confined to open water and do not contact shoreline receptors, the proximity of foraging BIAs suggests individual birds may be exposed during offshore feeding. However, given the localised nature of the spill and the limited spatial extent of surface hydrocarbons, impacts are expected to be short term and unlikely to affect population viability at the regional scale.
Summary of potential impacts to other species
Pelagic fish populations
Fish mortalities are rarely observed to occur as a result of hydrocarbon spills (International Tanker Owners Pollution Federation, 2011). This has generally been attributed to the possibility that pelagic fish can detect and avoid surface waters underneath hydrocarbon spills by swimming into deeper water or away from the affected areas. Fish that have been exposed to dissolved aromatic hydrocarbons can eliminate the toxicants once placed in clean water, so individuals exposed to a spill are likely to recover (King, et al., 1996). Where fish mortalities have been recorded, the spills (resulting from the groundings of the tankers Amoco Cadiz in 1978 and the Florida in 1969) have occurred in sheltered bays. Laboratory studies have shown adult fish can detect hydrocarbons in water at very low concentrations, and large numbers of dead fish have rarely been reported after hydrocarbon spills (Hjermann, et al., 2007). This suggests juvenile and adult fish can avoid water contaminated with high concentrations of hydrocarbons. However, sublethal impacts to adult and juvenile fish may be possible, given long-term exposure (days to weeks) to polycyclic aromatic hydrocarbon concentrations (Hjermann, et al., 2007), which are typically the most toxic components of hydrocarbons. Light molecular weight aromatic hydrocarbons (i.e. one- and two-ring molecules) are generally soluble in water, which increases bioavailability to gill-breathing organisms such as fish. The effects of exposure to oil on the metabolism of fish appears to vary according to the organs involved, exposure concentrations and route of exposure (waterborne or food intake). Oil reduces the aerobic capacity of fish exposed to aromatics in the water and, to a lesser extent, affects fish consuming contaminated food (Cohen, et al., 2005). The liver, a major detoxification organ, appears to be where anaerobic activity is most impacted, probably increasing anaerobic activity to help eliminate ingested oil from the fish (Cohen, et al., 2005). Fish are perhaps most susceptible to the effects of spilled oil in their early life stages, particularly during egg and planktonic larval stages, which can become entrained in spilled oil. Contact with oil droplets can damage feeding and breathing apparatus of embryos and larvae (Fodrie & Heck, 2011). The toxic hydrocarbons in water can result in genetic damage, physical deformities and altered developmental timing for larvae and eggs exposed to even low concentrations over prolonged timeframes (days to weeks) (Fodrie & Heck, 2011). More subtle, chronic effects on the life history of fish because of exposure in early life stages to hydrocarbons include disruption to complex behaviours such as predator avoidance, reproductive and social behaviour (Hjermann, et al., 2007). Prolonged exposure of eggs and larvae to weathered concentrations of hydrocarbons in water has also been shown to cause immunosuppression and to allow expression of viral diseases (Hjermann, et al., 2007). Polycyclic aromatic hydrocarbons have also been linked to increased mortality and stunted growth rates of early life history (pre-settlement) of reef fishes, as well as behavioural impacts that may increase predation of post-settlement larvae (Johansen, et al., 2017). However, the effect of a hydrocarbon spill on a population of fish in an area with fish larvae or eggs, and the extent to which any of the adverse impacts may occur, depend greatly on prevailing oceanographic and ecological conditions at the time of the spill and its contact with fish eggs or larvae. Demersal species are associated with the Ancient Coastline at 125 m Depth Contour KEF, which overlaps Operational Area Part 2. Additional KEFs that may host relatively diverse or abundant fish assemblages compared to the relatively featureless continental shelf habitats within the wider EMBA (see Section 4.7). Mortality and sublethal effects may impact populations located near a well release and within the EMBA for entrained or dissolved aromatic hydrocarbons. Additionally, if prey (infauna and epifauna) surrounding the well location and within the EMBA is contaminated, this can result in the absorption of toxic components of the hydrocarbons (polycyclic aromatic), potentially impacting fish populations that feed on these. Therefore, a worst-case hydrocarbon spill scenario has the potential to result in moderate, medium term impacts to pelagic fish species, with consequence severity dependent on the actual timing, duration and extent of a spill in relation to species' migratory movements and distributions.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Summary of potential impacts to environmental value(s)
Summary of potential impacts to other habitats and communities
Offshore reefs
The quantitative spill risk assessment indicates there is potential for coral reef habitat to be exposed to entrained and dissolved hydrocarbons at the Montebello Islands (Table 6-11), the EMBA also extends to the Ningaloo coast where there known coral reef habitat exist (Table 4-3). These locations support sensitive benthic and intertidal communities, including coral reef systems, macroalgae and associated invertebrate fauna. Floating hydrocarbons are not predicted to impact these locations or accumulate on submerged reef structures or shorelines. Potential impacts to reef-associated biota include physical coating of coral and algal surfaces, which may inhibit photosynthesis and gas exchange, leading to reduced growth or mortality. Sessile organisms such as sponges and soft corals may be affected by dissolved and entrained hydrocarbons through dermal absorption or clogging of feeding structures. Protected species inhabiting these reef systems may also be at risk, particularly if hydrocarbons interfere with feeding or reproductive processes. However, given the limited spatial extent and short duration of hydrocarbon exposure predicted by modelling, and the resilience of many reef communities, impacts are expected to be short term and unlikely to result in population-level effects. No shoreline contact is predicted, and receptors not fully emergent are not expected to accumulate hydrocarbons.
Benthic fauna communities
In the event of a wellbore release at the seabed, the stochastic spill model predicted hydrocarbons droplets would be entrained, rapidly transporting them to the sea surface. As a result, the low-sensitivity benthic communities at the well location are not expected to have widespread exposure to released hydrocarbons.
Shoals and banks
Shoals and banks may occur within the EMBA, including Rankin Bank and Wilcox Shoal (Table 6-11). These features typically support diverse benthic communities, including macroalgae, demersal fish species, and hard and soft corals, and may serve as important habitat and feeding grounds. While hydrocarbons are not predicted to accumulate on submerged receptors, transient exposure to surface slicks may result in short-term ecological stress, particularly for emergent or shallow reef structures. Exposure to entrained hydrocarbons has the potential to result in lethal or sublethal toxic effects to corals and other sensitive sessile benthos in the upper water column, including subtidal corals. Mortality in some coral species is possible and would result in reduced coral cover and a change in the composition of coral communities. Sublethal effects to corals may include polyp retraction, changes in feeding, bleaching (loss of zooxanthellae) and increased mucous production, resulting in reduced growth rates and impaired reproduction (Negri & Heyward, 2000). In the unlikely event of a wellbore release occurring at the time of coral spawning at potentially affected coral locations, or in the general peak period of biological productivity, there is potential for a reduction in successful fertilisation and coral larval survival due to the sensitivity of coral in early life stages to hydrocarbons (Negri & Heyward, 2000). Such impacts are likely to result in failure of recruitment and in settlement of new population cohorts. Some non-coral species may also be affected via direct contact with entrained hydrocarbons, resulting in sublethal impacts and in some cases mortality. This is particularly for the early life stages of coral reef animals (reef-attached fishes and reef invertebrates), which can be relatively sensitive to hydrocarbon exposure. Coral reef fish are site-attached and have small home ranges; as reef residents, they are at higher risk from hydrocarbon exposure than non-resident, more wide-ranging fish species. The exact impact on resident coral communities will depend on actual hydrocarbon concentration, duration of exposure and water depth of the affected communities.
Key ecological features
KEFs potentially impacted by the hydrocarbon spill from a wellbore release are detailed in Section 4.7. Although these KEFs are primarily defined by seabed geomorphological features, they can indicate a potential for increased biological productivity and, therefore, ecological significance. The consequences of a hydrocarbon spill from a wellbore release event are predicted to result in minor impacts to values of the KEFs affected (for the values of each KEF, see Section 4.7 and the Master Existing Environment, (Appendix I). Impacts to benthic habitats are not predicted, as the maximum depth of entrained hydrocarbons above impact threshold is predicted to be 20 m beyond the immediate source. Potential impacts to associated pelagic communities may occur as described above. The KEFs within the EMBA have relatively broad-scale distributions and are unlikely to be significantly impacted. Given the broad spatial extent of most KEFs and the limited duration and footprint of hydrocarbon exposure, impacts are expected to be minor and temporary. The greatest potential for ecological effects is predicted to occur closest to the release location, with no long-term or population-level impacts anticipated.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Summary of potential impacts to environmental value(s)
Summary of potential impacts to air quality
A hydrocarbon release during a wellbore release could result in a short-term reduction in air quality. There is potential for human health effects on workers in the immediate vicinity of atmospheric emissions. The ambient concentrations of VOCs released from diffuse sources are difficult to accurately quantify, although their behaviour and fate is predictable in open offshore environments, as VOC emissions disperse rapidly by meteorological factors such as wind and temperature. VOC emissions from a hydrocarbon release in such environments are rapidly degraded in the atmosphere by reacting with photochemically-produced hydroxyl radicals. Given the highly unlikely likelihood of occurrence of a wellbore release, the temporary nature of any VOC emissions (from either gas surfacing or weathering of liquid hydrocarbons from a wellbore release), the predicted behaviour and fate of VOCs in open offshore environments, and the significant distance from the Operational area to the nearest sensitive airshed (town of Dampier, about 120 km away), a worst-case hydrocarbon spill scenario has the potential to result in minor, short-term impacts to air quality within the EMBA, with impacts predicted to be greatest for areas closest to the potential release location.
Summary of potential impacts to protected areas
The quantitative spill risk assessment results indicate the open-water environment protected within the Montebello AMP may be contacted (refer to Table 6-11), a number of other AMP are also within the EMBA (refer to Table 4-16). In the remote likelihood of a major spill occurring, entrained or dissolved hydrocarbons may contact the identified key receptor locations of islands and mainland coastlines, resulting in the actual or perceived contamination of protected areas as identified for the EMBA. Impact on the protected areas is discussed in the sections above for ecological values and sensitivities, and below for socioeconomic values. Additionally, such hydrocarbon contact may alter stakeholder understanding or perception of the protected marine environment, as these represent areas largely unaffected by anthropogenic influences and contain biologically diverse environments.
Summary of potential impacts to socio-economic value(s)
Fisheries – commercial
Fish exposure to hydrocarbons can result in ‘tainting’ of their tissues. Even very low levels of hydrocarbons can impart a taint or ‘off’ flavour or smell in seafood. Tainting is reversible through the process of depuration, which removes hydrocarbons from tissues by metabolic processes, although it depends upon the magnitude of the hydrocarbon contamination. Fish have a high capacity to metabolise these hydrocarbons while crustaceans (such as prawns) have a reduced ability (Yender, et al., 2002). Seafood safety is a major concern associated with spill incidents. Therefore, actual or potential contamination of seafood can affect commercial and recreational fishing and can impact seafood markets long after any actual risk to seafood from a spill has subsided (Yender, et al., 2002). A spill would result in establishing an exclusion zone around the spill-affected area. There would be a temporary prohibition on fishing activities for a period and subsequent potential for economic impacts to affected commercial fishing operators. Lethal and sublethal effects may impact localised populations of targeted species within the EMBA for entrained or dissolved hydrocarbons. However, entrained hydrocarbons are likely to be confined in the upper water column; therefore, demersal species are less likely to be exposed to hydrocarbons than pelagic species. The predicted EMBA resulting from a wellbore release may impact on Commonwealth and State fisheries identified in Table 4-23 as having a potential for interaction.
Tourism, including recreational activities
Whilst tourism operators have been recorded in the Operational Area (refer to Section 4.9.4), the Operational area are considered too far offshore for significant recreational fishing or tourism activities. However, some tourism activities may occur at the remote offshore islands, reefs and nearshore waters within the EMBA. These activities are expected to be exclusively nature-based tourism. Thus, impacts to the environmental values from a spill event may impact upon tourism activities. Recreational angling activities include shore-based fishing, private boat and charter boat fishing, with peak activity between April and October (Smallwood, et al., 2011) for the Exmouth region. Limited recreational fishing takes place in the offshore waters of the Operational area. Impacts on species that are recreationally fished are described above under ‘Summary of potential impacts to other species’. Impacts to tourism activities are expected to be minor based on the likelihood and nature of contact to environmental values that support tourism activities. Impacts to these values may result in displacement of tourism activity, and potentially minor loss of revenue for tourist operators (e.g. charter fishing cancellations due to fishery closures).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Summary of potential impacts to environmental value(s)
Offshore oil and gas infrastructure
The Operational area are within a region of established oil and gas operations, with additional infrastructure in the broader NWS region. Figure 4-16 shows the facilities, assets and infrastructure overlapping the Operational area and wider region. Avoidance of surface hydrocarbons is a possible response by other vessels. However, such occurrences will likely be limited to proximity to the release site, and other oil and gas activities are unlikely to be impacted.
Cultural features and heritage values
A search of the Australasian Underwater Cultural Heritage Database, which records all known Maritime Cultural Heritage (shipwrecks, aircraft, relics and other UCH) in Australian waters, indicated there are no sites within 10 km of the Operational area and numerous sites within the EMBA (Section 4.9.1.8). Shipwrecks occurring in the subtidal zone will be exposed to entrained and dissolved hydrocarbons, and marine life that shelter and take refuge in and around these wrecks may be affected by in-water toxicity of dispersed hydrocarbons. The consequences of such hydrocarbon exposure may include large fish species moving away, and resident fish species and sessile benthos such as hard corals exhibiting sublethal and lethal impacts (which may range from physiological issues to mortality). Operational areaThe Ningaloo Coast World Heritage place is located in the EMBA (Section 4.9.1.9). Potential impacts to the features of this place are discussed in the sections above. Woodside has extensively consulted with Traditional Custodian groups as described in Section 5 to identify environmental values of cultural interest, as specified in Section 4.9.1. Any cultural values linked to environment receptors have been assessed above. Refer to Section 6.9 for a further assessment of potential impacts to cultural features and heritage values from the Petroleum Activity.
Summary of potential impacts described above
In the highly unlikely event of a major hydrocarbon spill due to a wellbore release, the EMBA includes the areas listed in Table 6-11, including the Montebello AMP. Impacts on the values of the AMPs within the EMBA (identified in Table 4-16) are discussed in the relevant sections above. Additionally, such hydrocarbon contact may alter stakeholder understanding or perception of the protected marine environment, given these represent areas largely unaffected by anthropogenic influences and contain biologically diverse environments.

Demonstration of acceptability	
Acceptability criteria and assessment	***Acceptability statement***
Principles of ESD The impact assessment has considered the relevant principles of ESD: • The conservation of biological diversity and ecological integrity should be a fundamental consideration in decision making. • The principle of inter-generational equity – that the present generation should ensure the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations. • Decision-making processes should effectively both long-term and short-term economic, environmental, social and equitable considerations. ***Internal context*** The Petroleum Activity is consistent with Woodside corporate policies, culture, processes, standards, structure and systems as outlined in the demonstration of ALARP and adopted EPO, including: • Woodside Environment and Biodiversity Policy (Appendix A) • Woodside Risk Management Policy (Appendix A). ***External context*** Woodside has considered feedback from relevant persons during the impact assessment (Section 5). During stakeholder consultation with relevant persons, Department of Transport (superseded by	The predicted level of risk from a wellbore release to ecosystems, species, habitat or physical or biological attributes from a loss of marine diesel from a vessel collision is considered an acceptable level (consequence level M – Moderate), given: • Petroleum Activity is consistent with the relevant principles of ESD • proposed controls have considered the environmental consequence and are consistent with Woodside's policies, procedures and standards • feedback from stakeholders has been considered • legislative requirements and industry standards have been adopted • the Petroleum Activity will be managed in a manner that is consistent with management objectives for relevant World Heritage areas, AMPs, recovery plans and conservation plans/advice • predicted level of impact has been reduced to ALARP.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Department of Transport and Major Infrastructure (DTMI)) and AMSA (Marine Pollution)) asked to be consulted on oil spill risks with a potential to impact State waters. Woodside provided a copy of the First Strike Plan to DTMI. No additional questions or concerns relating to a hydrocarbon spill resulting from a wellbore release were raised during stakeholder engagement. ***Other requirements*** The impact assessment has been informed by risk-based analysis, including hydrocarbon spill modelling. The proposed control measures are consistent with industry legislation, codes and standards, good practice and professional judgement, including: • American Petroleum Institute Standard 53 for subsea blowout preventer function testing • OPGGS (Resource Management and Administration) Regulations 2025 to have an accepted WOMP and application to permanently plug for abandonment of the wells • NOPSEMA to be notified of reportable and recordable incidents, if required, in accordance with Section 7.11.4 The EMBA overlaps BIAs for threatened and migratory species, as well as State and Commonwealth marine protected areas. The residual risk of accidental loss of marine diesel from a vessel collision is not inconsistent with the relevant objectives and actions of any applicable recovery plans or threat abatement plans. Regard has been given to relevant conservation advice and wildlife conservation plans when assessing potential impacts. As demonstrated in Section 6.8, the Petroleum Activity is not considered to be inconsistent with the overall recovery objectives and actions of these recovery plans and conservation advice.	***Environmental performance consideration*** To manage an accidental hydrocarbon release as a result of a wellbore release to ecosystems, species, habitat or physical or biological attributes to an acceptable level, the following EPO has been applied: • EPO 9: No release of hydrocarbons to the marine environment due to wellbore release. The adopted controls are considered appropriate to manage the risks of the Petroleum Activity and compliance with those controls is considered to demonstrate the EPO has been met.

Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)[36]***	***Benefit in risk reduction[37]***	***Proportionality***	***Control adopted***
Legislation, codes and standards				
OPGGS (Resource Management and Administration) Regulations 2025: accepted WOMP that describes the well integrity outcomes, control measures and performance criteria used to demonstrate how the risk of a wellbore release integrity is managed to ALARP, including the well design and barriers to use to prevent a wellbore release, which aligns with industry guidance and good practice.	F: Yes. CS: Minimal cost. Standard practice.	Compliance with an accepted WOMP will ensure barriers are in place and verified, reducing the likelihood of a l wellbore release event occurring.	Benefits outweigh cost/sacrifice.	Yes C 9.**1**

[36] *Qualitative measure.*

[37] *Measured in terms of reduction of likelihood, consequence and current risk rating.*

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)[36]***	***Benefit in risk reduction[37]***	***Proportionality***	***Control adopted***
In the event of a spill, implement emergency response activities in accordance with the Oil Pollution First Strike Plan (Appendix H).	F: Yes. CS: Costs associated with implementing response strategies vary dependant on nature and scale of spill event. Standard practice.	This control would not reduce the likelihood, but response activities may reduce the consequence.	Benefits outweigh cost/sacrifice.	Yes C 9.2
Test the arrangements supporting the activities in the Oil Pollution First Strike Plan (Appendix H) to ensure it can be implemented as planned.	F: Yes. CS: Standard practice. Required by Woodside standards.	Legislative requirement based on vessel class. Unlikely to significantly reduce the consequence.	Legislative requirement – must be adopted.	Yes C 9.3
Good practice				
Subsea WCP installed, and function tested during well intervention activities. The WCP shall meet the Woodside Well Control Procedure, Woodside Engineering Standard Riserless Well Intervention Equipment and Services and shall be subject to NORSOK D-010 Risk Assessment.	F: Yes. CS: Standard practice. Required by Woodside standards.	Testing of the WCP will reduce the likelihood from a wellbore release resulting in release of hydrocarbons to the marine environment. In the event of wellbore release, this control would not reduce the consequence, although the reduction in likelihood would reduce the overall risk ranking.	Benefits outweigh cost/sacrifice.	Yes C 9.4
Mitigation: Oil spill response.	Refer to Appendix G			
Professional judgement – Eliminate				
Do not complete well intervention.	F: No. CS: Intervention is required to maintain the well and reduce loss of containment risk during ongoing operations.	All risk would be eliminated.	Disproportionate – cost/sacrifice outweighs benefit to be gained.	No
Professional judgement – Substitute				
None identified.				
Professional judgement – Engineered solution				
None identified.				

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)[36]***	***Benefit in risk reduction[37]***	***Proportionality***	***Control adopted***
ALARP statement: Based on the environmental risk assessment outcomes and use of the relevant tools appropriate to the decision type (i.e. Decision Type B; Section 2.3.4.2) and Woodside's criteria for demonstrating ALARP (Section 2.4.1), Woodside considers the adopted controls appropriate to manage the impacts and risks of an unplanned loss of hydrocarbon resulting from vessel collision. As no reasonable additional or alternative controls were identified that would further reduce the impacts and risks without grossly disproportionate sacrifice, the impacts and risks are considered ALARP.				

EPOs, EPSs and MC			
EPOs	***Controls***	***Performance standards***	***Measurement criteria***
EPO 9 No release of hydrocarbons to the marine environment due to a wellbore release.	C 9.1 OPGGS (Resource Management and Administration) Regulations 2025: accepted WOMP that describes the well integrity outcomes, control measures and performance criteria used to demonstrate how the risk of wellbore release is managed to ALARP, including the well design and barriers to use to prevent a wellbore release, which aligns with industry guidance and good practice.	PS 9.1.1 An accepted WOMP is implemented, and well integrity notification and reporting are undertaken in accordance with the regulations (as applicable).	MC 9.1.1 Acceptance letter from NOPSEMA demonstrates acceptance of the WOMP. Records demonstrate applicable NOPSEMA notification and reporting.
	C 9.2 In the event of a spill, implement emergency response activities in accordance with the Oil Pollution First Strike Plan (Appendix H).	PS 9.2.1 In the event of a spill, the Oil Pollution First Strike Plan requirements are implemented.	MC 9.2.1 Records of completed incident documentation.
	C 9.3 Test the arrangements supporting the activities in the Oil Pollution First Strike Plan (Appendix H) to ensure it can be implemented as planned.	PS 9.3.1 Exercises and tests will be conducted in alignment with the frequency identified in Table 7-10.	MC 9.3.1 Testing of arrangement records confirm emergency response capability has been maintained.
		PS 9.3.2 Woodside's procedure demonstrates a minimum level of trained personnel, for core roles in the Oil Pollution First Strike Plan, are maintained.	MC 9.3.2 Emergency management dashboard confirms minimum level of personnel trained for core Oil Pollution First Strike Plan roles are available.
	C 9.4 Subsea WCP installed, and function tested during well intervention activities.	PS 9.4.1 Subsea WCP specification, installation and function testing compliant with Woodside standards and international requirements (NORSOK D-010) as agreed by Woodside and the LWIV contractor.	MC 9.4.1 Records demonstrate WCP specifications and function testing were in accordance with minimum standards for the expected well intervention conditions as agreed by Woodside and the LWIV contractor.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.7.3 Unplanned hydrocarbon release: vessel collision

Context		
Project vessels – Section 3.6	Physical environment – Section 4.4 Biological environment – Section 4.5 Protected species – Section 4.6 Socioeconomic environment – Section 4.9	Stakeholder consultation – Section 5

Risk evaluation summary

Source of risk	***Environmental value potentially impacted***						***Evaluation***						
	Marine sediment	Water quality	Air quality (incl odour)	Ecosystems/habitat	Species	Socioeconomic	Decision type	Consequence/impact	Likelihood	Risk rating	ALARP tools	Acceptability	Outcome
Hydrocarbon release to the marine environment due to a vessel collision (between project vessels or a third party)		X		X	X	X	A	D	1	M	LCS GP PJ	Acceptable if ALARP	EPO 10

Description of source of risk

The temporary presence of the LWIV and support vessels in the Operational area could result in a navigational hazard for commercial shipping within the immediate area. This navigational hazard could result in a vessel collision and a spill of hydrocarbons if it causes a fuel tank rupture.

Vessels have multiple isolated marine diesel tanks throughout their hulls. The total storage capacity of support vessels used for the Petroleum Activity can be 500 to 1,000 m³, with isolated tanks ranging from 22 to 250 m³. An LWIV can have a total marine diesel storage capacity of more than 2,000 m³, with isolated tanks ranging in size from 50 to 165 m³.

In the unlikely event of a vessel collision involving a vessel during the Petroleum Activity, the vessel will have the capability to pump marine diesel from a ruptured tank to a tank with spare volume to reduce the potential volume of fuel released to the environment.

Industry experience

Registered or foreign flag vessels in Australian waters are required to report events to the Australian Transport Safety Bureau, AMSA or Australian Search and Rescue.

From a review of Australian Transport Safety Bureau's marine safety and investigation reports, one vessel collision occurred in 2011–2012 that spilled 25 to 30 L of oil into the marine environment as a result of a collision between a tug and an activity support vessel off Barrow Island. Two other vessel collisions occurred in 2010, one in the port of Dampier, where a support vessel collided with a barge being towed. Minor damage was reported and no significant injury to personnel or pollution occurred. The second 2010 collision involved a vessel under pilot control in port that connected with a vessel alongside a wharf, causing it to sink. No reported pollution resulted from the sunken vessel. These incidents demonstrate the likelihood of only minor volumes of hydrocarbons being released during the highly unlikely event of a vessel collision.

From 2010 to 2011, Australian Transport Safety Bureau's annual publication defines the individual safety action factors identified in marine accidents and incidents: 42% related to navigation action. Of those, 15% related to poor communication and 42% related to poor monitoring, checking and documentation. Most of these related to grounding, which is deemed not credible for this Petroleum Activity.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Credible spill scenario

For a vessel collision to result in the worst-case scenario of a hydrocarbon spill potentially impacting an environmental receptor, several factors must align:

- The identified causes of vessel interaction must result in a collision.
- The collision must have enough force to penetrate the vessel hull.
- The collision must be in the exact location of the fuel tank.
- The fuel tank must be full, or at least at a volume that is higher than the point of penetration.

The probability of these factors aligning to result in a breach of fuel tanks, resulting in a spill that could potentially affect the marine environment, is considered highly unlikely. Given the offshore location of the Operational area, vessel grounding is not considered a credible risk.

The environmental risk analysis identified and assessed two potential scenarios that could result in a loss of vessel structural integrity, resulting in damage to fuel storage tank(s) and a loss of marine diesel to the marine environment. The scenarios considered damage to single and multiple fuel storage tanks in a project vessel due to combinations of vessel-to-vessel collision scenarios.

The scenarios considered comprised a collision of the project vessels with each other or with a third-party vessel (i.e. commercial shipping, other petroleum-related vessels and commercial fishing vessels). The likelihood of a collision was assessed as being highly unlikely, given the standard vessel operations and equipment in place to prevent collision at sea, the standby role of a support vessel (low vessel speed) and its operation near the LWIV (exclusion areas), and the construction and placement of storage tanks. For the purposes of this assessment, a worst-case instantaneous loss of 250 m³ from a tank on the Offshore Support Vessel has been considered. Potential credible hydrocarbon spill scenarios as a result of vessel collision are summarised in Table 6-12.

Table 6-12: Summary of credible hydrocarbon spill scenario as a result of vessel collision

Scenario	Hydrocarbon volumes	Preventative and mitigation controls	Credibility	Max. possible volume loss
Breach of support vessel fuel tanks due to vessel collision	Offshore Support Vessels have multiple marine diesel tanks typically ranging between 22 to 105 m³ each General Support Vessel have multiple marine diesel tanks typically ranging between 22-105 m³ each.	Typically, double wall tanks that are located midship (not bow or stern) Support vessels are not anchored and steam at low speeds when relocating within the Operational area or providing standby cover. Normal maritime procedures would apply during such vessel movements.	**Credible – Worst Case from an Offshore Support Vessel** A vessel collision could result in a release from a support vessel fuel tank	250 m³ instantaneous
Breach of LWIV fuel tanks due to vessel collision	The LWIV has multiple isolated tanks; the largest volume of a single tank is unlikely to exceed 165 m³	Tank locations midship (not bow or stern). LWIV will be holding station during the Petroleum Activity when undertaking LWI.	**Credible** A vessel collision could result in a release from an LWIV fuel tank	165 m³ instantaneous

Quantitative hydrocarbon risk assessment

To inform the impact assessment, quantitative hydrocarbon spill modelling is referenced for the worst-case hydrocarbon release scenario.

Modelled credible scenario

Spill modelling of an instantaneous 250 m³ surface release of marine diesel within Operational Area Part 1 (the CK4 well location) was undertaken by RPS (2025). Given the distance of the wells to one another (2 km to 16 km from one another) and similar water depths and sensitivities, the modelling is considered representative of a spill at any of the Operational area. The modelled volume is greater than the largest volume of a single tank on the support vessel and is therefore considered conservative to inform the impacts from a vessel collision.

Modelling was undertaken over all seasons to address the potential for the activity timing over any time of year. The overall EMBA for the scenario is based on stochastic modelling, which compiles data from 200 hypothetical worst-case spills under various weather and metocean conditions. This is considered to provide a conservative estimate of the EMBA and the potential impacts from the identified worst-case credible release volumes for loss of containment scenarios.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Refer to Section 6.7.1 for the quantitative spill risk assessment methodology and Section 6.7.1.4.2 for a description of marine diesel characteristics used to model this scenario.

Consequence assessment
Environmental value(s) potentially impacted
Environment that may be affected
The overall EMBA for the Petroleum Activity is based on stochastic modelling, which compiles data from multiple hypothetical worst-case spill simulations under a variety of weather and metocean conditions (as described in Section 6.7.1).
As the weathering of different fates of hydrocarbons (surface, entrained and dissolved) differs due to the influence of the metocean transport mechanism, a different area is discussed for each hydrocarbon fate. These fates have been outlined below.
Surface hydrocarbons
The modelling indicates the spill would be localised and confined to open water, extending to about 13 km (at or above the 10 g/m² impact threshold) from the release location.
Sociocultural hydrocarbon thresholds for surface hydrocarbons, which include the threshold for visible surface hydrocarbons of 1 g/m², may extend to about 63 km from the release site.
Sensitive receptors are not predicted to be contacted by surface hydrocarbons above reported thresholds.
Entrained hydrocarbons
The modelling indicates entrained hydrocarbons at the ecological threshold of 1,000 ppb threshold are predicted to extend 16 km from the release site
Sensitive receptors are not predicted to be contacted by ecological threshold above reported thresholds.
Dissolved hydrocarbons
The modelling indicates dissolved hydrocarbons at the ecological threshold of 10 ppb could potentially occur up to 50 km from the release location.
Sensitive receptors are not predicted to be contacted by dissolved hydrocarbons above reported thresholds.
Accumulated hydrocarbons
Accumulated hydrocarbons above threshold concentrations (100 g/m²) were not predicted by the modelling. Floating oil at concentrations equal to or greater than 1 g/m² are not predicted to contact any shoreline receptors.
Consequence assessment summary
Modelling indicates the spill will remain offshore and are not predicted to contact sensitive receptors (e.g. Marine Parks). The potential biological and ecological impacts of an accidental hydrocarbon release as a result of a vessel collision during the Petroleum Activity are presented in the next sections.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Consequence assessment
Summary of potential impacts to protected species, other habitats and communities, water quality and socioeconomic values
Modelling of a 250 m³ release of marine diesel spill due to vessel collision predicts that no receptors will be contacted by accumulated oil concentrations equal to or greater than 100 g/m² (ecological threshold), and no receptors will be contacted by accumulated oil concentrations equal to or greater than 10 g/m² (sociocultural threshold). No receptors will be contacted by surface hydrocarbon concentrations equal to or greater than 10 g/m² (ecological threshold), and no receptors will be contacted by surface oil concentrations equal to or greater than 1 g/m² (sociocultural threshold). The potential impacts of spilled hydrocarbons to species (protected and otherwise), marine primary producers, other habitats and communities, water quality, marine sediment quality, air quality, protected areas and socioeconomic values are described in Section 6.7.2. The wellbore release EMBA is larger spatially than the vessel collision EMBA; therefore, the potential impacts of entrained hydrocarbons provided in Section 6.7.2, and the scale of impact described, provides a conservative assessment for potential impacts of a 250 m³ release of marine diesel. Impacts specific to a spill of marine diesel are summarised below. It is noted the toxic components in marine diesel include alkylated naphthalenes, which can be rapidly accumulated by marine biota, including invertebrates such as marine oysters, clams, shrimp, as well as a range of vertebrates, such as finfish. Marine diesel also contains additives that contribute to its toxicity. Given the localised area of the potential EMBA and the rapid dispersion, dilution and weathering of a marine diesel spill, it is expected any potential impacts will be low magnitude and temporary in nature. ***Protected species*** As identified in Section 4.6.3, protected species including migrating pygmy blue whales and humpback whales may be encountered within the Operational area, and therefore could be impacted near the marine diesel spill location, where the volatile, water soluble and most toxic components of the diesel may be present. However, the window for exposure to hydrocarbons with the potential for any toxicity effects in these waters would be limited to a few days after the spill. Potential impacts may include behavioural impacts (e.g. avoidance of impacted areas), sub-lethal biological effects (e.g. skin irritation, irritation from ingestion or inhalation, reproductive failure) and, in rare circumstances, organ or neurological damage leading to death. Given the absence of critical habitats or aggregation areas, cetaceans in the area are expected to be transient, and impacts are expected to be limited to individuals or small groups of animals. Impact on the overall population viability of cetaceans is not predicted. No BIAs or habitat critical to the survival of turtles overlap the Operational area (Section 4.6.1.1) and the Operational area are unlikely to represent an important habitat for marine turtles due to the absence of potential nesting or foraging habitat (i.e. no emergent islands, reef habitat or shallow shoals) and the water is deep (~80 m to 130 m). In the event of a worst-case vessel spill of marine diesel, there is a potential that surface and entrained hydrocarbons exceeding impact threshold concentrations (10 g/m² and 100 ppb respectively) will be in offshore waters, extending up to 13 km and 173 km respectively, from the release site. Toxicity of hydrocarbons will be significantly reduced by weathering over such distances, with the volatile and water-soluble (often the most toxic) components expected to have dissipated beyond the vicinity of the spill site. Dissolved aromatic hydrocarbons at concentrations equal to or greater than the 10 ppb threshold are predicted to be limited to within 50 km of the spill site. Low concentrations are only capable of causing sublethal impacts to the most sensitive marine organisms and no lethal or sub-lethal impacts to marine turtles are expected in the BIAs near the Operational area (as identified in Table 4-7). The potential for lethal and sub-lethal impacts to marine turtles is limited to small numbers of transient individuals that may be in offshore waters near the release location. Seabirds may also be exposed to marine diesel on the sea surface or upper water column, if resting or foraging in waters near the spill. Impacts may include mortality due to oiling of feathers or the ingestion of hydrocarbons. However, due to the limited spatial extent of a marine diesel spill and limited window for exposure, population-level impacts are not expected. Other protected species that may occasionally transit through the area, and may potentially be exposed to a marine diesel spill, include shark and ray species such as whale sharks and manta rays. Impacts are again predicted to be limited to a small number of animals, given the low numbers of animals that may transit through the area during the short period when spilled hydrocarbons are present. Given the limited number of animals that may be impacted and the rapid dispersion of marine diesel, it is considered any potential impacts will be minor. ***Other habitats, species and communities*** Within the EMBA for a marine diesel spill resulting from a vessel collision, there is the potential for plankton communities to potentially be impacted where entrained or dissolved hydrocarbon threshold concentrations are exceeded. A range of lethal and sublethal impacts may occur to plankton exposed to entrained or dissolved hydrocarbons within the EMBA. Communities are expected to recover quickly (weeks/months) due to high population turnover. It is therefore considered any potential impacts would be low magnitude and temporary in nature.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Pelagic fish populations in the open water offshore environment of the EMBA are highly mobile and are able to move away from a marine diesel spill. The spill-affected area would be confined to the surface layer and upper 20 to 30 m of the water column. It is therefore unlikely fish populations would be exposed to widespread hydrocarbon contamination. Pelagic fish populations are distributed over a wide geographical area so impacts on populations or species level are considered negligible. Combined with these factors and the rapid dispersion of marine diesel, it is considered any potential impacts will be minor.

Other communities (e.g. demersal fish, benthic infauna and epifauna) and key sensitivities (e.g. KEFs identified in Section 4.7) occur within the EMBA; however, they will not be directly exposed or impacted by a marine diesel spill as hydrocarbons are confined to the upper layers of the water column.

Water quality

It is likely water quality will be reduced at the release location of the spill; however, such impacts to water quality would be temporary and localised in nature due to the rapid dispersion and weathering of marine diesel. The potential impact is therefore expected to be low.

Protected areas

Hydrocarbons at or exceeding impact thresholds are not predicted to contact protected areas.

Cultural values and heritage

Woodside has extensively consulted with Traditional Custodian groups as described in Section 5 to identify environmental values of cultural interest, as specified in Section 4.9.1. Any cultural values linked to environment receptors have been assessed above. Refer to Section 6.9 for a further assessment of potential impacts to cultural features and heritage values from the Petroleum Activity.

Socioeconomic

A marine diesel spill is considered unlikely to cause significant direct impacts on the target species fished by Commonwealth and State fisheries (see Table 4-23) that overlap with the EMBA. The fisheries that operate within the EMBA predominantly target demersal fish species (demersal finfish and crustaceans) that inhabit waters in the range of >60 to 200 m depth, or pelagic species that are highly mobile. Therefore, a marine diesel spill is expected to only result in negligible impacts, considering hydrocarbons are confined to the upper layers of the water column. Visible surface hydrocarbons at or exceeding 1 g/m² may also occur up to 63 km from the release site, which may result in fouling of fishing gear and a perception of impacts to fish stocks by fisheries stakeholders and the public. There is the potential that a fishing exclusion zone would be applied in the area of the spill, which would put a temporary ban on fishing activities and potentially lead to subsequent economic impacts on commercial fishing operators if they were planning to fish within it. Such measures would likely be in place for less than a week and would not result in widespread or long-term impacts to fishing activities.

Summary of potential impacts to environmental values

In the unlikely event of an unplanned hydrocarbon release to the marine environment due to vessel collision, combined with the adopted controls, it is considered any potential impact to water quality would be minor, localised and temporary in nature compared to background levels and international standards, with localised and temporary impacts to habitats, populations and shipping or fishing concerns.

The highest environmental consequence identified for assessing an unplanned hydrocarbon release to the marine environment due to vessel collision, is defined as D, which equates to minor impact on environmental features of low significance with some ability to recover.

Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)[38]***	***Benefit in risk reduction[39]***	***Proportionality***	***Control adopted***
Legislation, codes and standards				
Comply with Marine Order 30 (Prevention of collisions), including: • adherence to steering and sailing rules, including	F: Yes. CS: Minimal cost. Standard practice.	Legislative requirement to reduce the likelihood that interference with other marine users results in a collision.	Legislative requirement – must be adopted.	Yes C 10.1

[38] *Qualitative measure.*

[39] *Measured in terms of reduction of likelihood, consequence and current risk rating.*

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)[38]***	***Benefit in risk reduction[39]***	***Proportionality***	***Control adopted***
maintaining lookouts (e.g. visual, hearing, radar), proceeding at safe speeds, assessing the risk of collision and acting to avoid collision (monitoring radar) • adherence to navigation light display requirements, including visibility, light position and shape appropriate to the Petroleum Activity • adherence to navigation noise signals as required.				
Comply with Marine Order 27 (Safety of navigation and radio equipment), including: • navigational systems and equipment mentioned in regulations 19 and 20 of Chapter V of SOLAS for the vessel are type-approved and installed aboard vessels • navigational systems and equipment mentioned in regulations 7 to 11 of Chapter IV of SOLAS are installed aboard vessels • navigational systems and equipment are maintained in working order • navigational activities and incidents of importance to safety of navigation on the vessel are recorded.	F: Yes. CS: Minimal cost. Standard practice.	Legislative requirement to reduce the likelihood that interference with other marine users results in a collision.	Legislative requirement – must be adopted.	Yes C 10.2
Comply with Marine Order 21 (Safety and emergency arrangements), including: • adherence to minimum safe crewing levels • maintenance of navigation equipment in efficient working order (compass or radar) • navigational systems and equipment required are those specified in regulation 19 of Chapter V of SOLAS • Automatic Identification System that provides other users with information about the vessel's identity, type, position, course, speed,	F: Yes. CS: Minimal cost. Standard practice.	Legislative requirement to reduce the likelihood that interference with other marine users results in a collision.	Legislative requirement – must be adopted.	Yes C 10.3

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)[38]***	***Benefit in risk reduction[39]***	***Proportionality***	***Control adopted***
navigational status and other safety-related data.				
Establishment of a 500 m safety exclusion zone around the LWIV and communicated to marine users.	F: Yes. CS: Minimal cost. Standard practice.	Legislative requirements to be followed reduce the likelihood of a collision.	Legislative requirement – must be adopted.	Yes C 1.2
In the event of a spill, implement emergency response activities in accordance with the Oil Pollution First Strike Plan (Appendix H).	F: Yes. CS: Costs associated with implementing response strategies vary dependant on nature and scale of the spill event. Standard practice.	This control would not reduce the likelihood, but response activities may reduce the consequence.	Benefits outweigh cost/sacrifice.	Yes C 9.2
Test the arrangements supporting the activities in the Oil Pollution First Strike Plan (Appendix H) to ensure it can be implemented as planned.	F: Yes. CS: Minimal cost. Standard practice.	Testing the Oil Pollution First Strike Plan activities would not reduce the likelihood, but response activities may reduce the consequence.	Legislative requirement – must be adopted.	Yes C 9.3
Good practice				
Develop a Concurrent Operations (CONOPS) Plan to manage interactions with the Okha FPSO. The CONOPS Plan will contain information about: • minimum separation distances • communications • vessels and activities involved in CONOPS • safety exclusion zone entry and exit processes • helicopter operations • key roles, responsibilities and emergency contacts.	F: Yes. CS: Minimal cost. Standard practice.	CONOPS Plan ensures the Petroleum Activity and Okha asset are aware of the activities and exclusion zones and there are process to communicate them. Reduces the likelihood of the Petroleum Activity interacting with the Okha asset activities.	Benefits outweigh cost/sacrifice. Control is also standard practice.	Yes C 10.5
Notify AHO of activities and movements no less than four working weeks before the scheduled activity start date.	F: Yes. CS: Minimal cost. Standard practice.	Notifying AHO will enable them to generate navigation warnings (Maritime Safety Information Notifications and Notices to Mariners, including AUSCOAST warnings where relevant).	Benefits outweigh cost/sacrifice. Control is also standard practice.	Yes C 1.3
Notify AMSA's JRCC of activities and movements 24 to 48 hours before operations begin.	F: Yes. CS: Minimal cost. Standard practice.	Communicating the Petroleum Activity to other marine users ensures they are	Benefits outweigh cost/sacrifice.	Yes C 1.5

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)[38]***	***Benefit in risk reduction[39]***	***Proportionality***	***Control adopted***
		informed and aware, reducing the likelihood of interfering with other marine users.	Control is also standard practice.	
Notify relevant government departments, fishing industry representative bodies, fishery licence holders, and other oil and gas operators (as requested during consultation) of activities before starting and upon completing activities.	F: Yes CS: Minimal cost. Standard practice	Communicating the Petroleum Activity to other marine users ensures they are informed and aware, reducing the likelihood of interfering with other marine users.	Benefits outweigh cost/sacrifice. Control is also standard practice.	Yes C 1.4
Mitigation: Oil spill response.	Refer to Appendix G			
Professional judgement – Eliminate				
Eliminate use of vessels.	F: No. Vessels are needed to conduct the Petroleum Activity. CS: Not considered – control not feasible.	Not considered – control not feasible.	Not considered – control not feasible.	No
Professional judgement – Substitute				
None identified.				
Professional judgement – Engineered solution				
None identified.				
ALARP statement: Based on the environmental risk assessment outcomes and use of the relevant tools appropriate to the decision type (i.e. Decision Type A; Section 2.3.4.2) and Woodside's criteria for demonstrating ALARP (Section 2.4.1). Woodside considers the adopted controls appropriate to manage the impacts and risks of an unplanned loss of hydrocarbon resulting from vessel collision. As no reasonable additional or alternative controls were identified that would further reduce the impacts and risks without grossly disproportionate sacrifice, the impacts and risks are considered ALARP.				

Demonstration of acceptability	
Acceptability criteria and assessment	***Acceptability statement***
Principles of ESD The impact assessment has considered the relevant principles of ESD: • The conservation of biological diversity and ecological integrity should be a fundamental consideration in decision making. • The principle of inter-generational equity – that the present generation should ensure the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations. • Decision-making processes should effectively integrate long-term and short-term economic, environmental, social and equitable considerations. ***Internal context*** The Petroleum Activity is consistent with Woodside corporate	The predicted level of risk to a wellbore release to ecosystems, species, habitat or physical or biological attributes from a loss of marine diesel from a vessel collision is considered to be of an acceptable level (consequence level M – Moderate), given the: • Petroleum Activity is consistent with the relevant principles of ESD • proposed controls have considered the environmental consequence and are consistent with Woodside's policies, procedures and standards • feedback from stakeholders has been considered • legislative requirements and industry standards have been adopted • Petroleum Activity will be managed in a manner that is consistent with management objectives for

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

policies, culture, processes, standards, structure and systems as outlined in the demonstration of ALARP and adopted EPO, including: • Woodside Environment and Biodiversity Policy (Appendix A) • Woodside Risk Management Policy (Appendix A). ***External context*** Woodside has considered feedback from relevant persons during the impact assessment (Section 5). As requested during consultation, controls have been adopted to inform other users of the presence of the project vessels during the Petroleum Activity and reduce the potential for vessel collision, including notifications to AHO and AMSA ***Other requirements*** The EMBA overlaps BIAs for threatened and migratory species, as well as State and Commonwealth marine protected areas. The residual risk of accidental loss of marine diesel from a vessel collision is not inconsistent with the relevant objectives and actions of any applicable recovery plans or threat abatement plans. Regard has been given to relevant conservation advice and wildlife conservation plans when assessing potential impacts. As demonstrated in Section 6.8, the Petroleum Activity is not considered to be inconsistent with the overall recovery objectives and actions of these recovery plans and conservation advice.	relevant World Heritage areas, AMPs, recovery plans and conservation plans/advice • predicted level of impact has been reduced to ALARP. ***Environmental performance consideration*** To manage impacts from an accidental marine diesel release as a result of vessel collision to ecosystems, species, habitat or physical or biological attributes to an acceptable level, the following EPO has been applied: • EPO 10: No release of hydrocarbons to the marine environment due to a vessel collision during the Petroleum Activity. The adopted controls are considered appropriate to manage the risks of the Petroleum Activity and compliance with those controls is considered to demonstrate the EPO has been met.

EPOs, EPSs and MC			
EPOs	***Controls***	***Performance standards***	***Measurement criteria***
EPO 10 No release of hydrocarbons to the marine environment due to a vessel collision during the Petroleum Activity.	C 10.1 Comply with Marine Order 30 (Prevention of collisions), including: • adherence to steering and sailing rules, including maintaining lookouts (e.g. visual, hearing, radar), proceeding at safe speeds, assessing risk of collision, and acting to avoid collision (monitoring radar) • adherence to navigation light display requirements, including visibility, light position and shape appropriate to the Petroleum Activity • adherence to navigation noise signals as required.	PS 10.1.1 Project vessels compliant with Marine Order 30 (Prevention of collisions), which requires vessels to always be visible.	MC 10.1.1 Marine assurance inspection records demonstrate compliance with standard maritime safety procedures (Marine Orders 21, 27 and 30).
	C 10.2 Comply with Marine Order 27 (Safety of navigation and radio equipment), including: • navigational systems and equipment mentioned in regulations 19 and 20 of Chapter V of SOLAS for the vessel are type-approved and installed aboard vessels	PS 10.2.1 Project vessels compliant with Marine Order 27 (Safety of navigation and radio equipment).	

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

EPOs, EPSs and MC			
EPOs	***Controls***	***Performance standards***	***Measurement criteria***
	• navigational systems and equipment mentioned in regulations 7 to 11 of Chapter IV of SOLAS are installed aboard vessels • navigational systems and equipment are maintained in working order • navigational activities and incidents of importance to safety of navigation on the vessel are recorded.		
	C 10.3 Comply with Marine Order 21 (Safety and emergency arrangements), including: • adherence to minimum safe crewing levels • maintenance of navigation equipment in efficient working order (compass or radar) • navigational systems and equipment required are those specified in regulation 19 of Chapter V of SOLAS • Automatic Identification System that provides other users with information about the vessel's identity, type, position, course, speed, navigational status and other safety-related data.	PS 10.3.1 Project vessels compliant with Marine Order 21 (Safety and emergency procedures).	
	C 9.2 In the event of a spill, implement emergency response activities in accordance with the Oil Pollution First Strike Plan (Appendix H).	PS 9.2.1 Refer to Section 6.7.2.	MC 9.2.1 Refer to Section 6.7.2.
	C 9.3 Test the arrangements supporting the activities in the Oil Pollution First Strike Plan (Appendix H) to ensure it can be implemented as planned.	PS 9.3.1 Refer to Section 6.7.2.	MC 9.3.1 Refer to Section 6.7.2.
		PS 9.3.2 Refer to Section 6.7.2.	MC 9.3.2 Refer to Section 6.7.2.
	C 1.2 Establishment of a 500 m safety exclusion zone around the LWIV and communicated to marine users.	PS 1.2.1 See Section 6.6.1.	MC 1.2.1 See Section 6.6.1.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

EPOs, EPSs and MC			
EPOs	***Controls***	***Performance standards***	***Measurement criteria***
	C 10.4 Develop a CONOPS Plan to manage interactions with the Okha FPSO. The CONOPS Plan will contain information about: • minimum separation distances • communications • vessels and activities involved in CONOPS • exclusion zone entry and exit processes • helicopter operations • key roles, responsibilities.	PS 10.4.1 A CONOPS Plan is in place to manage interactions with the Okha FPSO. The CONOPS Plan contains information about: • minimum separation distances • communications • vessels and activities involved in CONOPS • exclusion zone entry and exit processes • helicopter operations • key roles, responsibilities.	MC 10.4.1 Records show the CONOPS Plan is developed to manage interactions with the Okha FPSO.
	C 1.3 Notify AHO of activities and movements no less than four weeks before the scheduled activity start date.	PS 1.3.1 See Section 6.6.1.	MC 1.3.1 See Section 6.6.1.
	C 1.4 Notify relevant government departments, fishing industry representative bodies, fishery licence holders, and other oil and gas operators (as requested during consultation) of activities before starting and upon completing activities.	PS 1.4.1 See Section 6.6.1.	MC 1.4.1 See Section 6.6.1.
	C 1.5 Notify AMSA's JRCC of activities and movements 24 to 48 hours before operations begin.	PS 1.5.1 See Section 6.6.1.	MC 1.5.1 See Section 6.6.1.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.7.4 Unplanned discharges: hydrocarbon and chemical spills from vessel and subsea activities

Context		
Subsea intervention activities – Section 3.5 Project vessels – Section 3.6	Physical environment – Section 4.4 Protected species – Section 4.6	Stakeholder consultation – Section 5

Risk evaluation summary

Source of risk	***Environmental value potentially impacted***						***Evaluation***						
	Marine sediment	Water quality	Air quality (incl odour)	Ecosystems/habitat	Species	Socioeconomic	Decision type	Consequence/impact	Likelihood	Risk rating	ALARP tools	Acceptability	Outcome
Accidental discharge of hydrocarbons or chemicals from vessel deck activities and equipment, from subsea ROV hydraulic leaks (typically <100 L)		X			X		A	F	2	L	LCS GP PJ	Broadly acceptable	EPO 11
Minor releases during chemical transfers from support vessels to the LWIV		X			X		A	F	2	L			

Description of source of impact

LWIV, support vessels and ROV operations

Deck spills can result from spills of stored hydrocarbons and chemicals or equipment. Project vessels typically store hydrocarbons and chemicals in various volumes (20 L, 205 L; up to about 4,000 to 6,000 L). Storage areas are typically set up with effective primary and secondary bunding to contain any deck spills. Releases from equipment are predominantly from the failure of hydraulic hoses, which can either be located within bunded areas or outside of bunded or deck areas (e.g. over water on cranes). Operational area

Chemicals that will be used and may be accidentally released include:

- non-process chemicals (maintenance and cleaning chemicals)
- non-process hydrocarbons – i.e. hydraulic fluids used in machinery (including cranes, winches, ROVs), small volumes of fuel.

Non-process chemicals

Non-process chemicals, such as wash chemicals, cleaning chemicals, maintenance and solvents, are generally held onboard in low quantities (typically <50 L containers) and are within chemical cabinets or bunded storage areas on the LWIV and support vessels. Non-process chemical spills may result from human error or damage to a chemical container during handling. Spills are generally captured by the drain system and routed to a holding tank for treatment or disposal onshore. If a spill is not contained on deck or within a bunded area, there would be a release to the marine environment of up to 50 L.

Non-process hydrocarbons

Woodside's operational experience demonstrates spills are most likely to originate from hydraulic hoses and have been less than 100 L, with an average volume <10 L.

Non-process hydrocarbons (hydraulic fluids) are used in hydraulic-powered machinery, such as winches, cranes and ROVs, and are hydrocarbon-based with added chemical component additives. Unplanned discharges are predominantly due to failure of hydraulic hoses or minor leaks from process components or spills during periodic refuelling of hydraulic hoses. Spills or leaks from hydraulic hoses are usually very small volumes (about 1 L) and are typically contained within a bunded or drained area under the equipment mounted on deck. These small on-deck spills

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

are unlikely to reach the marine environment. A burst hydraulic hose on an extended crane could potentially result in hydraulic fluid being sprayed in a fine jet out over the water. However, this would only result in a small volume (about 25 L) being released, due to the small capacity of hydraulic hoses.

The ROV hydraulic fluid is supplied through hoses containing about 20 L of fluid. Hydraulic lines to the ROV arms and other tooling may become caught, resulting in minor leaks to the marine environment. Small-volume hydraulic leaks may occur from equipment operating via hydraulic controls subsea (subsea control fluid).

Hydraulic fluids are medium oils of light to moderate viscosity. They have a relatively rapid spreading rate and will dissipate quickly, particularly in high sea states. Lubricating oils may also be held onboard, typically stored with the non-process chemicals and held in low quantities. These hydrocarbons are more viscous, so in an unplanned discharge the spreading rate of a slick of these oils would be slightly slower.

Woodside's operational experience demonstrates spills are most likely to originate from hydraulic hoses and have been less than 100 L, with an average volume <10 L.

Consequence assessment

Environmental value(s) potentially impacted

Water quality

No significant impacts from the accidental discharges described are anticipated in the deepwater, offshore locations of the Operational area because of the minor quantities involved, the limited duration of activities during the Petroleum Activity (refer to Section 3.4), and high level of dilution into the open water marine environment of the Operational area. The potential impact to water quality will be localised and of no lasting effect.

Unplanned discharges of non-process chemicals or hydrocarbons may temporarily reduce water quality in the immediate vicinity of the release point. However, given the very small volumes, short duration, and the low sensitivity of the receiving environment within the Operational area, any reduction in water quality would be temporary and of no lasting effect.

Marine Sediments

Accumulation of contaminants in sediments depends primarily on the volume and concentration of particulates in discharges or constituents that adsorb onto seawater particulates, the area over which those particulates could settle onto the seabed (dominated by current speeds and water depths), and the resuspension, bioturbation, and microbial decay of those particulates in the water column and on the seabed.

Given the unplanned discharges are expected to rapidly mix in the water column and become diluted, accumulation in sediments at a measurable level is not expected to occur.

Marine fauna

As a result of a change in water quality, further impacts to receptors may occur, which include injury or mortality to marine fauna resulting from exposure to toxins in the released chemicals and hydrocarbons. As surface discharges are rapidly dispersed, and subsea discharges would be of very small volumes, potential impacts would be highly localised and temporary. The likelihood of ecological impacts to marine fauna (including protected species), other communities and habitats will be limited to no lasting effect and restricted to individual animals.

Key Ecological Features

Although the Ancient Coastline at 125 m Depth Contour KEF overlaps Operational Area Part 2, the values and sensitivities of this KEF occur on a broad scale outside of Operational Area Part 2. As described in the consequence evaluation above, the discharge of LWI discharges within the Operational area is not expected to result in a lasting effect to water quality, and no change in sediment quality is predicted. Therefore these discharges are unlikely to cause a change in habitats or communities at a measurable level and will not change the viability of the population or ecosystem.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)[40]***	***Benefit in risk reduction[41]***	***Proportionality***	***Control adopted***
Legislation, codes and standards				
Marine Order 91 (Marine pollution prevention – oil) 2014, requires SOPEP/ SMPEP as appropriate to vessel class.	F: Yes. CS: Minimal cost. Standard practice.	Legislative requirements to be followed reduce the likelihood of an unplanned release. The consequence is unchanged.	Legislative requirement – must be adopted.	Yes C 6.3
Liquid chemical and fuel storage areas on vessels are bunded or secondarily contained when they are not being handled or moved temporarily.	F: Yes. CS: Minimal cost. Standard practice.	Reduces the likelihood of contaminated deck drainage water being discharged to the marine environment.	Legislative requirement – must be adopted.	Yes C 11.1
Good practice				
Maintain and locate spill kits near hydrocarbon storage areas and deck areas for use to contain and recover deck spills.	F: Yes. CS: Minimal cost. Standard practice.	Reduces the likelihood of a deck spill from entering the marine environment. The consequence is unchanged.	Benefits outweigh cost/sacrifice.	Yes C 11.2
Fluids and additives intended or likely to be discharged to the marine environment will have an environmental assessment completed before use to ensure the impacts associated with use are ALARP and acceptable.	F: Yes. CS: Minimal cost. Standard practice.	Environmental assessment of chemicals will reduce the consequence of impacts resulting from discharges to the marine environment, by ensuring chemicals have been assessed for environmental acceptability. Planned discharges are required for the safe execution of activities and therefore no reduction in likelihood can occur.	Benefits outweigh cost/sacrifice.	Yes C 5.1
Professional judgement – Eliminate				
None identified.				
Professional judgement – Substitute				
None identified.				
Professional judgement – Engineered solution				
Below-deck storage of all hydrocarbons and chemicals.	F: No. During operations there is a need to keep small volumes near activities and within	Not considered – control not feasible.	Not considered – control not feasible.	No

[40] *Qualitative measure.*

[41] *Measured in terms of reduction of likelihood, consequence and current risk rating.*

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)[40]***	***Benefit in risk reduction[41]***	***Proportionality***	***Control adopted***
	equipment requiring use of hydrocarbons and chemicals, and can result in increased risk of leaks from transfers via hose or smaller containers. CS: Not considered – control not feasible.			
A reduction in the volumes of chemicals and hydrocarbons stored onboard the LWIV and support vessels.	F: Yes. Increases the risks associated with transportation and lifting operations. CS: Project delays if required chemicals are not on board. Increases the risks associated with transportation and lifting operations.	No reduction in likelihood or consequence since chemicals will still be needed to enable activities.	Disproportionate – cost/sacrifice outweighs benefit to be gained.	No
ALARP statement: Based on the assessment outcomes, use of the relevant tools appropriate to the decision type (i.e. Decision Type A; Section 2.3.4.2) and Woodside's criteria for demonstrating ALARP (Section 2.4.1), Woodside considers the adopted controls appropriate to manage potential impacts and risks associated with unplanned deck and subsea spills. As no reasonably practicable additional or alternative controls were identified that would further reduce the risks and impacts without disproportionate sacrifice, the impacts and risks are considered ALARP.				

Demonstration of acceptability
Acceptability statement: The risk assessment has determined that an unplanned minor discharge of hydrocarbons or chemicals from minor deck spills is unlikely to result in a potential consequence greater than temporary exceedance over national/international water quality standards, with low impact to the marine environment. Further opportunities investigated to reduce the impacts and risks have been described above. The adopted controls are considered good oil field practice and industry best practice and meet legislative requirements (Marine Order 91). Based on the assessment outcomes, use of the relevant tools appropriate to the decision type (i.e. Decision Type A; Section 2.3.4.2) and Woodside's criteria for demonstrating acceptability (Section 2.4.2), Woodside considers the adopted controls appropriate to manage the impacts and risks to a level that is broadly acceptable, and compliance with those controls demonstrates the EPOs are met.

EPOs, EPSs and MC			
EPOs	***Controls***	***Performance standards***	***Measurement criteria***
EPO 12a Undertake the Petroleum Activity in a manner that does not result in a	C 6.4 Marine Order 91 (Marine pollution prevention – oil) 2014, requires SOPEP/SMPEP as appropriate to vessel class.	PS 6.4 Refer to Section 6.6.5.	MC 6.4.1 Refer to Section 6.6.5

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

EPOs, EPSs and MC			
EPOs	***Controls***	***Performance standards***	***Measurement criteria***
substantial change in water quality that may adversely impact on biodiversity, ecological integrity, social amenity or human health. EPO 12b No unplanned release of hydrocarbons or chemicals to the marine environment from vessel and subsea activities.	C 11.1 Liquid chemical and fuel storage areas on vessels are bunded or secondarily contained when they are not being handled or moved temporarily.	PS 11.1.1 Failure of primary containment in storage areas does not result in loss to the marine environment.	MC 11.1.1 Records confirm all liquid chemicals and fuel are stored in bunded or secondarily contained areas when not being handled or moved temporarily.
	C 11.2 Maintain and locate spill kits near hydrocarbon storage areas and deck areas for use to contain and recover deck spills.	PS 11.2.1 Spill kits to be available for use to clean up deck spills.	MC 11.2.1 Records confirm spill kits are present, maintained and suitably stocked.
	C 5.1 Fluids and additives intended or likely to be discharged to the marine environment will have an environmental assessment completed before use to ensure the impacts associated with use are ALARP and acceptable.	PS 5.1.1 Refer to Section 6.6.4.	MC 5.1.1 Refer to Section 6.6.4.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.7.5 Unplanned discharges: release of solid hazardous and non-hazardous wastes (including dropped objects)

Context		
Subsea intervention activities – Section 3.5 Project vessels – Section 3.6 Support operations – Section 3.7	Physical environment –Section 4.4 Habitats and biological communities – Section 4.5 Protected species – Section 4.6	Stakeholder consultation – Section 5

Risk evaluation summary

Source of risk	***Environmental value potentially impacted***						***Evaluation***						
	Marine sediment	Water quality	Air quality (incl odour)	Ecosystems/habitat	Species	Socioeconomic	Decision type	Consequence/impact	Likelihood	Risk rating	ALARP tools	Acceptability	Outcome
Accidental loss of hazardous or non-hazardous wastes to the marine environment	X	X		X	X		A	F	2	L	GP	Broadly acceptable	EPO 12
Dropped objects resulting in the disturbance of benthic habitat	X			X			A	F	2	L			

Description of source of impact

The LWIV and support vessels will generate solid wastes, including packaging and domestic wastes such as aluminium cans, bottles, paper and cardboard. Hence, there is the potential for solid wastes to be lost overboard to the marine environment. Equipment that has been recorded as being lost on previous campaigns has primarily been windblown or dropped overboard, and has included things such as personal protective equipment and small tools or materials. These events have occurred during backloading activities, periods of adverse weather and incorrect waste storage.

There is the potential for objects to be dropped overboard from the LWIV and support vessels to the marine environment. Objects that have been dropped during previous offshore activities include small numbers of personal protective gear (e.g. glasses, gloves, hard hats), small tools (e.g. spanners) hardware fixtures (e.g. riser hose clamp) and drill equipment (e.g. drill pipe). However, there is also potential for larger equipment to be dropped during the Petroleum Activity (e.g. subsea XT). The spatial extent in which dropped objects can occur is restricted to the Operational area.

For the Petroleum Activity, the largest dropped object would be a subsea XT during replacement. A subsea XT, once removed, will be between approximately 3.6m (L) x 3.3m (W) x 5.2m (H) 2m. The overall footprint of disturbance within each Operational Area from a subsea XT being dropped is estimated to be minimal and localised (less than 5 m²).

Consequence assessment

Environmental value(s) potentially impacted

Solid wastes

The potential impacts of solid wastes accidentally discharged to the marine environment include direct pollution and contamination of the environment, and secondary impacts relating to potential contact of marine fauna with wastes, resulting in entanglement or ingestion and leading to injury and death of individual animals. The temporary or permanent loss of waste materials into the marine environment is not likely to have a significant environmental impact, based on the location of the Operational area, the types, size and frequency of wastes that could occur, and species present. Given this, impacts will have no lasting effect on any species or water quality.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Water quality

Hazardous solid wastes such as paint cans and oily rags can cause localised contamination of the water through a release of toxins and chemicals. Given the likely small volumes of any unplanned solid waste discharge, and the occasional nature of the event, these would result in temporary and highly localised changes to the water quality.

Physical environment

In the unlikely event of an object being dropped into the marine environment, potential environmental effects would be limited to localised physical impacts on benthic communities. In most cases, objects will be able to be recovered, therefore these impacts will also be temporary. However, there may be instances where objects are unable to be recovered due to health and safety, operational constraints or other factors such as the difficulty of recovering dropped objects at depth. When dropped objects are unable to be recovered, the impact will continue to be localised but would also be long term.

The temporary or permanent loss of dropped objects into the marine environment is likely to result in a localised impact only, as the benthic communities associated with the Operational area are of low sensitivity and are broadly represented throughout the NWMR. As described in Section 4.7, Operational Area Part 2 overlaps the Ancient Coastline at 125 m Depth Contour KEF. Benthic habitat surveys in the region, including within this KEF, indicate benthic habitats within the KEF are characterised by sand interspersed with areas of rubble and outcroppings of limestone pavement (AIMS, 2014; RPS, 2011). Such habitats are widely distributed in the NWMR. No significant escarpments, species of conservation significance, emergent features or areas of high biological productivity characteristically associated with the Ancient Coastline at 125 m Depth Contour KEF have been observed in Operational Area Part 2. Given the nature and scale of risks and consequences from dropped objects, no lasting effect is expected to seabed sensitivities associated with the Operational area. Further, considering the types, size and frequency of dropped objects that could occur, it is unlikely a dropped object would have a significant impact on any benthic community.

Marine fauna

The unplanned discharge of solid wastes can result in mortality to fauna, either through contamination or physical injury depending on the nature of the waste. Marine fauna, including fish, seabirds and shorebirds, marine mammals and marine reptiles, may be impacted through ingestion or entanglement of waste or through exposure to toxic chemicals. Ingestion or entanglement of marine fauna has the potential for physical harm, which may limit feeding and foraging behaviours and thus can result in mortalities. The Threat Abatement Plan for the impacts of marine debris on the vertebrate wildlife of Australia's coasts and oceans (Commonwealth of Australia, 2018) identifies EPBC Act-listed species for which there are scientifically documented adverse impacts resulting from marine debris. Marine turtles and seabirds particularly may be at risk from plastics, which may cause entanglement or are mistaken for food (Commonwealth of Australia, 2018; Commonwealth of Australia, 2017) and ingested, causing damage to internal tissues and potentially preventing feeding activities. In the worst instance this could have a lethal effect on an individual. Marine debris has been identified as threat in the Recovery Plan for Marine Turtles in Australia (2017–2027) (Commonwealth of Australia, 2017) (refer to Section 6.8).

Impacts to species including fish, birds, marine mammals and marine reptiles from the unplanned discharge of solid waste is unlikely, given the low occurrence of unplanned discharges and the location of the activities at significant distance from sensitive habitats. Significant impacts are unlikely to occur at an individual level and will not occur at a population level, nor result in a decrease of the quality of the habitat such that the extent of these species is likely to decline.

While the threat abatement plan for impacts of marine debris on vertebrate marine life does not list explicit management actions for non-related industries (Commonwealth of Australia, 2018), management controls will reduce the risk of unplanned discharge of solid waste.

The temporary or permanent loss of waste materials into the marine environment will have no lasting effect on any species or water quality, based on the types, size and frequency of wastes that could occur.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)[42]***	***Benefit in risk reduction[43]***	***Proportionality***	***Control adopted***
Legislation, codes and standards				
Comply with Marine Order 95 (Marine pollution prevention – garbage) as appropriate to vessel class, which prescribes matters necessary to give effect to Annex V of The International Convention for the Prevention of Pollution From Ships, 1973 (MARPOL), which prohibits the discharge of all garbage into the sea, except as provided otherwise.	F: Yes. CS: Minimal cost. Standard practice.	Legislative requirements to be followed reduce the likelihood of an unplanned release. The consequence is unchanged.	Legislative requirement – must be adopted.	Yes C 12.1
Good practice				
Implement LWIV and support vessels waste management plan, which requires: • dedicated waste segregation bins • records of all waste to be disposed, treated or recycled • waste streams to be handled and managed according to their hazard and recyclability class.	F: Yes. CS: Minimal cost. Standard practice.	Reduces the likelihood of a release of waste to the environment by providing guidance on storage, handling and transport of wastes.	Benefit outweighs cost/sacrifice.	Yes C 12.2
Recover lost equipment and waste and dropped objects where safe and practicable to do so. Consider: • risk to personnel to retrieve the object • whether the location of the object is in recoverable water depths • the object's proximity to subsea infrastructure • ability to recover the object (i.e. nature of object, lifting equipment).	F: Yes. However, it may not always be practicable. Assessed on a case by case basis. CS: Minimal cost. Standard practice.	Potentially reduces consequence by recovering the object or waste container from the environment.	Benefit outweighs cost/sacrifice.	Yes C 12.3

[42] *Qualitative measure.*

[43] *Measured in terms of reduction of likelihood, consequence and current risk rating.*

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)[42]***	***Benefit in risk reduction[43]***	***Proportionality***	***Control adopted***
The vessel contractor has procedures for lifts, bulk transfers and cargo loading that require: • the security of loads to be checked before starting lifts • loads to be covered if there is a risk of loss of loose materials • lifting operations to be conducted using the PTW and JSA systems to manage the specific risks of that lift, including consideration of weather and sea state.	F: Yes. CS: Minimal cost. Standard practice.	Reduces the likelihood of a release to the environment by providing procedures to follow to reduce risk during lifts.	Benefit outweighs cost/sacrifice.	Yes C 12.4
Professional judgement – Eliminate				
None identified.				
Professional judgement – Substitute				
None identified.				
Professional judgement – Engineered solution				
None identified.				
ALARP statement: Based on the assessment outcomes, use of the relevant tools appropriate to the decision type (i.e. Decision Type A; Section 2.3.4.2) and Woodside's criteria for demonstrating ALARP (Section 2.4.1), Woodside considers the adopted controls appropriate to manage potential impacts and risks associated with a release of unplanned solid hazardous and non-hazardous waste. As no reasonably practicable additional or alternative controls were identified that would further reduce the impacts and risks without disproportionate sacrifice, the impacts and risks are considered ALARP.				

Demonstration of acceptability
Acceptability statement: The risk assessment has determined that, given the adopted controls, accidental discharge of solid waste is unlikely to result in a potential consequence above localised, not significant to environmental receptors with no lasting effects. Further opportunities investigated to reduce the impacts and risks have been described above. The adopted controls are considered good oil field practice and industry best practice and meet legislative requirements (Marine Order 95). Relevant recovery plans, conservation advice and threat abatement plans have been considered during the impact assessment, and the Petroleum Activity is not considered to be inconsistent with the overall recovery objectives and actions of these plans and advice (refer to Section 6.8). Based on the assessment outcomes, use of the relevant tools appropriate to the decision type (i.e. Decision Type A; Section 2.3.4.2) and Woodside's criteria for demonstrating acceptability (Section 2.4.2), Woodside considers the adopted controls appropriate to manage the impacts and risks to a level that is broadly acceptable, and compliance with those controls demonstrates the EPOs are met.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

EPOs, EPSs and MC			
EPOs	***Controls***	***Performance standards***	***Measurement criteria***
EPO 12a Woodside will manage its activities to prevent material loss of solid hazardous and non-hazardous waste.	C 12.1 Comply with Marine Order 95 (Marine pollution prevention – garbage) as appropriate to vessel class, which prescribes matters necessary to give effect to Annex V of MARPOL, which prohibits the discharge of all garbage into the sea, except as provided otherwise.	PS 12.1.1 Project vessels comply with Marine Order 95 (Marine pollution prevention – garbage).	MC 12.1.1 Records demonstrate project vessels comply with Marine Order 95 (Marine pollution prevention – garbage) as appropriate to vessel class.
EPO 12b No release of solid hazardous or non-hazardous waste[44] to the marine environment.	C 12.2 Implement LWIV and support vessels waste management plan, which requires: • dedicated waste segregation bins • records of all waste to be disposed, treated or recycled • waste streams to be handled and managed according to their hazard and recyclability class.	PS 12.2.1 Hazardous and non-hazardous waste will be managed in accordance with the LWIV and support vessels waste management plan.	MC 12.2.1 Records demonstrate compliance with the vessel waste management plan.
	C 12.3 Recover lost equipment and waste and dropped objects where safe and practicable to do so. Consider: • risk to personnel to retrieve the object • whether the location of the object is in recoverable water depths • the object's proximity to subsea infrastructure • ability to recover the object (i.e. nature of object, lifting equipment).	PS 12.3.1 Waste, equipment and objects dropped or lost to the marine environment will be recovered where safe and practicable to do so.	MC 12.3.1 Records detail the recovery attempt consideration and status of any waste, equipment and objects dropped or lost to the marine environment.
	C 12.4 The vessel contractor has procedures for lifts, bulk transfers and cargo loading that require: • the security of loads to be checked before starting lifts • loads to be covered if there is a risk of loss of loose materials • lifting operations to be conducted using the PTW and JSA systems to manage the specific risks of that lift, including consideration of weather and sea state.	PS 12.4.1 All lifts conducted in accordance with applicable vessel contractor work procedures to limit the potential for dropped objects.	MC 12.4.1 Records show applicable vessel contractor work procedures are in place to limit the potential for dropped objects.

[44] *Waste as defined in the Woodside Offshore Facilities Waste Management Plan.*

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.7.6 Physical presence (unplanned): interactions with marine fauna

Context		
Project vessels – Section 3.6 Support operations – Section 3.7	Protected species – Section 4.6	Stakeholder consultation – Section 5

Risk evaluation summary

Source of impact	*Environmental value potentially impacted*						*Evaluation*						
	Marine sediment	Water quality	Air quality (incl odour)	Ecosystems/habitat	Species	Socioeconomic	Decision type	Consequence/impact	Likelihood	Risk rating	ALARP tools	Acceptability	Outcome
Accidental collision between project vessels and protected marine fauna within the Operational area					X		A	E	1	L	LCS GP	Broadly acceptable	EPO 13

Description of source of impact

The LWIV and support vessels operating in and around the Operational area may present a potential hazard to cetaceans (e.g. humpback whales) and other protected marine fauna, such as marine turtles and whale sharks. Vessel movements can result in collisions between the vessel (hull and propellers) and marine fauna, potentially resulting in superficial injury, serious injury that may affect life functions (e.g. movement and reproduction), and mortality.

The factors that contribute to the frequency and severity of impacts due to collisions vary greatly due to vessel type, vessel operation (specific activity, speed), physical environment (e.g. water depth), the type of animal potentially present and their behaviours.

Vessels used during the Petroleum Activity may include support vessels, with multiple vessels likely to be used to support the LWIV. Support vessels would typically be stationary or moving at low speeds when supporting the Petroleum Activity. Support vessels do not anchor within the Operational area during the activities due to water depth; therefore, vessels will use DP. During well intervention, the LWIV will remain largely stationary while on DP at the well location.

Consequence assessment

Environmental value(s) potentially impacted

Vessel disturbance is a key threat to some migratory and threatened species identified as occurring within the Operational area, including cetaceans and marine turtles. Relevant conservation actions outlined in these plans are listed in Section 6.8.

Marine mammals

Cetaceans are naturally inquisitive. Their reaction to the approach of a vessel varies. Some species remain motionless when near a vessel, while others are known to be curious and often approach ships that have stopped or are slow moving, although they generally do not approach and sometimes avoid faster moving ships (Richardson, et al., 1995). The Whale and Dolphin Conservation Society (2006) indicates some cetacean species, such as humpback whales, can detect and change course to avoid a vessel.

Collisions between vessels and marine mammals occur more frequently in areas where high vessel traffic and important habitat coincide (Whale and Dolphin Conservation Society, 2006). In Australia, most vessel strikes to known species involved humpback, southern right and sperm whales, in descending order (Peel, et al., 2016). No vessel strike collisions were reported on the northern coast of Australia (Peel, et al., 2016). The behaviour exhibited by

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

whales before vessel collision varies, with some reported as being asleep or unmoving before the collision (Peel, et al., 2016) and others displaying a 'last-second flight response' (Laist, et al., 2001).

The likelihood of a vessel or whale collision being lethal is influenced by vessel speed; the greater the speed at impact, the greater the risk of mortality (Jensen & Silber, 2004; Laist, et al., 2001). Vanderlaan & Taggart (2007) found the chance of lethal injury to a large whale because of a vessel strike increases from about 20% at 8.6 knots to 80% at 15 knots. According to the data of Vanderlaan & Taggart (2007), it is estimated the risk is less than 10% at a speed of four knots. Vessel/whale collisions at this speed are uncommon and, based on the US NOAA database (Jensen & Silber, 2004), there are only two known instances of collisions when the vessel was travelling at less than six knots. Both were from whale-watching vessels that were deliberately placed among whales.

The Operational area are about 43 km from the pygmy blue whale migration BIA and about 34 km from the humpback whale migration BIA. Individuals may transit through the Operational area and increased numbers may occur during whale migration periods (April to July northern migration, October to January southern migration for pygmy blue whales) and migrating humpback whales may be present between about May and November but aggregations are not expected. Given the absence of aggregations, the size of the BIA in total relative to the Operational area, duration of activities within the Operational area and the slow speeds at which vessels operate, collisions with cetaceans are considered highly unlikely.

Whale shark

Whale sharks are at risk from vessel strikes when feeding at the surface. Whale sharks may traverse offshore NWS waters, including the Operational area, during their migrations to and from Ningaloo Reef, and a BIA for foraging whale sharks overlaps the Operational area. However, given the main aggregation area for whale sharks is off the coast of Ningaloo (designated as a foraging BIA with high density prey), which is over 300 km from the Operational area, it is expected whale shark presence within the Operational area would not comprise significant numbers, and their presence would be transitory and of a short duration. There are no constraints preventing whale sharks from moving away from vessels to avoid injury (e.g. shallow water or shorelines). Given the absence of aggregations, the size of the BIA in total relative to the Operational area, duration of activities within the Operational area and the slow speeds at which vessels operate, collisions with whale sharks are considered highly unlikely.

Marine turtles

Turtles are also at risk from vessel strikes, particularly in shallow coastal foraging habitats and internesting areas where there are high numbers of recreational and commercial vessels (Commonwealth of Australia, 2017).

Considering the distance of the Operational area from the nearest nesting beaches (farther than 100 km), it is expected the presence of marine turtles would be very unlikely and only comprise individuals transiting the open, offshore waters for short periods. Given the slow speeds at which support vessels operate, collisions with transiting marine turtles are considered highly unlikely.

It is unlikely vessel movement associated with the Petroleum Activity will have a significant impact on marine turtle populations, given the low presence of transiting individuals and the low operating speed of the support vessels (generally less than eight knots or stationary, unless operating in an emergency).

Seabirds

There is potential for seabirds to be in flight while helicopters are landing or taking off from the LWIV; however, the noise of an approaching helicopter is expected to deter birds form the area. A wedge-tailed shearwater breeding BIA overlaps the Operational area (Figure 4-10); however, the presence of helicopters servicing the Petroleum Activity is not anticipated to impact the breeding activity, given the short duration of the activity and expected low number of helicopter trips required.

Cultural features and heritage values

Refer to Section 6.9 for an assessment of potential impacts to cultural features and heritage values from the Petroleum Activity. Related control measures that demonstrate that impacts are reduced to ALARP and are of an acceptable level have been captured in Section 6.9.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/ sacrifice (CS)[45]***	***Benefit in risk reduction[46]***	***Proportionality***	***Control adopted***
Legislation, codes and standards				
Implement EPBC Regulations 2025 Part 8 Division 8.1 Interacting with cetaceans, which includes the following[47]: • Vessels will not travel faster than 6 knots within 300 m of a cetacean (caution zone) and not approach closer than 100 m from a whale. • Vessels will not approach closer than 50 m for a dolphin or 100 m for a whale (except animals bow riding). • If the cetacean shows signs of being disturbed, support vessels will immediately withdraw from the caution zone at a constant speed of less than 6 knots.	F: Yes. CS: Minimal cost. Standard practice.	EPBC Regulations 2025 – Part 8 Division 8.1 Interacting with cetaceans includes requirements relating to the speed vessels can travel at within particular distances of cetaceans. Reducing the speed vessels travel can also reduce the likelihood of an unplanned interaction.	Legislative requirement – must be adopted.	Yes C 4.1
Good practice				
Vessels will not deliberately approach greater than 8 knots within 250 m of a whale shark and not allow the vessel to approach closer than 30 m of a whale shark.	F: Yes. CS: Minimal cost. Standard practice.	Implementing controls to reduce vessel speed around whale sharks can potentially reduce the likelihood of unplanned interaction.	Benefit outweighs cost/sacrifice.	Yes C 4.2
Vessels will not travel faster than 6 knots within 300 m of a turtle (caution zone). If the turtle shows signs of being disturbed, vessels will immediately withdraw from the caution zone at a constant speed of less than 6 knots[48].	F: Yes. CS: Minimal cost. Standard practice.	Implementing controls to reduce vessel speed around whale sharks can potentially reduce the likelihood of unplanned interaction.	Benefit outweighs cost/sacrifice.	Yes C 4.3

[45] Qualitative measure.

[46] Measured in terms of reduction of likelihood, consequence and current risk rating.

[47] For safety reasons, the distance requirements are not applied for a vessel holding station or with limited manoeuvrability, e.g. loading, back-loading, bunkering, close standby cover for overside working and emergency situations.

[48] For safety reasons, the distance requirements are not applied for a vessel holding station or with limited manoeuvrability, e.g. loading, back-loading, bunkering, close standby cover for overside working and emergency situations.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/ sacrifice (CS)[45]***	***Benefit in risk reduction[46]***	***Proportionality***	***Control adopted***
Professional judgement – Eliminate				
None identified.				
Professional judgement – Substitute				
Variation of the timing of the Petroleum Activity to avoid migration and foraging periods.	F: Yes. Avoidance of the migration period is technically feasible, although not considered to be reasonably practicable. CS: Significant cost and schedule delays in contracting a vessel for a specific timeframe.	Negligible reduction in consequence, given the duration and nature of the activity and receiving environment.	Disproportionate – cost/sacrifice outweighs benefit to be gained.	No
Professional judgement – Engineered solution				
None identified.				
ALARP statement: Based on the assessment outcomes, use of the relevant tools appropriate to the decision type (i.e. Decision Type A; Section 2.3.4.2) and Woodside's criteria for demonstrating ALARP (Section 2.4.1), Woodside considers the adopted controls appropriate to manage potential impacts and risks associated with unplanned interaction with marine fauna. As no reasonably practicable additional or alternative controls were identified that would further reduce the impacts and risks without disproportionate sacrifice, the impacts and risks are considered ALARP.				

Demonstration of acceptability
Acceptability statement: The risk assessment has determined that, given the adopted controls, unplanned interaction with marine fauna is unlikely to result in a potential consequence greater than a localised and low-level impact on environmental features of low significance. Further opportunities investigated to reduce the impacts and risks have been described above. The adopted controls are considered good oil field practice or industry best practice and meet the requirements of Part 8 (Division 8.1) of the EPBC Regulations. Relevant recovery plans and conservation advice have been considered during the impact assessment, particularly the Conservation Management Plan for the Blue Whale: A Recovery Plan under the EPBC Act 1999 2015–2025 (Commonwealth of Australia, 2015a) and the Recovery Plan for Marine Turtles in Australia 2017–2027 (Commonwealth of Australia, 2017). The residual risk of vessel collision with marine fauna is not inconsistent with the relevant objectives and actions of any applicable recovery plans or threat abatement plans (refer to Section 6.8). Based on the assessment outcomes, use of the relevant tools appropriate to the decision type (i.e. Decision Type A; Section 2.3.4.2) and Woodside's criteria for demonstrating acceptability (Section 2.4.2), Woodside considers the adopted controls appropriate to manage the impacts and risks to a level that is broadly acceptable, and compliance with those controls demonstrates the EPOs are met.

EPOs, EPSs and MC			
EPOs	***Controls***	***Performance standards***	***Measurement criteria***
EPO 13 No injury or mortality to EPBC Act and WA	C 4.1 Implement EPBC Regulations 2025 Part 8 Division 8.1 Interacting with	PS 4.1.1 Refer to Section 6.6.3.	MC 4.1.1 Refer to Section 6.6.3.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

EPOs, EPSs and MC			
EPOs	***Controls***	***Performance standards***	***Measurement criteria***
Biodiversity Conservation Act listed marine fauna as a result of noise generated by the Petroleum Activity.	cetaceans, which includes the following[49]: • Vessels will not travel faster than 6 knots within 300 m of a cetacean (caution zone) and not approach closer than 100 m from a whale. • Vessels will not approach closer than 50 m for a dolphin or 100 m for a whale (except animals bow riding). • If the cetacean shows signs of being disturbed, support vessels will immediately withdraw from the caution zone at a constant speed of less than 6 knots.		
	C 4.2 Vessels will not deliberately approach greater than 8 knots within 250 m of a whale shark and not allow the vessel to approach closer than 30 m of a whale shark.	PS 4.2.1 Refer to Section 6.6.3.	MC 4.2.1 Refer to Section 6.6.3.
	C 4.3 Vessels will not travel faster than 6 knots within 300 m of a turtle (caution zone). If the turtle shows signs of being disturbed, vessels will immediately withdraw from the caution zone at a constant speed of less than 6 knots.[50]	PS 4.3.1 Refer to Section 6.6.3.	MC 4.3.1 Refer to Section 6.6.3.

[49] For safety reasons, the distance requirements are not applied for a vessel holding station or with limited manoeuvrability, e.g. loading, back-loading, bunkering, close standby cover for overside working and emergency situations.

[50] For safety reasons, the distance requirements are not applied for a vessel holding station or with limited manoeuvrability, e.g. loading, back-loading, bunkering, close standby cover for overside working and emergency situations.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.7.7 Physical presence (unplanned): introduction of invasive marine species

Context		
Project vessels – Section 3.6	Physical environment – Section 4.4 Habitats and biological communities – Section 4.5 Protected species – Section 4.6	Stakeholder consultation – Section 5

Risk evaluation summary

Source of impact	*Environmental value potentially impacted*						*Evaluation*						
	Marine sediment	Water quality	Air quality (incl odour)	Ecosystems/habitat	Species	Socioeconomic	Decision type	Consequence/impact	Likelihood	Risk rating	ALARP tools	Acceptability	Outcome
Introduction and establishment of invasive marine species (IMS)				X	X	X	A	D	0	L	LCS GP PJ	Broadly acceptable	EPO 14

Description of source of impact

During the Petroleum Activity, vessels and Immersible equipment have the potential to introduce IMS to the Operational area.

Vessels will be transiting to and from the Operational area, potentially including traffic mobilising from international waters. There is the potential for project vessels to transfer IMS from international waters, Australian waters or coastal waters into the Operational area.

All vessels are subject to some level of marine fouling whereby organisms attach to the vessel hull. This could particularly occur in areas where organisms can find a good attachment surface (e.g. seams, strainers and unpainted surfaces) or where turbulence is lowest (e.g. niches, sea chests), although commercial vessels typically maintain antifouling coatings (AFC) to reduce the build-up of fouling organisms. IMS could be present as biofouling on immersible equipment such as ROVs, and could be translocated to the Operational area and transferred directly to the seafloor or subsea structures where they could establish. Organisms can also be drawn into ballast tanks during onboarding of ballast water as cargo is loaded or to balance vessels under load.

The support vessels have the potential to introduce IMS to the Operational area through marine biofouling (containing IMS), as well as within high-risk ballast water exchange. There is also a remote potential that cross contamination between vessels can also occur (such as IMS translocated between project vessels) during times when vessels need to be alongside each other.

Consequence assessment

Environmental value(s) potentially impacted

IMS are a subset of non-indigenous marine species (NIMS) that have been introduced into a region beyond their natural biogeographic range, resulting in impacts to sociocultural, human health, economic and environmental values. NIMS are species that have the ability to survive, reproduce and establish founder populations. However, not all NIMS introduced into an area will thrive or cause demonstrable impacts; most NIMS around the world are relatively benign and few have spread widely beyond sheltered ports and harbours. NIMS are only considered IMS when they result in impacts to environmental values or have sociocultural, economic or human health impacts.

Once introduced, IMS may prey on local species that had previously not been subject to this kind of predation and therefore not have evolved protective measures against the attack. They may outcompete indigenous species for food, space or light and can also interbreed with local species, creating hybrids such that the endemic species is lost. These changes to the local marine environment result in changes to the natural ecosystem.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

IMS have also proven economically damaging to areas where they have been introduced and established. Such impacts include direct damage to assets (fouling of vessel hulls and infrastructure) and depletion of commercially harvested marine life (e.g. shellfish stocks). IMS have proven particularly difficult to eradicate from areas once established. If the introduction is detected early, eradication may be effective but is likely to be expensive, disruptive and, depending on the method of eradication, harmful to other local marine life.

Potential IMS have historically been introduced and translocated around Australia by natural and human means, including marine fouling and ballast water. Potential IMS vary from one region to another depending on various environmental factors such as water temperature, salinity, nutrient levels and habitat type, which dictate their survival and invasive capabilities. IMS typically require hard substrate in the photic zone, requiring shallow waters to become established. Highly-disturbed, shallow-water environments such as shallow coastal waters, ports and marinas are more susceptible to IMS colonisation, whereas IMS are generally unable to successfully establish in deepwater ecosystems and open-water environments where the rate of dilution and the degree of dispersal are high (Williamson & Fitter, 1996; Paulay et al., 2002; Geiling, 2014).

Despite the potential high consequence of a marine pest establishing within a high value environment as a result of introduction, unlike coastal or sheltered nearshore waters, the offshore open waters of the Operational area are not conducive to IMS settling and establishing, due to the lack of light or suitable habitat to sustain growth or survival.

Project vessels and Immersible equipment needed for the Petroleum Activity have the potential to introduce IMS into the Operational area. Due to the water depths (about 80 m to 130 m) and lack of submerged banks and shoals within the Operational area and surrounding waters, settlement and establishment of IMS is not considered credible. Furthermore, the likelihood is considered highly unlikely, given the open water environment of the Operational area, distance from shorelines (>100 km) and critical habitat, and the control measures to be implemented.

In support of Woodside's assessment of the impacts and risks of IMS introduction associated with the Petroleum Activity, Table 6-13 presents a risk and impact evaluation of the different aspects of IMS translocation.

Table 6-13: Credibility, consequence and likelihood of introducing invasive marine species

IMS introduction location	*Credibility of Introduction*	*Consequence of Introduction*	*Likelihood*
Transfer of IMS from infected vessel to Operational area and establishment on the seafloor or subsea infrastructure	***Not credible*** The Operational area are in offshore, open waters away from shorelines, hard substrate and critical habitat. Therefore, conditions are not conducive to the settlement or establishment of IMS.		
Transfer of IMS from an infected vessel to, and subsequent establishment on, project infrastructure	**Credible** There is potential to transfer marine pests between project vessels within the Operational area.	**Environment – not credible** The translocation of IMS from a colonised project vessel to another vessel via natural dispersion is not credible. This is because of the open-water environment of the Operational area and distance from shorelines and critical habitat. On this basis there is no credible environmental risk. **Reputation – D** If IMS were to establish on a project vessel from another colonised vessel, this could potentially impact the vessel operationally through the fouling of intakes, and potentially cause the infected vessels to be quarantined and requiring costly cleaning. Such introduction would be expected to have minor	**Remote (0)** Interactions between project vessels will be limited during the Petroleum Activity, with minimum 500 m temporary exclusion zones being adhered to around the Petroleum Activity, and interactions limited to short periods of time alongside (as in, during backloading activities). There is also no direct contact (in other words, they are not tied up alongside) during these activities. Spread of marine pests via ballast water or spawning in these open-ocean environments is also considered remote.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

		impact to Woodside's reputation, particularly with Woodside's contractors, and may impact future proposals.	
Transfer between project vessels and from project vessels to other marine environments beyond the Operational area.	**Not credible** This risk is considered so remote it is not credible for the purposes of the Petroleum Activity. As described above, the transfer of IMS between project vessels was already considered remote, given the offshore open-ocean environment. Project vessels will be in an offshore, open-ocean, deep environment, where IMS survival is implausible. Furthermore, this marine pest once transferred would need to survive on a new vessel with good hygiene (in other words, has been through Woodside's risk assessment process) and survive the transport back from the Operational area to shore. In the event it was to survive this trip, it would then need conditions conducive to establishing a viable population in the nearshore waters to which the infected vessel travels.		

Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/ sacrifice (CS)[51]***	***Benefit in risk reduction[52]***	***Proportionality***	***Control adopted***
Legislation, codes and standards				
Vessels will manage their biosecurity risk associated with biofouling, as outlined in the Australian Biofouling Management Requirements.	F: Yes. CS: Minimal cost. Standard practice.	Reduces the likelihood of transferring marine pests between project vessels within the Operational area. No change in consequence would occur.	Legislative requirement – must be adopted.	Yes C 14.1
Project vessels will manage their ballast water using one of the approved ballast water management options, as outlined in the Australian Ballast Water Management Requirements.	F: Yes. CS: Minimal cost. Standard practice.	Reduces the likelihood of transferring marine pests between project vessels within the Operational area. No change in consequence would occur.	Legislative requirement – must be adopted.	Yes C 14.2
Good practice				
Apply Woodside's IMS risk assessment process to project vessels and relevant immersible equipment that enter the Operational area unless exempt.	F: Yes. CS: Minimal cost. Good practice implemented across all Woodside operations.	The IMS risk assessment process will identify potential risks with additional controls implemented accordingly. In doing so, the likelihood of transfer of IMS between project vessels within the Operational area is reduced. No change in consequence would occur.	Benefits outweigh cost/sacrifice.	Yes C 14.3

[51] *Qualitative measure.*

[52] *Measured in terms of reduction of likelihood, consequence and current risk rating.*

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/ sacrifice (CS)[51]***	***Benefit in risk reduction[52]***	***Proportionality***	***Control adopted***
Professional judgement – Eliminate				
Do not discharge ballast water during the Petroleum Activity.	F: Yes however ballast water discharges are critical for maintaining vessel stability. Given the nature of the Petroleum Activity, use of ballast water (including potential discharge) is considered a safety-critical requirement. CS: Not assessed due to safety critical element	Elimination of the potential introduction of IMS, if present within the ballast water.	Legislative requirements (C16.1) are required to be implemented to manage potential ballast water risk to low. Noting the safety critical element and the adopted control (C16.1) this is disproportionate to the risk reduction.	No
Professional judgement – Substitute				
Source project vessels based in Australia only.	F: Potentially. Limiting activities to only use local project vessels could potentially pose a significant risk in terms of time and duration of sourcing a vessel, as well as the ability of the local vessels to perform the required tasks. For example, there are limited installation vessels based in Australian waters. While the project will attempt to source project vessels locally it is not always possible. Availability cannot always be guaranteed when considered competing Oil and Gas activities in the region. In addition, sourcing Australian based vessels only will cause increases in cost due to pressures of vessel availability. CS: Significant cost and schedule impacts due to restrictions of vessel hire opportunities.	Sourcing vessels from within Australian will reduce the likelihood of IMS from outside Australian waters, however, it does not reduce the likelihood of introduction of species native to Australia but alien to the Operational Area and NWMR, or of IMS that have established elsewhere in Australia. The consequence is unchanged.	Disproportionate Sourcing vessels from Australian waters may result in a reduction in the likelihood of IMS introduction to the Operational Area; however, the potential cost of implementing this control is grossly disproportionate to the minor environmental gain (or reducing an already remote likelihood of IMS introduction) potentially achieved by using only Australian based vessels, consequently this risk is considered not reasonably practicable.	No
Inspect all vessels for IMS.	F: Yes. Approach to inspect vessels could be a feasible option. CS: Significant cost and schedule impacts. In addition, Woodside's IMS	Inspecting all vessels for IMS would reduce the likelihood of IMS being introduced to the Operational area. However, this reduction is	Disproportionate – cost/sacrifice outweighs benefit to be gained.	No

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/ sacrifice (CS)[51]***	***Benefit in risk reduction[52]***	***Proportionality***	***Control adopted***
	risk assessment process is seen to be more cost effective as this control allows Woodside to manage the introduction of marine pests through biofouling, while targeting its efforts and resources to areas of greatest concern.	unlikely to be significant, given the other control measures implemented. No change in consequence would occur.		
Professional judgement – Engineered solution				
None identified.				
ALARP statement: Based on the assessment outcomes, use of the relevant tools appropriate to the decision type (i.e. Decision Type A; Section 2.3.4.2) and Woodside's criteria for demonstrating ALARP (Section 2.4.1), Woodside considers the adopted controls appropriate to manage potential impacts and risks associated with introduction of IMS. As no reasonably practicable additional or alternative controls were identified that would further reduce the risks and impacts without disproportionate sacrifice, the impacts and risks are considered ALARP.				

Demonstration of acceptability
Acceptability statement: The risk assessment has determined that, given the adopted controls, the accidental introduction and establishment of IMS through ballast water or biofouling on vessels represents a low residual risk that has a remote likelihood of resulting in a potential impact greater than a localised and low-level impact on environmental features or areas of low significance Further opportunities to reduce the impacts and risks have been investigated above. Based on the assessment outcomes, use of the relevant tools appropriate to the decision type (i.e. Decision Type A; Section 2.3.4.2) and Woodside's criteria for demonstrating acceptability (Section 2.4.2), Woodside considers the adopted controls appropriate to manage the impacts and risks to a level that is broadly acceptable, and compliance with those controls demonstrates the EPOs are met.

EPOs, EPSs and MC			
EPOs	***Controls***	***Performance standards***	***Measurement criteria***
EPO 14 No introduction of IMS into the Operational area as a result of the Petroleum Activity.	C 14.1 Project vessels will manage their ballast water using one of the approved ballast water management options, as outlined in the Australian Ballast Water Management Requirements. This applies to all Vessels that will enter the Operational Area, including those carrying out activities outside of Australian Territorial Seas (>12nm).	PS 14.1.1 Compliance with Australian Ballast Water Management Requirements (as defined under the *Biosecurity Act*) (aligned with the International Convention for the Control and Management of Ships' Ballast Water and Sediments) to prevent the introduction of IMS.	MC 14.1.1 Ballast Water Records System maintained by vessels that verifies compliance against Australian Ballast Water Management Requirements.
	C 14.2 Project vessels will manage their biosecurity risk associated with biofouling, as outlined in the Australian Biofouling Management Requirements.	PS 14.2.1 Compliance with Australian Biofouling Management Requirements (as defined under the *Biosecurity Act*)	MC 14.2.1 Records of implementation of biofouling management measure and pre-arrival reporting.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

EPOs, EPSs and MC			
EPOs	***Controls***	***Performance standards***	***Measurement criteria***
		to prevent the introduction of IMS.	
	MC 14.3 Apply Woodside's IMS risk assessment process to project vessels and relevant immersible equipment that enter the Operational; area unless exempt (Section 7.2.2) Based on the outcomes of each IMS risk assessment, management measures commensurate with the risk will be implemented to minimise the likelihood of IMS being introduced.	PS 14.3.1 Before entering the Operational Area, vessels, are determined to be low[53] risk of introducing IMS of concern.	MC 14.3.1 Records of IMS risk assessments maintained for all project vessels and relevant immersible equipment entering the Operational Area or IMS management area to undertake the Petroleum Activity.
		PS 14.3.2 In accordance with Woodside's process, the IMS risk assessments will be undertaken by an authorised Environment Adviser who has completed relevant Woodside IMS training or by a qualified and experienced IMS inspector.	MC 14.3.2 Records confirm the IMS risk assessments were undertaken by an Environment Adviser or IMS inspector (as relevant).

[53] Low risk of introducing IMS of concern is defined as either no additional management measures required or, management measures have been applied to reduce the risk.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.7.8 Physical presence (unplanned): interaction with live infrastructure

Context		
Relevant Activities Subsea intervention activities – Section 3.5 Project vessels – Section 3.6 Support operations – Section 3.7	**Existing Environment** Regional Context – Section 4.2	**Consultation** Consultation – Section 5

Impact evaluation summary

Source of impact	Environmental value potentially impacted						Evaluation						
	Marine Sediment	Water Quality	Air Quality (incl Odour)	Ecosystems/ Habitat	Species	Socio-economic	Decision Type	Consequence/ Impact	Likelihood	Risk Rating	ALARP Tools	Acceptability	Outcome
Interaction with live infrastructure from dropped objects						X	A	E	1	L	LCS GP	Broadly Acceptable	EPO 15

Description of source of impact

As detailed in Section 4.9.6 there is existing live subsea infrastructure in the Operational Area, which includes a number of tiebacks to the Okha FPSO facility. During the Petroleum Activity, activities may be conducted that present a risk of dropped objects over the nearby live infrastructure.

There is the potential for objects to be dropped overboard from the project vessels over the live infrastructure. Objects that have been dropped during previous offshore activities include small numbers of personal protective gear (e.g. glasses, gloves, hard hats), small tools (e.g. spanners) hardware fixtures (e.g. riser hose clamp) and drill equipment (e.g. drill pipe); however, there is also potential for larger equipment to also be dropped during the activity, particularly during recovery of infrastructure from the seabed. For the Petroleum Activity, the largest dropped object would be a subsea XT during replacement. The spatial extent in which dropped objects can occur is restricted to the Operational Area.

Impact assessment

Environmental value(s) potentially impacted

Interactions with other marine users

In the unlikely event of an object being dropped on live infrastructure there is potential impacts to the infrastructure. Within the Operational Area, there is the infrastructure associated with the tiebacks to the Okha FPSO facility owned by Woodside.

If interactions with live infrastructure were to occur, Woodside would notify the relevant operations team in accordance with the SIMOPS plan. This would trigger responses to assess and respond to any damage caused in accordance with the relevant operations EP for the live infrastructure. Under Regulation 56 of the Environment Regulations, a titleholder may refer NOPSEMA to information previously given to NOPSEMA for another purpose under the OPGGS Act, the Environment Regulations or any other regulations made under the Act, to comply with a requirement on the titleholder under the Environment Regulations to give NOPSEMA information or include information in a document. In accordance with Regulation 56, NOPSEMA is referred to the relevant operations EPs72 submitted by the Operators of the live infrastructure, and accepted by NOPSEMA, for the detail of the Operators' assessment and response in such a scenario. Potential impacts therefore include time and costs associated with inspecting the infrastructure and time and costs associated with any associated repair, which are expected to be slight and short-term in nature.

Potential subsequent loss of containment

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

In the unlikely event of an object being dropped on live infrastructure, and in the further unlikely event of a severe interaction with the infrastructure, there is a possibility that live infrastructure could be ruptured releasing hydrocarbons into the marine environment in such a scenario. In accordance with Regulation 56, NOPSEMA is referred to the relevant operations EPs submitted by the Operators of the live infrastructure, and accepted by NOPSEMA, for the detail of potential impacts, receptors and the extent of the environment that may be affected in such a scenario, being:

- Okha FPSO Facility Operations Environment Plan, Section 6.7.5 (NOPSEMA Doc A1244148, https://docs.nopsema.gov.au/A1244148)

This EP addresses the risks and impacts (interaction with live infrastructure) that arise from the activities under this EP (interaction from dropped objects). This EP also contains controls to prevent such an event from occurring that are within the operational control of this EP. The maintenance and incident response associated with the live infrastructure and/or loss of containment from the live infrastructure is not within the operational control of this EP. As detailed below, the risks and impacts of the activities under this EP are managed to ALARP and an acceptable level by implementing the SIMOPS plan and notifying the relevant Operators in the instance of an interaction with live infrastructure to allow the relevant Operator's detailed response strategies under the relevant operations EPs to be triggered, if required. In the event of a loss of containment caused by an interaction with live infrastructure Woodside will follow direction from the relevant Operator and will respond as per the relevant Operator's requirements. In accordance with Regulation 56, NOPSEMA is referred to the relevant operations EPs submitted by the Operators of. the live infrastructure, and accepted by NOPSEMA, for the detail of the operational control, maintenance and incident response associated with the live infrastructure and/or loss of containment from the live infrastructure

Summary of Potential Impacts to environmental value(s)

Given the adopted controls, it is considered that an interaction with live infrastructure due to a dropped object or anchor drag, were it to occur, will not result in a potential impact greater than localised and low level (i.e. Environment Impact – E).

Demonstration of ALARP				
Control considered	**Control feasibility (F) and cost/sacrifice (CS)[54]**	**Benefit in risk reduction[55]**	**Proportionality**	**Control adopted**
Legislation, codes and standards				
No additional controls identified				
Good practice				
Recover lost equipment and waste and dropped objects where safe and practicable to do so. Consider: • risk to personnel to retrieve the object • whether the location of the object is in recoverable water depths • the object's proximity to subsea infrastructure • ability to recover the object (i.e. nature of object, lifting equipment).	F: Yes. However, it may not always be practicable. Assessed on a case by case basis. CS: Minimal cost. Standard practice.	Potentially reduces consequence by recovering the object or waste container from the environment.	Benefit outweighs cost/sacrifice.	Yes C 12.3

[54] *Qualitative measure.*

[55] *Measured in terms of reduction of likelihood, consequence and current risk rating.*

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Demonstration of ALARP				
Control considered	**Control feasibility (F) and cost/sacrifice (CS)[54]**	**Benefit in risk reduction[55]**	**Proportionality**	**Control adopted**
The vessel contractor has procedures for lifts, bulk transfers and cargo loading that require: • the security of loads to be checked before starting lifts • loads to be covered if there is a risk of loss of loose materials • lifting operations to be conducted using the PTW and JSA systems to manage the specific risks of that lift, including consideration of weather and sea state.	F: Yes. CS: Minimal cost. Standard practice.	Reduces the likelihood of a release to the environment by providing procedures to follow to reduce risk during lifts.	Benefit outweighs cost/sacrifice.	Yes C 12.4
Professional judgement – Eliminate				
None identified.				
Professional judgement – Substitute				
None identified.				
Professional judgement – Engineered solution				
None identified.				
ALARP statement: Based on the assessment outcomes, use of the relevant tools appropriate to the decision type (i.e. Decision Type A; Section 2.3.4.2.1) and Woodside's criteria for demonstrating ALARP (Section 2.4.1), Woodside considers the adopted controls appropriate to manage potential impacts and risks associated with a release of unplanned solid hazardous and non-hazardous waste. As no reasonably practicable additional or alternative controls were identified that would further reduce the impacts and risks without disproportionate sacrifice, the impacts and risks are considered ALARP.				

Demonstration of acceptability
Acceptability statement: The impact assessment has determined that disturbance to seabed from dropped objects represents a low current risk rating and is unlikely to result in a risk consequence greater than slight. The adopted controls are considered industry good practice. Relevant recovery plans, conservation advice and threat abatement plans have been considered during the impact assessment, and the Petroleum Activity is not considered to be inconsistent with the overall recovery objectives and actions of these plans and advice (refer to Section 6.8). Based on the assessment outcomes, use of the relevant tools appropriate to the decision type (i.e. Decision Type A; Section 2.3.4.2.1) and Woodside's criteria for demonstrating acceptability (Section 2.4.2), Woodside considers the adopted controls appropriate to manage the impacts and risks to a level that is broadly acceptable, and compliance with those controls demonstrates the EPOs are met.

EPOs, EPSs and MC			
EPOs	***Controls***	***Performance standards***	***Measurement criteria***
EPO 15 No interactions with live infrastructure resulting in loss of	C 12.3 Refer section 6.7.5	PS 12.3.1 Refer section 6.7.5	MC 12.3.1 Refer section 6.7.5
	C 12.4	PS 12.4.1	MC 12.4.1

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

EPOs, EPSs and MC			
EPOs	***Controls***	***Performance standards***	***Measurement criteria***
hydrocarbons to the marine environment during the Petroleum Activity	Refer section 6.7.5	Refer section 6.7.5	Refer section 6.7.5

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.8 Recovery plan and threat abatement assessment

This section describes the assessment Woodside has undertaken to demonstrate the Petroleum Activity is not inconsistent with any relevant recovery plans or threat abatement plans. For the purposes of this assessment, the relevant Part 13 statutory instruments (recovery plans and threat abatement plans) are:

- Recovery Plan for Marine Turtles in Australia 2017–2027 (Commonwealth of Australia, 2017)
- Conservation Management Plan for the Blue Whale 2015–2025 (Commonwealth of Australia, 2015a)
- Recovery Plan for the Grey Nurse Shark (*Carcharias taurus*) 2014 (Commonwealth of Australia, 2014)
- Sawfish and River Sharks Multispecies Recovery Plan (Commonwealth of Australia, 2015b)
- Threat Abatement Plan for the impacts of marine debris on the vertebrate wildlife of Australia's coasts and oceans 2018 (Commonwealth of Australia, 2018)
- National Recovery Plan for the Southern Right Whale (DCCEEW, 2024c).

Table 6-14 lists the objectives and (where relevant) the action areas of these plans, and describes whether these objectives and action areas apply to government, the titleholder and the Petroleum Activity. For those objectives and action areas applicable to the Petroleum Activity, the relevant actions of each plan have been identified, and an evaluation has been conducted as to whether impacts and risks resulting from the Petroleum Activity are clearly inconsistent with that action or not. The results are presented in Table 6-15 to Table 6-19.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 6-14: Identification of applicability of recovery plan and threat abatement plan objectives and action areas

EPBC Act Part 13 statutory instrument	Applicable to:		
	Government	***Titleholder***	***Petroleum activity***
Recovery Plan for Marine Turtles in Australia			
Long-term recovery objective: Minimise anthropogenic threats to allow the conservation status of marine turtles to improve so they can be removed from the EPBC Act threatened species list	Y	Y	Y
Interim recovery objectives			
Current levels of legal and management protection for marine turtle species are maintained or improved, both domestically and throughout the migratory range of Australia's marine turtles	Y		
The management of marine turtles is supported	Y		
Anthropogenic threats are demonstrably minimised	Y	Y	Y
Trends in nesting numbers at index beaches and population demographics at important foraging grounds are described	Y	Y	
Action areas			
A. Assessing and addressing threats			
A1. Maintain and improve efficacy of legal and management protection	Y		
A2. Adaptatively manage turtle stocks to reduce risk and build resilience to climate change and variability Continue to meet Australia's international commitments to address the causes of climate change	Y	Y	
A3. Reduce the impacts of marine debris	Y	Y	
A4. Minimise chemical and terrestrial discharge	Y	Y	
A5. Address international take within and outside Australia's jurisdiction	Y		
A6. Reduce impacts from terrestrial predation	Y		
A7. Reduce international and domestic fisheries bycatch	Y		
A8. Minimise light pollution	Y	Y	Y
A9. Address the impacts of coastal development/infrastructure and dredging and trawling	Y	Y	
A10. Maintain and improve sustainable Indigenous management of marine turtles	Y		

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

EPBC Act Part 13 statutory instrument	Applicable to:		
	Government	***Titleholder***	***Petroleum activity***
B. Enabling and measuring recovery			
B1. Determine trends in index beaches	Y	Y	
B2. Understand population demographics at key foraging grounds	Y		
B3. Address information gaps to better facilitate the recovery of marine turtle stocks	Y	Y	Y
Blue Whale Conservation Management Plan			
Long-term recovery objective: Minimise anthropogenic threats to allow their conservation status to improve so they can be removed from the EPBC Act threatened species list	Y	Y	Y
Interim recovery objectives			
The conservation status of blue whale populations is assessed using efficient and robust methodology	Y		
The spatial and temporal distribution, identification of biologically important areas, and population structure of blue whales in Australian waters is described	Y	Y	Y
Current levels of legal and management protection for blue whales are maintained or improved and an appropriate adaptive management regime is in place	Y		
Anthropogenic threats are demonstrably minimised	Y	Y	Y
Action Areas			
A. Assessing and addressing threats			
A.1: Maintain and improve existing legal and management protection	Y		
A.2: Assess and address anthropogenic noise	Y	Y	Y
A.3: Understand impacts of climate variability and change	Y	Y	Y
A.4: Minimise vessel collisions	Y	Y	Y
B. Enabling and measuring recovery			
B.1: Measure and monitor population recovery	Y		
B.2: Investigate population structure	Y		
B.3: Describe spatial and temporal distribution and define biologically important habitat	Y	Y	Y

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

EPBC Act Part 13 statutory instrument	Applicable to:		
	Government	***Titleholder***	***Petroleum activity***
Grey Nurse Shark Recovery Plan			
Overarching objective: To assist the recovery of the grey nurse shark in the wild, throughout its range in Australian waters, with a view to: • improving the population status, leading to future removal of the grey nurse shark from the threatened species list of the EPBC Act • ensuring anthropogenic activities do not hinder the recovery of the grey nurse shark in the near future, or impact on the conservation status of the species in the future	Y	Y	Y
Specific objectives			
Develop and apply quantitative monitoring of the population status (distribution and abundance) and potential recovery of the grey nurse shark in Australian waters	Y		
Quantify and reduce the impact of commercial fishing on the grey nurse shark through incidental (accidental and/or illegal) take, throughout its range	Y		
Quantify and reduce the impact of recreational fishing on the grey nurse shark through incidental (accidental and/or illegal) take, throughout its range	Y		
Where practicable, minimise the impact of shark control activities on the grey nurse shark	Y		
Investigate and manage the impact of ecotourism on the grey nurse shark	Y		
Manage the impact of aquarium collection on the grey nurse shark	Y		
Improve understanding of the threat of pollution and disease to the grey nurse shark	Y	Y	Y
Continue to identify and protect habitat critical to the survival of the grey nurse shark and reduce the impact of threatening processes within these areas	Y	Y	
Continue to develop and implement research programs to support the conservation of the grey nurse shark	Y	Y	
Promote community education and awareness in relation to grey nurse shark conservation and management	Y		
Sawfish and River Sharks Recovery Plan			
Primary objective: To assist the recovery of sawfish and river sharks in Australian waters with a view to: • improving the population status leading to the removal of the sawfish and river shark species from the threatened species list of the EPBC Act	Y	Y	Y

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

EPBC Act Part 13 statutory instrument	Applicable to:		
	Government	***Titleholder***	***Petroleum activity***
• ensuring anthropogenic activities do not hinder recovery in the near future, or impact on the conservation status of the species in the future			
Specific objectives			
Reduce and, where possible, eliminate adverse impacts of commercial fishing on sawfish and river shark species	Y		
Reduce and, where possible, eliminate adverse impacts of recreational fishing on sawfish and river shark species	Y		
Reduce and, where possible, eliminate adverse impacts of Indigenous fishing on sawfish and river shark species	Y		
Reduce and, where possible, eliminate the impact of illegal, unregulated and unreported fishing on sawfish and river shark species	Y		
Reduce and, where possible, eliminate adverse impacts of habitat degradation and modification on sawfish and river shark species	Y	Y	Y
Reduce and, where possible, eliminate any adverse impacts of marine debris on sawfish and river shark species, noting the linkages with the 'Threat Abatement Plan for the impact of marine debris on vertebrate marine life'	Y	Y	Y
Reduce and, where possible, eliminate any adverse impacts of collection for public aquaria on sawfish and river shark species	Y		
Improve the information base to allow the development of a quantitative framework to assess the recovery of, and inform management options for, sawfish and river shark species	Y		
Develop research programs to assist conservation of sawfish and river shark species	Y	Y	
Improve community understanding and awareness in relation to sawfish and river shark conservation and management	Y		
Threat Abatement Plan for the impacts of marine debris on the vertebrate wildlife of Australia's coasts and oceans			
Objectives			
Contribute to long-term prevention of the incidence of marine debris	Y	Y	
Understand the scale of impacts from marine plastic and microplastic on key species, ecological communities and locations	Y	Y	Y
Remove existing marine debris	Y		
Monitor the quantities, origins, types and hazardous chemical contaminants of marine debris, and assess the effectiveness of management arrangements for reducing marine debris	Y		

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

EPBC Act Part 13 statutory instrument	Applicable to:		
	Government	***Titleholder***	***Petroleum activity***
Increase public understanding of the causes and impacts of harmful marine debris, including microplastic and hazardous chemical contaminants, to bring about behaviour change	Y		
National Recovery Plan for the Southern Right Whale			
Long-term recovery objective: Increase population to a level that the conservation status has improved and the species no longer qualifies for listing as threatened under any of the EPBC Act listing criteria	Y	Y	Y
Interim recovery objectives			
Current levels of Commonwealth and State legislative and management protection for southern right whales are implemented, maintained, or improved, so threats continue to be managed and reduced over the life of the plan	Y	Y	
Anthropogenic threats are managed consistent with ecologically sustainable principles to facilitate recovery of southern right whales	Y	Y	Y
Population dynamics, including demographics, distribution, residency and coastal movement across the species range, are monitored and quantified using robust, standardised, best-practice methodology to assess population recovery	Y		
The population structure in Australian waters is clearly characterised to evaluate the degree to which the western and eastern populations are separate and inform the degree of connectivity with other southern right whale populations	Y		
Capability of First Nation Australians, research, citizen science and general community groups is improved to assist in addressing recovery actions of southern right whales in Australia	Y		
Action areas			
<u>A. Assessing and addressing threats</u>			
A1: Maintain, implement and improve efficacy of current legislative and management protection for southern right whales	Y		
A2: Address habitat degradation impacts from coastal and offshore marine infrastructure developments within the species' range	Y	Y	
A3: Understand impacts of climate variability and anthropogenic climate change on the species biology and population recovery	Y	Y	
A4: Manage and mitigate the threat of entanglements from commercial active or discarded fishing gear throughout the species' range in Australian waters	Y		
A5: Assess, manage and mitigate impacts from anthropogenic underwater noise	Y	Y	Y
A6: Manage, minimise and mitigate the threat of vessel strike	Y	Y	Y

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

EPBC Act Part 13 statutory instrument	Applicable to:		
	Government	***Titleholder***	***Petroleum activity***
<u>B. Enabling and measuring recovery</u>			
B1: Measure and monitor population demographics and recovery	Y		
B2: Characterise population structure	Y		
B3: Determine migratory paths and offshore distribution	Y		
B4: Improve capability of First Nation Australians, research, citizen science and general community groups to assist with management of southern right whales	Y		

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 6-15: Assessment against relevant actions of the Recovery Plan for Marine Turtles in Australia

Part 13 statutory instrument	Relevant action areas/objectives	Relevant actions	Evaluation	Relevant EPO and EPS
Recovery Plan for Marine Turtles in Australia	Action Area A3: Reduce the impacts from marine debris.	Action: Support implementation of the 'Threat Abatement Plan for the impacts of marine debris on the vertebrate wildlife of Australia's coasts and oceans'. Priority actions at stock level: • Green turtles, NWS (G-NWS) – Understand the threat posed to this stock by marine debris. • Loggerhead turtles, WA (LH-WA) – Determine the extent to which marine debris is impacting loggerhead turtles. • Flatback turtles, Pilbara (F-Pil) – No relevant actions.	Refer to Section 6.7.5 **Not inconsistent assessment**: The assessment of the accidental release of solid hazardous and nonhazardous wastes has considered the potential risks to marine turtles. Controls have been implemented to reduce the likelihood of accidental release of solid wastes for the duration of the Petroleum Activity.	EPO 12 PS 12.1.1 PS 12.2.1 PS 12.3.1 PS 12.4.1
	Action Area A4: Minimise chemical and terrestrial discharge.	Action: Ensure spill risk strategies and response programs adequately include management for marine turtles and their habitats, particularly in reference to 'slow to recover habitats', such as nesting habitat, seagrass meadows or coral reefs. Priority actions at stock level: • G-NWS – Ensure spill risk strategies and response programs include management for turtles and their habitats. • LH-WA and F-Pil – Ensure spill risk strategies and response programs include management for turtles and their habitats, particularly in reference to slow-to-recover habitats, such as seagrass meadows or corals.	Refer to Sections 6.7.3 and 6.7.4 **Not inconsistent assessment**: The assessment of accidental release of chemicals/hydrocarbons has considered the potential risks to marine turtles. Spill risk strategies and the response program include management measures for turtles and their nesting habitats.	EPO 9 EPO 10 Detailed oil spill preparedness and response performance outcomes, standards and measurement criteria for the Petroleum Activity are presented in Appendix G

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Part 13 statutory instrument	Relevant action areas/objectives	Relevant actions	Evaluation	Relevant EPO and EPS
	Action Area A8: Minimise light pollution.	Action: Manage artificial light within or adjacent to habitat critical to the survival of marine turtles such that marine turtles are not displaced from these habitats. Priority actions at stock level: • G-NWS – As above. • LH-WA – No relevant actions. • F-Pil – Manage artificial light from onshore and offshore sources to ensure biologically important behaviours of nesting adults and emerging/dispersing hatchlings can continue.	Refer to Section 6.6.7 **Not inconsistent assessment**: The assessment of light emissions has considered the potential impacts to marine turtles. Internesting, mating, foraging or migrating turtles are not impacted by light from the Petroleum Activity. Based on the nature and scale of the Petroleum Activity, impacts are limited to localised and temporary behavioural disturbance to isolated transient individuals, which is unlikely to result in displacement of adult turtles from internesting or nesting habitat critical to the survival of marine turtles.	EPO 8 PS 8.1.1 PS 8.2.1
	Action Area B1: Determine trends at index beaches.	Action: Maintain or establish long-term monitoring programs at index beaches to collect standardised data critical for determining stock trends, including data on hatchling production. Priority actions at stock level: • G-NWS – Continue long-term monitoring of index beaches. • LH-WA – Continue long-term monitoring of nesting and foraging populations. • F-Pil – No relevant actions.	**Not inconsistent assessment**: Woodside contributes to Action Area B1 via its support of the Ningaloo Turtle Program.	N/A
	Action Area B3: Address information gaps to better facilitate the recovery of marine turtle stocks.	Action: Understand the impacts of anthropogenic noise on marine turtle behaviour and biology. Priority actions at stock level: • G-NWS – Given this is a relatively accessible stock that is likely to be exposed to anthropogenic noise, investigate the impacts of anthropogenic noise on turtle behaviour and biology and extrapolate findings from the NWS stock to other stocks. • LH-WA – No relevant actions. • F-Pil – No relevant actions.	Refer to Section 6.6.3 **Not inconsistent assessment**: The assessment of acoustic emissions has considered the potential impacts to marine turtles. Noise related to the Petroleum Activity is not expected to result in behavioural response, injury or mortality of individuals, or any other lasting effect.	EPO 4 PS 4.3.1

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Part 13 statutory instrument	Relevant action areas/objectives	Relevant actions	Evaluation	Relevant EPO and EPS
Assessment summary The Recovery Plan for Marine Turtles in Australia has been considered when assessing impacts and risks, and the Petroleum Activity is not considered to be inconsistent with the relevant actions of this plan.				

Table 6-16: Assessment against relevant actions of the Blue Whale Conservation Management Plan

Part 13 statutory instrument	Relevant action areas/objectives	Relevant actions	Evaluation	Relevant EPO and EPS
Blue Whale Conservation Management Plan	Action Area A.2: Assess and address anthropogenic noise.	Action 2: Assess the effect of anthropogenic noise on blue whale behaviour. Action 3: Anthropogenic noise in biologically important areas will be managed such that any blue whale continues to use the area without injury and is not displaced from a foraging area.	Refer to Section 6.6.3 **Not inconsistent assessment**: The assessment of acoustic emissions has considered the potential impacts to cetaceans. Acoustic emissions from project vessels are not expected to reach any pygmy blue whale BIAs. There are no known or possible foraging areas for pygmy blue whales within or adjacent to the Operational area or noise EMBA.	EPO 4 PS 4.1.1
	Action Area A.3: Understand impacts of climate variability and change.	Action 1: Understand impacts of climate variability and change.	Refer to Section 6.6.6 **Not inconsistent assessment:** Section 6.6.6 includes an assessment of the Petroleum Activity's GHG emissions on marine fauna.	EPO 7 PS 7.1.1 PS 7.2.1
	Action Area A.4: Minimise vessel collisions.	Action 3: Ensure the risk of vessel strikes on blue whales is considered when assessing actions that increase vessel traffic in areas where blue whales occur and, if required, appropriate mitigation measures are implemented.	Refer to Section 6.7.6 **Not inconsistent assessment**: The assessment of a vessel collision with marine fauna has considered the potential risks to cetaceans. Vessel collisions with cetaceans, including pygmy blue whales, are highly unlikely to occur, given the low operating speed of support vessels.	EPO 13 PS 4.1.1

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Part 13 statutory instrument	Relevant action areas/objectives	Relevant actions	Evaluation	Relevant EPO and EPS
	Action Area B.3: Describe spatial and temporal distribution and define biologically important habitat.	Action 2: Identify migratory pathways between breeding and feeding grounds. Action 3: Assess timing and residency within biologically important areas.	**Not inconsistent assessment**: Woodside contributes to Action Area B.3 via its support of targeted research initiatives, such as satellite tracking of pygmy blue whale migratory movements.	N/A
Assessment summary The Blue Whale Conservation Management Plan has been considered when assessing impacts and risks, and the Petroleum Activity is not considered to be inconsistent with the relevant actions of this plan.				

Table 6-17: Assessment against relevant actions of the Recovery Plan for the Grey Nurse Shark (*Carcharias taurus*)

Part 13 statutory instrument	Relevant action areas/objectives	Relevant actions	Evaluation	Relevant EPO and EPS
Recovery Plan for the Grey Nurse Shark	Objective 7: Improve understanding of the threat of pollution and disease to the grey nurse shark.	Action 7.1: Review and assess the potential threat of introduced species, pathogens and pollutants.	Refer to Sections 6.6.4 and 6.6.5 **Not inconsistent assessment**: This EP includes an assessment of the impacts from planned discharges to the marine environment.	Refer to Sections 6.6.4 and 6.6.5
			Refer to Section 6.7 **Not inconsistent assessment**: This EP includes an assessment of the impacts from unplanned discharges to the marine environment, including unplanned releases of hydrocarbons.	Refer to Section 6.7 Detailed oil spill preparedness and response performance outcomes, standards and measurement criteria for the Petroleum Activity are presented in Appendix G
Assessment summary The Grey Nurse Shark Recovery Plan has been considered when assessing impacts and risks, and the Petroleum Activity is not considered to be inconsistent with the relevant actions of this plan.				

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 6-18: Assessment against relevant actions of the Sawfishes and River Sharks Multispecies Recovery Plan

Part 13 statutory instrument	Relevant action areas/objectives	Relevant actions	Evaluation	Relevant EPO and EPS
Sawfishes and River Sharks Multispecies Recovery Plan	Objective 5: Reduce and, where possible, eliminate adverse impacts of habitat degradation and modification on sawfish and river shark species.	Action 5c: Identify risks to important sawfish and river shark habitat and measures needed to reduce those risks.	Refer Section 6.6 and 6.7 **Not inconsistent assessment**: The assessment of accidental release of chemicals/hydrocarbons has considered the potential risks to sawfish and river sharks. Spill risk strategies and the response program include management measures, as identified and required.	Refer Sections 6.6 and 6.7 Detailed oil spill preparedness and response performance outcomes, standards and measurement criteria for the Petroleum Activity are presented in Appendix G
	Objective 6: Reduce and, where possible, eliminate any adverse impacts of marine debris on sawfish and river shark species, noting the linkages with the 'Threat Abatement Plan for the impact of marine debris on vertebrate marine life'.	Action 6a: Assess the impacts of marine debris including ghost nets, fishing gear and plastics on sawfish and river shark species.	Refer Section 6.7.5 **Not inconsistent assessment**: The assessment of the accidental release of solid hazardous and non-hazardous wastes has considered the potential risks to sawfish. Controls have been implemented to reduce the likelihood of accidental release of solid wastes for the duration of the Petroleum Activity.	EPO 12 PS 12.1.1 PS 12.2.1 PS 12.3.1 PS 12.4.1
Assessment summary The Sawfish and River Shark Recovery Plan has been considered when assessing impacts and risks, and the Petroleum Activity is not considered to be inconsistent with the relevant actions of this plan.				

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 6-19: Assessment against relevant actions of the Threat Abatement Plan for the impacts of marine debris on the vertebrate wildlife of Australia's coasts and oceans

Part 13 statutory instrument	Relevant action areas/objectives	Relevant actions	Evaluation	Relevant EPO and EPS
Threat Abatement Plan for the impacts of marine debris on the vertebrate wildlife of Australia's coasts and oceans	Objective 2: Understand the scale of marine plastic and microplastic impact on key species, ecological communities and locations.	Action 2.04: Build understanding related to plastic and microplastic pollution.	Refer to Section 6.7.5 **Not inconsistent assessment**: The assessment of the accidental release of solid hazardous and non-hazardous wastes has considered the potential risks to the marine environment. Controls have been implemented to reduce the likelihood of accidental release of solid wastes for the duration of the Petroleum Activity.	EPO 12 PS 12.1.1 PS 12.2.1 PS 12.3.1 PS 12.4.1
Assessment summary The 'Threat Abatement Plan for the impacts of marine debris on the vertebrate wildlife of Australia's coasts and oceans' has been considered when assessing impacts and risks, and the Petroleum Activity is not considered to be inconsistent with the relevant actions of this plan.				

Table 6-20: Assessment against relevant actions of the National Recovery Plan for the Southern Right Whale

Part 13 statutory instrument	Relevant action areas/objectives	Relevant actions	Evaluation	Relevant EPO and EPS
National Recovery Plan for the Southern Right Whale	A2: Address habitat degradation impacts from coastal and offshore marine infrastructure developments within the species' range.	Action 1: Coastal and offshore development actions are assessed according to principles of ecological sustainable development to ensure the risk of injury, auditory impairment and/or disturbance to southern right whales is maintained. Action 3: Current information on species' occurrence, particularly in habitat critical to the survival, BIAs, and historic high use areas, are used to inform planning, assessment and decision-making on marine infrastructure development actions.	Refer to Section 6.6.3 **Not inconsistent assessment**: This EP assesses the potential impacts of the Petroleum Activity on cetaceans. No BIAs for habitat critical to the survival of the southern right whale overlap the EMBA for any planned impacts.	N/A

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Part 13 statutory instrument	Relevant action areas/objectives	Relevant actions	Evaluation	Relevant EPO and EPS
	A3: Understand impacts of climate variability and anthropogenic climate change on the species biology and population recovery.	Action 1: Continue to meet Australia's international commitments to address causes of climate change, including greenhouse gas emissions.	Refer to Section 6.6.6 **Not inconsistent assessment:** Section 6.6.6 includes an assessment of the GHG emissions from the Petroleum Activity on marine fauna and its contribution to GHG emissions.	EPO 7 PS 7.1.1 PS 7.2.1
	A5: Assess, manage and mitigate impacts from anthropogenic underwater noise.	Action 2: Actions within and adjacent to southern right whale BIAs and habitat critical to the survival should demonstrate that it does not prevent any southern right whale from using the area or cause auditory impairment. Action 3: Actions within and adjacent to southern right whale BIAs and habitat critical to the survival should demonstrate that the risk of behavioural disturbance is minimised. Action 4: Ensure environmental assessments associated with underwater noise-generating activities include consideration of national policy (e.g. EPBC Act Policy Statement 2.1) and guidelines related to managing anthropogenic underwater noise, and implement appropriate mitigation measures to reduce risks to southern right whales to the lowest possible level. Action 5: Quantify the risks of anthropogenic underwater noise to southern right whales, including studies aimed to measure physiological effects, behavioural disturbance, and changes to acoustic communication (e.g. masking of vocalisations) to whales.	Refer to Section 6.6.3 **Not inconsistent assessment**: This EP assesses the potential impacts of the Petroleum Activity on cetaceans. No BIAs for habitat critical to the survival of the southern right whale overlap the noise EMBA.	EPO 4 PS 4.1.1
	A6: Manage, minimise and mitigate the threat of vessel strike.	Action 1: Assess risk of vessel strike to southern right whales in BIAs. Action 3: Ensure environmental impact assessments and associated plans consider and quantify the risk of vessel strike and associated potential cumulative risks in BIAs and habitat critical to their survival.	Refer to Section 6.7.6; note, vessel activity is not planned within the BIA **Not inconsistent assessment**: The assessment of a vessel collision with marine fauna has considered the potential risks to cetaceans.	EPO 13 PS 4.1.1
Assessment summary The National Recovery Plan for the Southern Right Whale has been considered when assessing impacts and risks, and the Petroleum Activity is not considered to be inconsistent with the relevant actions of this plan.				

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.9 Cultural features and heritage values assessment

The identification of cultural features and heritage values of the environment as well as the social, economic and cultural features important to Indigenous people is integral to understanding the environment and any potential impacts and risks to the environment. In line with Woodside's Indigenous Communities Policy (Woodside 2025), Woodside seeks to avoid damage or disturbance to cultural heritage (including intangible heritage). If avoidance is not possible, Woodside will seek to minimise and mitigate any impacts, through consultation with Indigenous communities and Traditional Custodians.

Mitigation of intangible heritage can include any measure or control aimed at ensuring the viability of the cultural heritage and its intergenerational transmission. This can include reducing impacts and risks to environmental features that are associated with intangible cultural heritage (UNESCO, 2003; Australia ICOMOS, 2013).

Values and features of significance identified in Section 4.9.1 (Table 4-21) as being likely or possible to interact with the Operational Area or EMBA are addressed in the risk assessment below. Management of these risks ensures that Indigenous concerns and interests are adequately acknowledged and protected throughout the duration of the Petroleum Activity.

Any action in Australian waters that will or might interact with the seabed could impact UCH, as such, an adequate process of UCH assessment and management is to be undertaken ahead of, and concurrent with, any proposed actions in the near and offshore environment (DCCEEW 2024). The impact assessment below considers both Indigenous and historical UCH in order to protect its value for future generations.

Context		
Light well intervention activities – Section 3.5	Physical environment – Section 4.4 Habitats and biological communities – Section 4.5 Cultural values and heritage – Section 4.9.1	Stakeholder consultation – Section 5

Impact evaluation summary								
Source of impact	***Value potentially impacted***							
	Marine Mammals	Marine Reptiles	Fish	Seabirds	Coral	Benthic Habitats e.g. Seagrass	Shoreline Habitats e.g. Mangroves	Water Quality
	Impact Consequence level							
6.6.2 Physical presence: disturbance to seabed	NA	NA	NA	NA		No lasting effect (F)	NA	NA
6.6.3 Routine and non-routine acoustic emissions	No lasting effect (F)	No lasting effect (F)	No lasting effect (F)	NA	NA	NA	NA	NA
6.6.4 Routine and non-routine discharges: subsea fluids and fugitive hydrocarbons	NA	NA	NA	NA	NA	NA	NA	No lasting effect (F)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.6.5 Routine and non-routine discharges: vessel utility systems (bilge water, grey water, sewage, putrescible wastes and deck drainage water)	NA	NA	NA	NA	NA	NA	NA	No lasting effect (F)
6.6.7 Routine and non-routine: external lighting on the project vessels	No lasting effect (F)	No lasting effect (F)	No lasting effect (F)	NA	NA	NA	NA	NA

Source of risk	***Value potentially impacted***							
	Marine Mammals	Marine Reptiles	Fish	Seabirds	Coral	Benthic Habitats e.g. Seagrass	Shoreline Habitats e.g. Mangroves	Water Quality
	Risk Rating							
6.7.2 Unplanned hydrocarbon release: wellbore release	Moderate	Moderate	Moderate	Moderate	Low	Low	NA	Moderate
6.7.3 Unplanned hydrocarbon release: vessel collision	Moderate	Moderate	Moderate	Moderate	Low	Low	NA	Moderate
6.7.4 Unplanned discharges: hydrocarbon and chemical spills from vessel and subsea activities	Low	Low	Low	NA	NA	NA	NA	Low
6.7.5 Unplanned discharges: release of solid hazardous and non-hazardous wastes (including dropped objects)	Low	Low	Low	NA	NA	NA	NA	Low
6.7.6 Physical presence (unplanned): interactions with marine fauna	Low	Low	Low	NA	NA	NA	NA	NA
6.7.7 Physical presence (unplanned): introduction of invasive marine species	NA	NA	NA	NA	Low	NA	NA	NA

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Description of source of impact/risk (key aspects)
Acoustic Emissions LWIV and support vessels will generate noise in the air and underwater, due to the operation of thruster engines, propeller cavitation, plugging operations, onboard machinery and other activities. Refer to Section 6.6.3 for more details **Light Emissions** Routine light emissions include light sources that alter the ambient light conditions in an environment. The LWIV and support vessels will routinely use external lighting to navigate and conduct safe operations at night throughout the Petroleum Activity. Refer to Section 6.6.7 for more details **Seabed disturbance** Seabed disturbance associated with the Petroleum Activity can occur. The presence of subsea infrastructure and the interaction with hydrodynamic processes may result in localised scouring to the seabed and localised sedimentation of fine substrates around infrastructure. ROV operations will also be conducted which can result in seabed disturbance. Refer to Section 6.6.2 for more details **Unplanned hydrocarbon release (basis of EMBA)** The EMBA is the largest spatial extent where unplanned events could have an environmental consequence on the surrounding environment. For this EP, the EMBA is the potential spatial extent of surface and in-water hydrocarbons at concentrations above ecological impact thresholds, in the highly unlikely event of the worst-case unplanned release. The EMBA therefore covers a larger area than the area that would be affected during any one single event. Refer to Section 6.7.2 for more details.
Detailed impact and risk assessment
The Petroleum Activity has the potential to impact cultural features and heritage values identified in Table 4-21 in the following ways.
Archaeological heritage and landscapes
Places that are identified in Section 4.9.1 for their value as archaeological sites are assumed to be at risk where there is potential for impact to the tangible or scientific elements of that place. This could include physical damage or disturbance to the archaeological integrity of a place. **Coastal/island archaeological sites (fish traps and petroglyphs)** No coastal areas or islands are present within the Operational area. A review of the DPLH's Aboriginal Heritage Inquiry System identified 1 Registered Heritage Places and 0 Lodged Aboriginal sites within the EMBA. These locations do exist within the EMBA boundary. However, given the EMBA is driven by an unplanned hydrocarbon release there is no anticipated impact pathway from this activity to onshore archaeological sites above highest astronomical tide (HAT). Archaeological sites may exist in intertidal landscapes within the EMBA and may be exposed to hydrocarbons from an unplanned release. However, there is no anticipated impact pathway from the presence of hydrocarbons on archaeological values, as this is not expected to impact the fabric or context of sites on an exposed shoreline site. Impacts to the heritage value of (for example) fish traps from an unplanned hydrocarbon release may occur indirectly through impacts to fish. However, it is expected that continued use of fish traps beyond their archaeological value will be preserved where fish species and distribution are maintained at a population level. With regard to fish, refer to species specific assessment below for further information, in addition to the impact and risk assessment in Sections 6.6 and 6.7 respectively. **Submerged cultural heritage (indigenous and historic)** The OA overlaps the submerged landscape, which is defined as the area from the WA coast to the Ancient Coastline at 125 m Depth Contour KEF. The submerged landscape is also considered to comprise potentially culturally significant landscapes and landscape features such as submerged hills, karst depressions/ravines and valleys between submerged ridges and submerged calcarenite ridges/paleo beach barrier systems. This area has been identified as having the potential for Indigenous archaeological heritage material to exist on the seabed. The intangible values associated with the submerged landscape are assessed below. No archaeological sites have been identified beyond terrestrial or intertidal areas, with the exception of four sites at Murujuga in Cape Bruguieres channel, Maitland River Hummock and Flying Foam Passage (Benjamin et al. 2020; Benjamin et al 2023; Benjamin et al 2026), which are outside of the EMBA. Additionally, volcanic rock which may contain petroglyphs does not occur within the Operational area. Nevertheless, cultural heritage values may exist on the seabed, these include both unidentified shipwrecks and Indigenous cultural material.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Planned activities overlapping the Ancient Landscape have potential for seabed disturbance, as outlined in Section 6.6.2. Woodside engages a consultant to undertake a desktop review based on geophysical and bathymetric data, for the potential of submerged archaeological material, in any areas subject to seabed disturbance. This approach is consistent with the Guidelines for Assessing and Managing Impacts to Underwater Cultural Heritage in Australian Waters (UCH) (DCCEEW, 2024) (see Section 5). Previous assessments undertaken which included wells, CK4 and LH3 did not identify any archaeological sites or values in Commonwealth waters that may be impacted by the Operational area. Areas including wells WA7 and WA8 will be subject to future assessment as outlined in relevant controls.

Known submerged heritage, including archaeological sites, may be protected subject to declarations under the Aboriginal and Torres Strait Islander Heritage Protection Act 1984, Underwater Cultural Heritage Act 2018 or EPBC Act 1999. Submerged archaeological sites (locations undefined) may exist on the Submerged Landscape within the broader EMBA. However, given the EMBA is driven by an unplanned hydrocarbon release, it is not expected to impact the seabed or archaeological material on or within it. Therefore, the Petroleum Activity is not expected to impact submerged archaeological sites in the broader EMBA.

Woodside understands there is no Indigenous archaeology known to exist within the OAs and no areas subject to declarations or prescriptions under these Acts are located within the OAs. No submerged sites of significance within the OAs were identified by Traditional Custodians during consultation while preparing this EP. In the event that unidentified cultural heritage is encountered it will be managed in accordance with the Unexpected Finds Procedure detailed Section 7.2.3 and applicable legislative obligations.

Intangible heritage

Intangible values that are identified in Section 4.9.1 are assumed to be at risk where there is potential for impact to the spiritual connections, features and/or places associated with the value. Impacts to intangible heritage can be individualised; the assessment below does not account for this variability but aims to assess widespread impacts to general intangible values.

Cultural obligations to care for Country/Access to Country

Potential impact pathways to the rights and obligations of Traditional Custodians to care for Sea Country may be directly associated with environmental impacts, or by excluding Traditional Custodians from Sea Country (e.g. by restricting access) or decision-making processes (e.g. by not conducting ongoing consultation). Restrictions on access may be temporary (e.g. where exclusion zones exist around activities for safety reasons) or permanent (e.g. where infrastructure obstructs access or navigation). Such impacts are limited to areas that have been traditionally accessed by Traditional Custodians and are expected to be concentrated in shoreline environments. As there is no potential for shoreline accumulation of hydrocarbons within the EMBA, an unplanned hydrocarbon release is not expected to result in the loss of heritage value, cultural practice, knowledge transmission, or cultural obligations at a broader cultural landscape scale. Ongoing consultation is also intended to facilitate access arrangements where feasibly safe to do so, and to support appropriately informed decision-making processes.

Creation/dreaming sites; ceremonial sites; sacred sites; ancestral beings

Activities that physically alter landscape features may be assumed to potentially impact values of creation/dreaming sites, sacred sites or ancestral beings. Activities that prevent the performance of ceremony at these sites will directly impact their values. This is anticipated to be focused on areas adjacent to the coast. There are no known creation or dreaming sites identified within the Operational area during consultation or through publicly available literature. Given the limited extent of the proposed activity, impacts to creation/dreaming or ceremonial sites are not expected.

Kinship systems and totemic species

Marine species may have kinship/totemic relationships to Traditional Custodians, but it is understood that these relationships do not prohibit people outside of that “skin group” from hunting or eating that same species (Juluwarlu 2004). It is therefore inferred that the management of totemic or kinship species applies at the species/population level and not to individual plants and animals. The impacts and risks associated with the Petroleum Activity are not considered to be ecologically significant at a population level. As such, cultural values associated with kinship systems and totemic species are expected to be maintained.

Resource collection

Direct impact to communities using these resources will inherently occur when the resource disappears, is displaced or suffers a reduction in population. Therefore, marine species (as resources) will be impacted where there is an impact at the species/population level. However, the impacts and risks associated with the Petroleum Activity are not considered to be ecologically significant at a population level. As such, cultural values associated with kinship systems and totemic species are expected to be maintained.

Songlines

Songlines can become lost, fragmented, or broken when there is a loss of Country or forced removal from Country (Neale and Kelly 2020:30). Physical sites that have been identified as comprising a component of a songline are important to protect to prevent the fragmenting or breaking apart of songlines and loss of sacred cultural knowledge. Landscape features that may be associated with intangible values, including songlines, would have been exposed during the LGM and are now submerged. Submerged landscape features, including submerged hills are considered in

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

the submerged cultural heritage assessment above. No specific songlines or associated submerged landscape features have been identified within the Operational Area. It is noted that oil and gas infrastructure exists in many areas of the North West Shelf, and that songlines are still acknowledged and recognised. It is inferred that if there were to be any impacts to surviving songlines these would be significantly more likely to be described as qualitative (i.e. "weaken" a songline) rather than binary or absolute (i.e. destroy a songline).

Knowledge of Country/customary law and transfer of knowledge/ Connection to Country

Where people are displaced or disrupted (e.g., during colonisation) or where there is a loss of technical skills or environmental knowledge this may damage connection to Country (McDonald and Phillips, 2021). Direct impact to communities practicing traditional skills will inherently occur when relevant aspects of the environment disappear, are displaced or suffer a reduction in species population. Furthermore, limitations on access to sites or disruption/relocation of Indigenous communities may have implications for the preservation of Indigenous knowledge. Impacts and risks from the Petroleum Activity are not considered to be ecologically significant at a population level and hence are not expected to impact the value of marine species. It is therefore not expected that the Petroleum Activity will displace or disrupt a Traditional Custodians capacity to pass on knowledge related to marine species or knowledge related to traditional culture/ technical skills.

Traditional Custodians maintain an ongoing connection to Sea Country through living cultural traditions, including the use of resources and the practice of cultural activities such as ceremonies and Dreaming stories. Woodside invites ongoing engagement with relevant Traditional Custodian groups to understand how this connection can remain uninterrupted during the Petroleum Activity. Supported further by the environmental management controls outlined in Sections 6.6 and 6.7, no adverse impacts to intangible cultural values associated with Sea Country are expected from the Petroleum Activity.

Marine ecosystems and species

Marine ecosystems may hold both cultural and environmental value, with cultural and environmental values intrinsically linked (DCCEEW 2023; MAC 2022 as cited in Woodside 2023a). It necessarily follows that an impact to marine ecosystems has the potential to impact cultural features where the impact is detectable within Sea Country and the seascape which Traditional Custodians view, interact with or hold knowledge of.

Fresh hydrocarbons (i.e. typically in the vicinity of the release location) may have a higher potential to cause toxic effects when ingested, while weathered hydrocarbons are considered to be less likely to result in toxic effects. As such, the risk of hydrocarbon ingestion is low. The migration of culturally significant marine fauna (marine reptiles, fish and mammals) protracts through time and space (i.e. the entire population will not be within the EMBA), and as such, a spill from a wellbore release is unlikely to affect an entire population.

A worst-case hydrocarbon spill scenario has the potential to result in major long-term impacts to offshore marine fauna species, with consequence severity dependent on the actual timing, duration and extent of a spill in relation to species' migratory movements and distributions. Such an event has been assessed above as highly unlikely and relevant EPOs and its corresponding controls have been implemented to mitigate such a risk (See section 6.6 and 6.7). There is potential for temporary or localised effects on cultural features and heritage values associated with affected environmental receptors; however, these impacts are not expected to result in the loss of heritage value, cultural practice, knowledge transmission, or cultural obligations at a broader cultural landscape or population scale.

Benthic habitats (coral, seagrass)

Through consultation and existing literature, Indigenous groups identified benthic habitats as valuable for their ecological values, including corals attracting fish and seagrass providing shelters for fauna, as well as an important habitat for dugongs. Additionally, coral is valued by Murujuga Aboriginal Corporation (MAC) for its aesthetic values.

As described in Section 6.6 and 6.7, an unplanned hydrocarbon release may impact benthic habitats. Given hydrocarbon characteristics, rapid weathering, short-term exposure, as well as the response strategies planned to be deployed, an unplanned release is not expected to result in a level of exposure to coral and seagrass that would cause an adverse impact on marine ecosystem functioning or integrity. As such, cultural values and intangible cultural heritage associated with benthic habitats are expected to be maintained.

Plankton

Through consultation and review of available literature (Section 4.9) Woodside understands that marine fauna such as plankton are culturally important to Traditional Custodians and may be affected by routine and non-routine emissions, light emissions, and unplanned hydrocarbon releases. Traditional Custodians value these species both tangibly as well intangibly as they can be considered a resource or linked to Songlines and Dreaming stories. Traditional Custodians also have connection to many marine species through kinship and totemic systems; an individual may have an obligation to care for a species to which they are kin. Traditional Custodians may also have a cultural obligation to care for the environmental values of Sea Country.

As described in Sections 6.6 and 6.7, potential impacts to marine fauna are predicted to be at an individual level, which are not considered to be ecologically significant at a population level. Impacts are not expected to occur to significant proportions of the populations of the species, nor expected to result in a decrease of the quality of the habitat such that the extent of these species is likely to decline. As such, cultural values and intangible cultural heritage associated with plankton are expected to be maintained.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Fish and cephalopods

Fish and squid have been identified through consultation and existing literature as an important resource, particularly as food sources. Direct impact to communities using these resources will inherently occur when the resource disappears, is displaced or suffers a reduction in population. Therefore, these species (as resources) are likely to be impacted where there is an impact at the species/population level.

Through consultation, fish were identified as important agents in the management of the broader ecosystem for Indigenous groups within or adjacent to the EMBA. There are Thalu ceremonies associated with increasing fish stocks. It may be assumed that inter-generational transmission of cultural knowledge relating to fish may be impacted where changes to population or behaviour results in reduced sightings (e.g. through population decline). This transfer of knowledge may be integral to managing a group's intangible cultural heritage (UNESCO 2003). Intangible cultural heritage associated with fish, including inter-generational knowledge regarding fishing techniques and migratory patterns, can be managed by reducing impacts to fish in nearshore marine environments to which this cultural knowledge is intrinsically connected.

The octopus is an important totem to Ngarla People and features in the creation story of Solitary Island. There are increase ceremonies/rituals for species of squid and octopus to enhance or maintain populations. Thalu are places where these increase ceremonies are performed. All mentions of active ceremonial sites in the reviewed literature were confined to onshore locations, though the values may extend offshore where, for example, the thalu relates to marine species populations. As thalu ceremonies are preformed to maintain and increase populations of marine species, it is inferred that management applies at the species/population level and not to individuals.

The potential impacts from the Petroleum Activity on fish and cephalopods are not considered to be ecologically significant at a population level. As such, cultural values and intangible cultural heritage associated with fish and cephalopods are expected to be maintained.

Whales, dolphins and dugongs

There are increase ceremonies/rituals for species of animals and plants important to Indigenous peoples, to enhance or maintain populations. Thalu are places where these increase ceremonies are performed. All mentions of active ceremonial sites in the reviewed literature were confined to onshore locations, though the values may extend offshore. For example, the thalu relates to marine species populations. As thalu ceremonies are performed to maintain and increase populations of marine species, it is inferred that management applies at the species/population level and not to individuals. For example, the thalu site on Murujuga which "brings in whales to beach" will continue to serve its purpose so long as whales continue to migrate through Mermaid Sound. Reviewed literature (DBCA 2020) also includes information that is marked as information that cannot be copied, reproduced or used without consent. The values described in the literature are environmental in nature, apply to marine mammal behaviours at a population level and are managed through existing environmental controls.

Related intangible cultural heritage may include the transmission of cultural knowledge about whales and whale behaviour, including birthing areas, whale communication and migratory patterns. Such cultural knowledge may be associated with various cultural functions and activities that support the social and economic life of a community (Fijn 2021). Whale symbology expressed through stories, music, and dance can reflect a group's connections with the sea, as well as marine fauna, which then comprise a group's cultural values (Ardler 2021; Bursill et al. 2007; Cressey 1998). Whales also speak to a broader connection that exists between Indigenous people and their surrounding environment. Beyond mythology and symbolism, whales can be connected with various economic and social functions associated with everyday life. Cultural knowledge of whales, whale migration, behaviour and the related marine environment may all be important in ensuring the continuation of these socio-economic functions and other related activities that remain valuable to Indigenous people (Fijn 2021). No impacts to communities' ability to perform or transmit stories, music or dance are anticipated from the Petroleum Activity. Where timing or performance is linked to sighting or engaging with these species, impacts may occur where numbers or migration behaviours are impacted at a population level.

Indigenous groups have expressed interest about whale migratory routes and studies. Inter-generational transmission of cultural knowledge (including songlines) relating to marine mammals may be impacted where changes to population or behaviour at a population level results in reduced sightings (e.g. through population decline, changes to migration routes or changes to migration seasonality). This transfer of knowledge may be integral to managing a group's intangible cultural heritage (UNESCO 2003).

The potential impacts of the Petroleum Activity on marine mammals are not considered ecologically significant at a population level. As such, cultural values and intangible cultural heritage associated with marine mammals are expected to be maintained.

Marine reptiles (turtles)

Turtles and their eggs have been identified through consultation and existing literature as an important resource, particularly as food sources. Direct impact to communities using these resources will inherently occur when the resource disappears, is displaced or suffers a reduction in population. Therefore, these species (as resources) are likely to be impacted where there is an impact at the species/population level.

Through consultation and review of available literature (Section 4.9.1), Woodside understands that marine fauna such as turtles, are culturally important to Traditional Custodians, and may be affected by light emissions. Traditional Custodians value these species both tangibly as well intangibly as they can be considered a resource or linked to

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Songlines and Dreaming stories. Traditional Custodians also have connection to many marine species through kinship and totemic systems; an individual may have obligation to care for a species to which they are kin. Traditional Custodians may also have a cultural obligation to care for the environmental values of Sea Country.

Intangible cultural heritage may also include the transmission of cultural knowledge about marine reptiles, such as nesting areas, hunting areas and migratory patterns. Cultural knowledge may also be conveyed through stories, such as the turtle being trapped in the sea as a result of its greed for berries as recounted by Capewell (2020). Such cultural knowledge may be associated with various cultural functions and activities that support the social and economic life of a community (Fijn 2021). Indigenous groups have expressed an interest regarding turtle monitoring programs and migration patterns.

Activities that impact turtle populations and their marine environment may have an indirect impact on some Aboriginal communities as this can limit access to cultural sites or deplete hunting areas that would threaten local food security (Delisle et al. 2018:251). Inter-generational transmission of cultural knowledge (including songlines) relating to marine reptiles may be impacted where changes to population or behaviour results in reduced sightings (e.g. through population decline, changes to migration routes or changes to migration seasonality). This transfer of knowledge may be integral to managing a group's intangible cultural heritage (UNESCO 2003).

The potential impacts from the Petroleum Activity on marine reptiles are not considered to be ecologically significant at a population level. As such, cultural values and intangible cultural heritage associated with marine reptiles are expected to be maintained.

Seabirds

Seabirds have been identified through literature as a culturally significant species (Malgana Aboriginal Corporation 2021), as well as a resource (seabird eggs; Smyth 2007). Direct impact to communities using these resources will inherently occur when the resource disappears, is displaced or suffers a reduction in population. Therefore, these species (as resources) are likely to be impacted where there is an impact at the species/population level. Intangible cultural heritage may also include the transmission of cultural knowledge about seabirds, such as nesting areas, hunting areas and migratory patterns. Such cultural knowledge may be associated with various cultural functions and activities that support the social and economic life of a community (Fijn 2021) Inter-generational transmission of cultural knowledge relating to seabirds may be impacted where changes to population or behaviour results in reduced sightings (e.g. through population decline, changes to migration routes or changes to migration seasonality). This transfer of knowledge may be integral to managing a group's intangible cultural heritage (UNESCO 2003).

The potential impacts from the Petroleum Activity on seabirds are not considered to be ecologically significant at a population level. As such, cultural values and intangible cultural heritage associated with seabirds are expected to be maintained.

Shoreline habitats (mangroves)

Through consultation, Indigenous peoples identified shoreline habitats as valuable for their ecological values, including mangroves for providing shelter to marine invertebrates, which are identified as resources, and a potential nursery for turtles. Literature also notes that mangroves are also valued for the flora and fauna they are associated with and support (Commonwealth of Australia 2002) and Smyth (2007) reports that mangrove seeds are used as a resource by Ngarda-Ngarli (the collective term for the Traditional Custodians who look after Murujuga Country).

There is no overlap between the Operational area and mangrove habitat, and no planned impacts to mangroves from the Petroleum Activity. As described in Section 6.7.2, given the non-persistent nature of the hydrocarbons, no significant effects to mangrove habitat are expected to occur. As such, cultural values and intangible cultural heritage associated with shoreline habitats are expected to be maintained.

Conclusion

The potential impacts and risks from the Petroleum Activity are not considered to be ecologically significant at the population level. As such, impacts are not expected to result in the loss of heritage value, cultural practice, knowledge transmission, or cultural obligations at a broader cultural landscape or population scale. Refer to the impacts on intangible values assessment above.

The impact and risk assessment for cultural features and heritage values has therefore determined that the planned activities are unlikely to result in an impact greater than localised and result in no lasting effect (F), and unplanned activities are assessed to have a residual risk rating of moderate (or lower). Woodside will continue to consider new heritage information as it becomes available.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/ sacrifice (CS)[56]***	***Benefit in impact reduction***	***Proportionality***	***Control adopted***
Legislation, codes and standards				
Report any potential underwater cultural heritage finds to relevant stakeholders and authorities in accordance with the Unexpected Finds Procedure, *Underwater Cultural Heritage Act* and the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984*.	F: Yes. CS: Minimal cost associated with the reporting process.	Meets legislative requirements and community expectations.	Benefits outweigh cost/sacrifice.	Yes C 3.1
Good practice				
Apply a 'living heritage'[57]management approach. Woodside seeks advice and incorporates Traditional Custodian cultural knowledges across our activities.	F: Yes CS: Minimal cost	Implementation of the 'living heritage' approach pays acknowledgement and respect to Traditional Custodian communities. It supports the transfer of cultural knowledges and is an effective strategy to manage intangible cultural values.	Benefits outweigh cost/sacrifice.	Yes C 17.1
Inductions to all relevant marine crew, prior to the individual commencing the activity, will include information on cultural features and heritage values, including tangible and intangible cultural heritage.	F: Yes CS: Minimal cost	Ensures workforce is suitably aware of cultural features and heritage values in the area they are operating	Benefits outweigh cost/sacrifice.	Yes C 17.2
The environmental impacts and risks of the activity will continue to be managed to as low as reasonably practicable and an acceptable level for cultural features and heritage values.	F: Yes CS: Substantial costs	Implementation of activities and associated controls to ALARP and acceptable levels supports the maintenance of cultural features and heritage values	Benefits outweigh cost/sacrifice.	Yes C 17.3
Review of existing survey data by a suitably qualified	F: Yes.	Review of data by suitably qualified maritime archaeologist will inform	Benefits outweigh cost/sacrifice.	C 3.1

[56] Qualitative measure.

[57] Living heritage supports community and individual identity. Intangible cultural heritage is 'living heritage' that is inherited from ancestors and passed on to their descendants. It is comprised of many influences, including oral traditions, art, social practices, rituals and ceremonies, cultural knowledge and practices. It is transmitted from generation to generation and evolves in response to the environment. Woodside applies a 'living heritage' approach to its cultural heritage management. This includes ensuring that Traditional Custodians are given voice to identify interests, transmit information and express concerns. Woodside works with Traditional Custodians to support and follow appropriate cultural protocols, including calling to Country, conducting smoking ceremonies (in areas where this custom is appropriate) and undertaking cultural awareness. Woodside will collaborate and provide relevant information it holds to groups such as Heritage Management Committees where they are established.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/ sacrifice (CS)[56]***	***Benefit in impact reduction***	***Proportionality***	***Control adopted***
maritime archaeologist to inform areas for laydown and/or installation of equipment to avoid or where not possible, minimise physical impacts to cultural heritage areas or prospective areas.	CS: Minimal costs associated with review of data and avoidance or minimisation options.	potential exclusion or avoidance areas for seabed disturbance. Implementing this process will protect and minimise any physical impacts to underwater cultural heritage. Additionally, this process is not inconsistent with the Guidelines on the application of the *Underwater Cultural Heritage Act 2018*: Assessing and Managing Impacts to Underwater Cultural Heritage in Australian Waters (DCCEEW 2024).		
Unexpected finds of potential UCH sites or features, including First Nations UCH, are managed in accordance with the Unexpected Finds Procedure set out in Section 7.2.3.	F: Yes. CS: Minimal cost associated with the reporting process.	Allows management of unexpected finds in accordance with legislative requirements, including UCH Guidance for Offshore Developments and the Guidelines to Assessing and Managing Impacts to Underwater Cultural Heritage in Australian Waters (DCCEEW, 2024a), under the *Underwater Cultural Heritage Act*, expert advice and community expectations.	Benefits outweigh cost/sacrifice.	Yes C 3.2
ALARP statement: Based on the assessment outcomes, use of the relevant tools appropriate to the decision type (i.e. Decision Type A; Section 2.3.4.2) and Woodside's criteria for demonstrating ALARP (Section 2.4.1), Woodside considers the adopted controls appropriate to manage potential impacts associated with disturbance to seabed from the activity. As no reasonably practicable additional or alternative controls were identified that would further reduce the impacts without disproportionate sacrifice, the impacts are considered ALARP.				

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Demonstration of acceptability
Acceptability statement: The impact and risk assessment has determined that, given the adopted controls, planned activities are unlikely to result in an impact greater than temporary localised impact not significant to areas or items of cultural significance with no lasting effects (F) and unplanned activities are assessed to have a residual risk rating of moderate (or lower). The Petroleum Activity and the EMBA are not expected to have a significant impact (e.g. changes in population levels) on MNES including marine fauna with a cultural connection with, or traditional use in nearshore areas. While the activity will occur on the Ancient Landscape, Woodside facilitates a process of undertaking underwater cultural heritage desktop assessments by qualified professionals to identify known or potential underwater cultural heritage where new seabed disturbance occurs, and an unexpected finds procedure (refer to Section 7.2.3) will be implemented. Therefore, the activity is not inconsistent with Underwater Cultural Heritage Guidance for Offshore Developments and the Guidelines to assessing and managing impacts to Underwater Cultural Heritage in Australian waters under the UCH Act. In addition, Woodside has engaged with Traditional Custodians adjacent to the EMBA to understand the cultural features and heritage values that may occur and potential impacts from the activity. Woodside maintains a long-standing relationships, with relevant Traditional Custodian groups, and undertakes consultation with those whose functions, interests or activities may be affected by activities conducted under this EP. In the event of an unplanned environmental impact, such as a hydrocarbon spill, Woodside will engage with relevant Indigenous groups within or adjacent to the EMBA in line with its Oil Pollution First Strike Plan (Appendix H). Woodside will support Traditional Custodians to practice cultural obligations to care for Country by providing timely information on the incident, facilitating safe access to Sea Country where practicable, and incorporating Traditional Custodian knowledge and priorities into response, mitigation and recovery activities. For ongoing consultation post Regulation 25 consultation, Woodside supports ongoing engagement with Traditional Custodians. Woodside is committed to ongoing engagement and support to care for and manage Country, including Sea Country. The 'living heritage' management approach has been developed to enable Woodside to manage cultural values which may be identified at any time during Woodside's activities via ongoing dialogue with Traditional Custodians. Further opportunities to reduce the impact have been investigated above. Based on the assessment outcomes, use of the relevant tools appropriate to the decision type (i.e. Decision Type A; Section 2.3.4.2) and Woodside's criteria for demonstrating acceptability (Section 2.4.2), Woodside considers the adopted controls appropriate to manage the impacts to a level that is broadly acceptable, and compliance with those controls demonstrates the EPOs are met.

EPOs, EPSs and MC[58]			
EPOs	***Controls***	***Performance standards***	***Measurement criteria***
EPO 17a No adverse impacts[59] to cultural features and heritage values from the Petroleum Activity EPO 17b Woodside supports ongoing engagement and consultation with Traditional Custodians or the purpose of assessing	C 17.1 Apply a 'living heritage' management approach. Woodside seeks advice and incorporates Traditional Custodian cultural knowledge across our activities.	PS 17.1.1 Woodside will continue to give voice to Traditional Custodians to identify interests, transmit information and express concern through ongoing consultation as identified in Section 5.7	MC 17.1.1 Records demonstrate Change Management and Management of Knowledge processes have been followed where new controls or management measures identified.
		PS 17.1.2 Woodside will assess and where deemed practicable implement appropriate cultural protocols where	MC 17.1.2 Records demonstrate Woodside implemented cultural protocols as requested.

[58] As marine ecosystems may hold both cultural and environmental value (see Section 4.9.1), with cultural and environmental values intrinsically linked, in addition to the specific controls for cultural features and heritage values, the controls and performance standards in Sections 6.7 and 6.8 will reduce impacts to cultural features and heritage values including marine species and habitats.

[59] For the purposes of the Petroleum Activity, an adverse impact to cultural features or heritage values is considered to occur where there is: direct physical disturbance causing observable damage to a site or object of cultural significance; a measurable and significant decline in the population or habitat of a culturally significant species attributable to the activity; or a substantiated impact on recognised intangible cultural values.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

EPOs, EPSs and MC[58]			
EPOs	***Controls***	***Performance standards***	***Measurement criteria***
and avoiding impacts to cultural features and heritage values.		requested by Traditional Custodians.	
	C 17.2 Inductions to all relevant marine crew, prior to the individual commencing the activity, will include information on cultural features and heritage values, including tangible and intangible cultural heritage	PS 17.2.1 All relevant marine crew have completed inductions that include information on cultural values, including tangible and intangible cultural heritage for awareness	MC 17.2.1 Records demonstrate all relevant marine crew have completed inductions that include information on cultural values
	C 17.3 The environmental impacts and risks of the activity will continue to be managed to as low as reasonably practicable and an acceptable level for cultural features and heritage values.	PS 17.3.1 Consideration of cultural values/new information, through the life of the EP, and the development of avoidance or mitigation strategies in collaboration with Traditional Custodians if impacts to cultural values are identified. Where avoidance is not possible, impact minimisation will be prioritised and demonstrated through a written options analysis/ALARP to ensure an acceptable level of impact. This will be documented through Woodside's Management of Change and Management of Knowledge processes.	MC 17.3.1 Records demonstrate Change Management and Management of Knowledge processes have been followed where new controls or management measures identified (Section 7.2.8)
EPO 3 No adverse[60] impact to UCH[61] without a permit[62].	C 3.1 Review of existing survey data by a suitably qualified maritime archaeologist to inform areas for laydown and/or installation of equipment to avoid or where not possible, minimise physical impacts to cultural heritage areas or prospective areas.	PS 3.1.1 Existing survey data reviewed by a suitably qualified maritime archaeologist to inform areas for survey activities and/or positioning of equipment.	MC 3.1.1 Records demonstrate review of existing archaeological data completed prior to commencement of activities.
	C 3.2 Report any potential UCH finds to relevant stakeholders and authorities in accordance with the Unexpected Finds Procedure, *Underwater Cultural Heritage Act 2018* (Cth) and the *Aboriginal and Torres Strait*	PS 3.2.1 Report any finds of potential UCH in accordance with the Unexpected Finds Procedure (set out in Section 7.2.3), including to the Australasian	MC 3.2.1 Records of potential UCH finds reported to relevant authorities and stakeholders.

[60] Adverse impacts to UCH without a permit are defined under the Underwater Cultural Heritage Act 2018, subsection 30(2).

[61] Underwater cultural heritage is defined as any trace of human existence that has a cultural, historical or archaeological character and is located under water, in accordance with the Underwater Cultural Heritage Act 2018 (Cth).

[62] Permit for Entry into a Protected Zone or to Impact Underwater Cultural Heritage would be acquired under the UCH Act 2018 (Cth).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

EPOs, EPSs and MC[58]			
EPOs	***Controls***	***Performance standards***	***Measurement criteria***
	Islander Heritage Protection Act 1984 (Cth).	Underwater Cultural Heritage Database.	
	C 3.3 Unexpected finds of potential UCH sites and features, including First Nations UCH, are managed in accordance with the Unexpected Finds Procedure, set out in Section 7.2.3.	PS 3.3.1 In the event a UCH site or feature is identified, implement the Unexpected Finds Procedure, set out in Section 7.2.3.	MC 3.3.1 No non-compliance with the Unexpected Finds Procedure.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

7. IMPLEMENTATION STRATEGY

7.1 Overview

Regulation 22 of the Environment Regulations requires an EP to contain an implementation strategy for the Petroleum Activity. The implementation strategy confirms fit-for-purpose systems, practices and procedures are in place to direct, review and manage the activities so environmental risks and impacts are continually reduced to ALARP and are acceptable, and EPOs and EPSs outlined in this EP are achieved.

Woodside, as operator, is responsible for ensuring the Petroleum Activity is managed in accordance with this implementation strategy and the WMS (Section 1.6).

7.2 Systems, practices, and procedures

All operational activities are planned and performed in accordance with relevant legislation and standards, management measures identified in this EP, and internal environment standards and procedures. The systems, practices and procedures that will be implemented are listed in the controls and EPSs adopted in Section 6. Document names and reference numbers may change during the statutory duration of this EP and is managed through a Change Register and update process.

7.2.1 Environmental Consideration during Selection, Assessment and Approval of Chemicals

All chemicals that may be operationally released or discharged to the marine environment by the Petroleum Activity are evaluated using a defined framework and set of tools to ensure the potential impacts are acceptable, ALARP and meet Woodside's expectation for environmental performance which requires chemicals to be selected with the lowest practicable environmental impacts and risks, subject to technical constraints).

Chemicals proposed to be selected as part for the Petroleum Activity will be managed in accordance with the requirements set out by the Australian Government under the Industrial Chemicals Environmental Standard (IChEMS). The IChEMS is a key component of several National reforms to improve approaches to how industrial chemicals are used, produced, imported and managed. Industrial chemicals will be listed on the IChEMS Register in one of 7 schedules according to their environmental risk.

Chemicals proposed for selection in this activity will be assessed against those listed in the IChEMS register under one of the seven schedules according to their environmental risk. The selection and management of any chemical will adhere to the specific risk management measures, storage, use and handling requirements outlined in the corresponding schedule

Chemicals discharged during the Petroleum Activities are described in Section 6.6.4. AFFF may be discharged where project vessel helideck testing requirements (typically annual) fall within the on-hire period, or in an emergency (refer to Section 6.6.5).

7.2.1.1 Environmental selection criteria

The chemical assessment process follows the principles outlined in the Offshore Chemical Notification Scheme (OCNS), which manages chemical use and discharge in the United Kingdom (UK) and the Netherlands. It applies the requirements of the OSPAR Convention. The OSPAR Convention is widely accepted as best practice for managing chemicals.

All chemical substances on the OCNS ranked list of registered products have an assigned ranking based on toxicity and other relevant parameters, such as biodegradation and bioaccumulation, in accordance with one of two schemes (as shown in Figure 7-1):

- Hazard Quotient (HQ) Colour Band: Gold, Silver, White, Blue, Orange or Purple (listed in order of increasing environmental hazard).
- OCNS Grouping: E, D, C, B or A (listed in order of increasing environmental hazard). Used for inorganic substances, hydraulic fluids and pipeline chemicals only.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

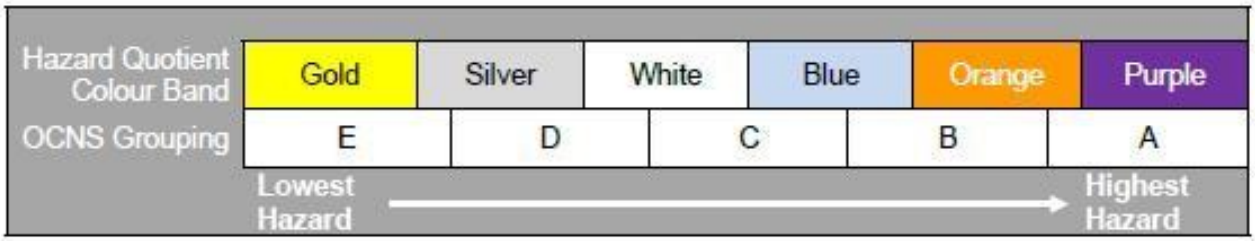


Figure 7-1: Offshore Chemical Notification Scheme ranking

Chemicals fall into the following assessment types:

- No further assessment: Chemicals with an HQ band of Gold or Silver or an OCNS ranking of E or D with no substitution or product warnings do not require further assessment. Such chemicals do not represent a significant impact on the environment under standard use scenarios and are therefore considered ALARP and acceptable.
- Further assessment/ALARP justification required: The following types of chemicals require further assessment to understand the environmental impacts of discharge into the marine environment:
  1– chemicals with no OCNS ranking
  2– chemicals with an HQ band of White, Blue, Orange or Purple or an OCNS ranking of A, B or C
  3– chemicals with an OCNS product or substitution warning.

This includes assessing the ecotoxicity, biodegradation and bioaccumulation of the chemicals in the marine environment in accordance with the Centre for Environment, Fisheries and Aquaculture Science (CEFAS) Hazard Assessment and the Department of Mines, Petroleum and Energy (DMPE) Environmental Risk Assessment of Chemicals used in WA Petroleum Activities Guideline.

7.2.1.1.1 Ecotoxicity

Chemical ecotoxicity is assessed using the criteria used by CEFAS to group chemicals based on ecotoxicity results (Table 6-1). If a chemical has an aquatic or sediment toxicity within the criteria for the OCNS grouping of D or E, this is considered acceptable in terms of ecotoxicity.

Table 7-1: Centre for Environment, Fisheries and Aquaculture Science's Offshore Chemical Notification Scheme grouping based on ecotoxicity results

Initial Grouping	A	B	C	D	E
Results of aquatic toxicity data (ppm)	<1	>1–10	>10–100	>100–1,000	>1,000
Results for sediment toxicity data (ppm)	<10	>10–100	>100–1,000	>1,000–10,000	>10,000

Note: aquatic toxicity refers to the Skeletonema costatum *EC_{50}, Acartia tonsa LC_{50} and Scophthalmus maximus (juvenile turbot) LC_{50} toxicity tests; sediment toxicity refers to the Corophium volutator LC_{50} test.*

7.2.1.1.2 Biodegradation

Chemical biodegradation is assessed using the CEFAS criteria, which align with the categorisation outlined in the DMPE Environmental Risk Assessment of Chemicals used in WA Petroleum Activities Guideline.

CEFAS categorises biodegradation into the following groups:

- readily biodegradable: results of >60% biodegradation in 28 days to an OSPAR harmonised offshore chemical notification format (HOCNF) accepted ready biodegradation protocol
- inherently biodegradable: results of >20% and <60% to an OSPAR HOCNF accepted ready biodegradation protocol or result of >20% by OSPAR accepted inherent biodegradation study
- not biodegradable: results of <20% from OSPAR HOCNF accepted biodegradation protocol or inherent biodegradation protocol, or half-life values derived from aquatic simulation test indicate persistence.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Chemicals with >60% biodegradation in 28 days to an OSPAR HOCNF accepted ready biodegradation protocol are considered acceptable in terms of biodegradation.

7.2.1.1.3 Bioaccumulation

The bioaccumulation of chemicals is assessed using the CEFAS bioaccumulation criteria, which align with the categorisation outlined in the DMPE Environmental Risk Assessment of Chemicals used in WA Petroleum Activities Guideline.

The following guidance is used by CEFAS:

- Non-bioaccumulative: Log Pow <3, or bioconcentration factor ≤100 and molecular weight is ≥700.
- Bioaccumulative: Log Pow ≥3 or bioconcentration factor >100 and molecular weight is <700.

Chemicals that meet the non-bioaccumulative criteria are considered acceptable. If a product has no specific ecotoxicity, biodegradation or bioaccumulation data available, the following options are considered:

- Environmental data for analogous products can be referred to where chemical ingredients and composition are largely identical.
- Environmental data may be referenced for each separate chemical ingredient (if known) within the product.

7.2.1.1.4 Alternatives

If no environmental data are available for a chemical or if the environmental data does not meet the acceptability criteria outlined above, potential alternatives for the chemical will be investigated, with preference for options with an HQ band of Gold or Silver, or OCNS Group E or D with no substitution or product warnings.

7.2.1.1.5 Decision

Once the further assessment/ALARP justification has been completed, the relevant environment adviser must concur that the environmental risk as a result of chemical use is ALARP and acceptable.

7.2.2 Woodside invasive marine species risk assessment process

7.2.2.1 Objective and scope

To minimise the risk of IMS as a result of the Petroleum Activity, all applicable vessels and immersible equipment will be subject to Woodside's IMS risk assessment process (unless exempt as outlined below).

The objective of the process is to identify the level of threat a contracted project vessel, or immersible equipment, poses if no additional risk reduction management measures are implemented. This allows Woodside (and its contractors) to apply management options that are commensurate to the identified level of risk.

The IMS risk assessment process does not apply to:

- vessels or immersible equipment that do not plan to enter the IMS Management Area[63]
- 'new build' vessels or immersible equipment launched less than14 days before mobilisation

[63] *The IMSMA is defined as all nearshore waters around Australia, extending from the lowest astronomical tide mark to 12 NM from land ('Territorial Seas', and including Australian territorial islands). The IMSMA also includes: (i) all waters which are shallower than the 50 m depth contour outside of the 12 NM boundary, thereby encompassing submerged reefs and atolls, and (ii) Operational Areas defined in environmental approvals. The IMSMA is based on current maritime boundary definitions, legal frameworks and requirements, IMS risk interpretations and existing management arrangements applied by Commonwealth and state/territory regulatory agencies.*

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- locally sourced vessels or immersible equipment from within the Western Locally Sourced Zone[64]. Vessels, or immersible equipment are defined as locally sourced when the same supply facilities or port have been used since their last IMS inspection, full hull clean in dry dock, or application of AFC.

7.2.2.2 Risk assessment process

Woodside's IMS risk assessment process was developed by considering the national biofouling management guidelines for the petroleum production and exploration industry, and guidelines for the control and management of a ships' biofouling to minimise the transfer of invasive aquatic species (IMO, 2023).

To effectively evaluate the potential for vessels and immersible equipment to introduce IMS, a risk assessment process has been developed to score and evaluate the risk posed by each project vessel, or immersible equipment planning to undertake activities within an IMS Management Area (IMSMA) or Operational area. The risk assessment process considers a range of factors, as listed in Table 7-2 and Table 7-3.

The IMS risk assessments will be undertaken by a trained environment adviser who has completed relevant Woodside IMS training or by a qualified and experienced IMS inspector. Woodside implements a quality assurance and control process for all IMS risk assessments, where a secondary trained environment adviser verifies the assessment to minimise the risk of misapplication and errors within the process.

Table 7-2: Key factors considered as a part of the risk assessment process for vessels

Factors	Details
Vessel type	The risk of IMS infection varies depending on the type of vessel undertaking the activity. A higher risk rating is applied for more complex, slow-moving vessels (e.g. dredges) in comparison to simple vessels (e.g. crew transfer vessel).
Recent IMS inspection and cleaning history, including for internal niches	In the case of biofouling on external hull niches, different risk ratings are applied depending on whether out-of-water or in-water IMS inspections by qualified IMS inspectors and cleaning (if required) have been undertaken before the contract begins. If an IMS inspection (and clean if required) has not been undertaken in the past six months (from the time of contract start), the highest risk factor is applied. The risk factor then lessens for vessels as the time between inspection and mobilisation reduces.
Out-of-water period before mobilisation	A risk reduction factor can be applied for vessels that are hauled out then mobilised as deck cargo or by road during mobilisation, therefore becoming air dried over an extended period. The risk reduction factor increases with exposure time out of water.
Age and suitability of AFC at mobilisation date	AFC manufacturers provide a range of coatings, each designed to avoid premature coating failure if it is correctly applied and matched to the vessel's normal speeds and activity profile (i.e. proportion of time spent stationary or below three knots), and based on its main operational region (i.e. tropical, subtropical temperate). If the AFC type is deemed to be unknown, unsuited or absent, the highest risk value is applied. If the AFC type is suitable, the risk factor applied reduces with age since application.
Internal treatment systems	A risk reduction factor is applied if the vessel has an internal biological fouling control system in place at the time of assessment, or evidence of manual dosing.
Vessel origin and proposed area of operation	Risk ratings are assigned based on the climatic relationship between the vessel's origin and the climatic region of the proposed area of operation. The highest risk rating is applied to similar climatic regions.
Number of stationary/slow speed periods >7 days	A risk factor is calculated based on the number of seven-day periods the vessel has been stationary or operated at low speed (<three knots) in port or coastal waters, which is any waters <50 m deep outside 12 NM from land or any waters within 12 NM of land. The greater the number of periods, the higher the risk factor applied.
Region of stationary or slow periods	A further multiplier is applied depending on the location of the stationary/slow speed periods. The highest risk rating is applied if the stationary or slow speed periods occurred within ports or coastal waters of the same climatic region.

[64] The Western Locally Sourced Zone spans an area that includes the entire WA coastline out to the Exclusive Economic Zone limit at 200 NM, but it excludes any government-declared Quarantine Areas.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Factors	Details
Type of activity – contact with seafloor	The potential for introducing IMS varies on the planned vessel activity. Those activities that come in contact with sediments and thus have the potential to accumulate and harbour IMS in areas such as hoppers (dredges) and spud cans (drilling rigs) are considered to have a greater risk of infection.

Table 7-3: Key factors considered as a part of the risk assessment process for immersible equipment

Factors	Details
Region of deployment since last thorough clean, particularly coastal locations	Climatic region of use since last overhaul, thorough cleaning or prolonged period out of water (>28 days). The highest risk rating is applied to similar climatic regions and activities in nearshore areas (<50 m deep or within 12 NM from land).
Duration of deployments	Maximum duration of deployment (maximum time in water) since last overhaul or thorough cleaning. The longer the immersion period, the higher the risk rating applied.
Duration of time out of water since last deployment	A further risk reduction factor can be applied for immersible equipment that has been out of the water for an extended period.
Transport conditions during mobilisation	If the equipment is stored in damp conditions, a high risk factor is applied, while if equipment is stored in dry and well ventilated (low humidity) conditions, a low risk factor is applied.
Post-retrieval maintenance regime	A risk reduction factor is applied if the equipment/item of interest is routinely washed, cleaned, checked or dissembled between project sites, while a higher risk rating is applied where no routine cleaning occurs.

After implementing the risk assessment process, vessels and immersible equipment are classified as one of three risk categories:

- ‘low’ – low risk of introducing IMS of concern and hence no additional management required, or management options have been applied to reduce the risk
- ‘uncertain’ – risk of introducing IMS is not apparent and as such the precautionary approach is adopted, and additional management options may be needed
- ‘high’ – high risk of introducing IMS hence additional management options are needed before this vessel mobilises to the Operational area.

After allocating a ‘low’ risk rating for a vessel or immersible equipment, the information the vessel operator provides for the risk assessment must be confirmed before mobilisation. For vessels or equipment classified as posing an ‘uncertain’ or ‘high’ theoretical risk, a range of management options are presented to reduce this theoretical risk to acceptable levels and achieve a low risk status. These management options have been developed with the intention of reducing IMS risk to levels that are ALARP. It is a flexible approach that allows a range of management actions to be tailored for a specific vessel movement. These will be assessed on a case-by-case basis and may include:

- having a suitably qualified and experienced IMS inspector inspect (desktop, in-water or dry dock) to verify risk status; where practicable, the inspection shall occur within seven days (but not more than 14 days) before final departure to the Operational area
- applying in-water or dry dock cleaning of the hull and other niche areas, typically applied where the assessment outcome is ‘high’ risk driven by the age of the AFC on the vessel and its time spent in similar climatic region ports
- limiting the duration the vessel spends within the IMSMA to a maximum of 48 hours (cumulative entries); applicable for ‘uncertain’ risk vessels only
- rejecting the vessel.

In some circumstances, such as emergency scenarios or in the presence of serious logistic constraints or other factors outside of Woodside’s control, it may not be possible to effectively apply any of the IMS

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

management measures available and described above. In the absence of regulatory conditions, commitments or other legislative obligations that prescribe management measures for IMS, a risk-assessed alternative process is available. This must be approved by the relevant Business Vice President and the HSE Vice President.

Before they enter the Operational area, project vessels and immersible equipment must be a 'low' risk of introducing IMS.

7.2.3 Unexpected finds procedure

If what appears to be UCH (defined as 'any trace of human existence that has a cultural, historical or archaeological character and is located under water') is discovered, the following Unexpected Finds Procedure will apply:

- All activities with the potential to impact the suspected UCH must cease immediately. Retain all records of the potential UCH, including any imagery, description and location.
- The person who discovers the heritage object must inform the Activity Supervisor.
- The Activity Supervisor must notify Woodside's Principal Heritage Adviser.
- Woodside will specify an appropriate buffer around the potential UCH, considering the nature and scale of the potential UCH and the activities to be managed.
- No seabed disturbance may occur within the buffer area around the potential UCH until approved by Woodside's Principal Heritage Adviser.
- Woodside's Principal Heritage Adviser must notify a qualified underwater archaeologist and provide all available documentation of the potential UCH.
- If the potential UCH appears to be Aboriginal in origin, Woodside's Principal Heritage Adviser must notify the appropriate Traditional Custodians to determine whether it is a heritage site and if so, how the site should be managed.
- If the potential UCH appears to be a shipwreck or aircraft that has been wrecked for more than 75 years, or is otherwise reportable under Section 40 of the *Underwater Cultural Heritage Act 2018* (Cth), Woodside's Principal Heritage Adviser must notify the Minister responsible for the *Underwater Cultural Heritage Act*, the DCCEEW underwater archaeology section through the Australasian Underwater Cultural Heritage Database, and the Western Australian Museum.
- If the suspected heritage object includes human remains, Woodside's Principal Heritage Adviser must also notify:
  1– the Australian Federal Police (phone: 131 444) of the location of the remains, that the remains are likely to be historic or Aboriginal in origin, and that it may be appropriate for Traditional Custodians and a maritime archaeologist to be present during any handling of the remains
  2– the Office of the Federal Environment Minister in accordance with Section 20 of the *Aboriginal and Torres Strait Islander Heritage Protection Act* (Cth).
- Work must not restart in the vicinity of the potential heritage object until Woodside's Principal Heritage Adviser provides written approval. Woodside's Principal Heritage Adviser must only provide written approval once agreed management measures are implemented consistent with approvals and legislation, or where the potential UCH is confirmed to not be UCH.

7.2.4 Offshore Seabird Management Plan

Project vessels will implement Woodside's Offshore Seabird Management Plan (Offshore SBMP), which aligns with recommendations in the National Light Pollution Guidelines for Wildlife (DCCEEW, 2023). When implemented, the Offshore SBMP addresses seabird interaction reporting and management for offshore and inshore activities within the NWMR, specifically when the Petroleum Activity is within a nocturnal seabird species' BIA.

The purpose of the Offshore SBMP is to manage interactions with seabirds offshore to ensure any impacts and risks are reduced to ALARP and an acceptable level. The plan also provides frontline workers with

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

guidance to manage seabird interactions and potential impacts resulting from these interactions identified as occurring as a result of Woodside's activities, as demonstrated in Figure 7-2.

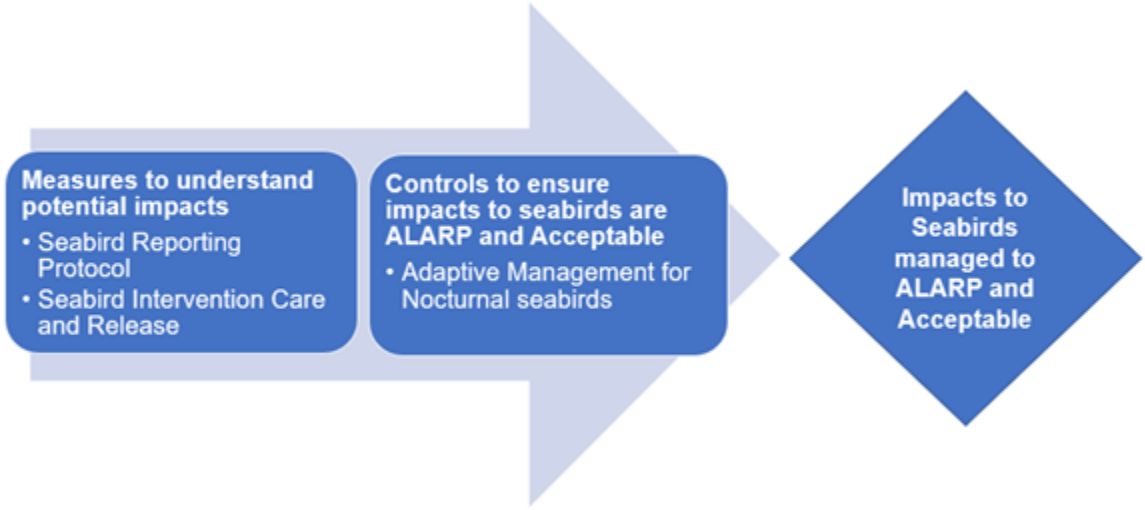


Figure 7-2: Schematic for Offshore Seabird Management Plan to manage seabird impacts to acceptable and as low as reasonably practicable levels

The Offshore SBMP adaptive management framework has been established to manage the uncertainty of the potential impacts of artificial night at light on nocturnal seabirds and is applied when a Project is within a nocturnal seabird BIA and greater than 20 km from a known rookery. Where interactions with nocturnal seabirds are identified, adaptive management controls under the Offshore SBMP may be triggered in a tiered approach.

This may include an initial assessment of:

- seabird species' important habitat proximity, life cycle seasonality, and periods of heightened sensitivity such as fledgling exodus
- overlap of seabird interactions and inclement weather; for example, post-cyclonic metocean conditions are known to increase seabird groundings.

And the possible controls and mitigation actions, for example:

- Extinguish outdoor/deck lights not necessary for but allowing safe operations and navigation at night.
- Use of block-out-blinds on portholes and windows not necessary for safety and/or navigation.

The Offshore SBMP will be available on board vessels during the Petroleum Activity. Vessel crew will be made aware of the Offshore SBMP through the campaign environment induction. This induction will include the requirement to report seabird sightings to the onshore Woodside Environment Advisor. The Offshore SBMP will be implemented by frontline personnel with support from Woodside activity focused Environmental Advisors, the Science team and a dedicated seabird subject matter expert.

7.3 Roles and responsibilities

Key roles and responsibilities for Woodside and contractor personnel relating to implementing, managing and reviewing this EP are described in Table 7-4. Roles and responsibilities for oil spill preparation and response are outlined in the Oil Pollution First Strike Plan (Appendix H) and the Woodside Incident Management Handbook.

All Woodside employees and contractors are responsible for implementing the Environment and Biodiversity Policy (Appendix A) in their areas of responsibility and to ensure the personnel are suitably trained and competent in their respective roles.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 7-4: Roles and responsibilities

Title (role)	Environmental responsibilities
All personnel	
All offshore-based personnel and onshore support personnel	• Understand the Woodside standards and procedures that apply to their area of work. • Understand the environmental risks and control measures that apply to their area of work. • Carry out assigned activities in accordance with approved procedures and the EP. • Follow instructions from the relevant supervisor with respect to environmental protection. • Cease operations that are deemed to present an unacceptable risk to the environment. • Participate in environmental assurance activities and inspections as required. • Prompt reporting of environmental hazards/incidents to their supervisor and assist in event investigation. • Attend HSE meetings, training and drills when required.
Office-based personnel	
Woodside Superintendent	• Monitor and manage the Petroleum Activity so it is performed as per the relevant standards and commitments in this EP and approval conditions. • Notify the Woodside Environment Adviser in a timely manner of any scope changes. • Liaise with regulatory authorities as required. • Review this EP as necessary and manage change requests. • Provide enough resources to implement permanent plugging-related management measures (i.e. controls, EPOs, PSs and MC) in this EP. • Ensure LWIV and support vessel personnel are given an HSE induction, as per Section 7.4.2 of this EP, at the start of the LWI activity. • Verify that contractors meet environmental-related contractual obligations. • Confirm controls and performance standards in this EP are actioned, as required, before LWI begins. • Ensure the LWIV start-up meets the requirements of the manage campaign operations process. • Confirm environmental incident reporting meets regulatory requirements (as outlined in this EP) and Woodside's HSE Reporting and Investigation Procedure. • Monitor and close out corrective actions identified during environmental monitoring or audits.
Woodside Head of Projects/ Region (Global Wells and Seismic)	• Ensure LWI operations are undertaken as per this EP and approval conditions. • Provide enough resources to implement the LWI-related management measures (i.e. controls, EPOs, EPSs and MC) in this EP. • Ensure LWIV and support vessel personnel are given an HSE induction, as per Section 7.4.2 of this EP, at the start of the LWI activity. • Confirm controls and EPSs in this EP are actioned, as required, before LWI operations.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Title (role)	Environmental responsibilities
Intervention Engineering Manager	• Monitor and manage the Petroleum Activity so it is performed as per the relevant standards and commitments in this EP and approval conditions. • Notify the Woodside Environment Adviser in a timely manner of any scope changes. • Liaise with regulatory authorities as required. • Provide enough resources to implement the subsea-related management measures (i.e. controls, EPOs, EPSs and MC) in this EP. • Ensure vessel personnel are given an HSE induction, as per Section 7.4.2 of this EP, at the start of the activities. • Verify that contractors meet environment-related contractual obligations. • Confirm controls and EPSs in this EP are actioned, as required, before activities begin. • Ensure relevant vessels meet the requirements of Woodside's Marine Operations Operating Standard. • Review this EP and manage change requests for the Petroleum Activity. • Confirm site-based personnel are given an HSE induction, as per Section 7.4.2 of this EP, at the start of the activity. • Ensure all project fluids to be discharged are assessed and approved as per the requirements of the EP. • Confirm environmental incident reporting meets regulatory requirements (as outlined in this EP) and Woodside's HSE Reporting and Investigation Procedure. • Monitor and close out corrective actions identified during environmental monitoring or audits.
Woodside Drilling, Completion and Subsea Engineers	• Ensure changes to the LWI activities are communicated to the Woodside Environmental Adviser. • Ensure well intervention fluid chemical components and other fluids that may be used have been assessed and approved by the Environmental Adviser.
Woodside Environmental Adviser	• Verify relevant environmental approvals for the activities exist before starting. • Track compliance with EPOs and EPSs as per the requirements of this EP. • Prepare the environmental component of the relevant induction package. • Assist with the review, investigation and reporting of environmental incidents. • Ensure environmental monitoring and inspections/audits are performed as per the requirements of this EP. • Liaise with relevant regulatory authorities as required. • Assist in preparing required external regulatory reports, in line with environmental approval requirements and Woodside incident reporting procedures. • Monitor and close out corrective actions (Environmental Compliance and Action Register) identified during environmental monitoring or audits. • Advise relevant Woodside personnel and contractors to help them understand their environment responsibilities. • Liaise with contractors to ensure communication and understanding of environment requirements as outlined in this EP.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Title (role)	Environmental responsibilities
Woodside Corporate Affairs Adviser	• Prepare and implement the consultation strategy for the Petroleum Activity. • Report on stakeholder consultation. • Continuously liaise and provide notification as required as outlined in the EP.
Woodside Marine Assurance Superintendent	• Conduct relevant audit and inspection to confirm support vessels comply with relevant Marine Orders and Woodside Marine Charters Instructions requirements to meet safety, navigation and emergency response requirements.
Corporate Incident Management Team (CIMT) Incident Commander	On receiving notification of an incident: • establish and take control of the Incident Management Team (IMT) and establish an appropriate command structure for the incident • assess the situation, identify risks and actions to minimise the risk • communicate impact, risk and progress to the Crisis Management Team and stakeholders • develop the Incident Action Plan, including objectives for action • approve, implement and manage the Incident Action Plan • communicate within and beyond the incident management structure • manage and review the safety of responders • address the broader public safety considerations • conclude and review activities.
LWIV based personnel	
Vessel Master (LWIV)	• Ensure personnel starting work on the vessel receive an environmental induction that meets the relevant requirements specified in this EP. • Ensure personnel are competent to perform the work they have been assigned. • Verify SOPEP drills are conducted as per the vessel's schedule. • Ensure the vessel Emergency Response Team has enough training to implement the SOPEP. • Ensure any environmental incidents or breaches of relevant EPOs or EPSs detailed in this EP are reported immediately to the Woodside Well Site Leader. • Ensure corrective actions for incidents or breaches are developed, communicated to the Well Site Leader, and tracked to closeout in a timely manner. Ensure closeout of actions is communicated to the Well Site Leader. • Ensure waste is managed on the LWIV as per the vessel’s Waste Management Plan.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Title (role)	Environmental responsibilities
LWIV Offshore Construction Manager (OCM)	• Ensure the WIV's management system and procedures are implemented. • Ensure personnel starting work on the WIV receive an environmental induction that meets the requirements specified in this EP. • Ensure personnel are competent to perform the work they have been assigned. • Verify that emergency drills are conducted as per the WIV's schedule. • Ensure the WIV's Emergency Response Team has been given sufficient training to implement the WIV's SOPEP. • Ensure any environmental incidents or breaches of outcomes or standards are reported immediately to the Well Site Manager. • Ensure corrective actions for incidents or breaches are developed, communicated to the Well Site Manager, and tracked to close-out in a timely manner.
Woodside Well Site Leader	• Ensure the well intervention program is performed as detailed in this EP. • Ensure the management measures (i.e. controls, EPOs, PSs and MC) detailed in this EP (relevant to offshore activities) are implemented on the WIV (other controls will be implemented onshore). • Ensure environmental incidents or breaches of outcomes or standards are reported as per the Woodside Corporate Event Notification Matrix. Ensure corrective actions for incidents and breaches are developed, tracked and closed out in a timely manner. • Ensure actions related to HSE initiatives are performed. • Ensure periodic environmental inspections/reviews are completed. Ensure corrective actions from inspections are developed, tracked and closed out in a timely manner.
Woodside Offshore HSE Advisor	• Support the Well Site Leader to ensure the controls detailed in this EP relevant to offshore activities are implemented on the LWIV and help collect and record evidence of implementation (other controls are implemented and evidence collected onshore). • Support the Well Site Leader to ensure the EPOs are met and the EPSs detailed in this EP are implemented on the LWIV. • Support the Well Site Leader to ensure environmental incidents or breaches of outcomes or standards outlined in this EP, are reported, and corrective actions for incidents and breaches are developed, tracked and closed out in a timely manner. • Ensure periodic environmental inspections/reviews are completed and corrective actions from inspections are developed, tracked and closed out in a timely manner. • Review contractors' procedures, input into Toolbox talks and JSAs. • Provide day-to-day environmental support for activities in consultation with the Woodside Environment Adviser.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Title (role)	Environmental responsibilities
Support vessel-based personnel	
Vessel Master	• Ensure personnel starting work on the vessel receive an environmental induction that meets the relevant requirements specified in this EP. • Ensure personnel are competent to perform the work they have been assigned. • Verify SOPEP drills are conducted as per the vessel's schedule. • Ensure the vessel Emergency Response Team has enough training to implement the SOPEP. • Ensure any environmental incidents or breaches of relevant EPOs or EPSs detailed in this EP are reported immediately to the Woodside Well Site Leader. • Ensure corrective actions for incidents or breaches are developed, communicated to the Well Site Leader, and tracked to closeout in a timely manner. Ensure closeout of actions is communicated to the Well Site Leader.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

7.4 Training and competency

7.4.1 Overview

As part of its contracting process, Woodside assesses a proposed contractor's environmental management systems to determine the level of compliance with Australian/New Zealand Standard International Organization for Standards 14001. This assessment is performed for the Petroleum Activity as part of pre-mobilisation. The assessment determines whether there is a clearly defined organisational structure that sets out the roles and responsibilities for key positions. It also assesses whether there is an up-to-date training matrix that defines any corporate and site- or Petroleum Activity-specific environmental training and competency requirements.

As a minimum, environmental awareness training is required for all personnel, detailing awareness and compliance with the contractor's environmental policy and Environmental Management System.

7.4.2 Inductions

Inductions are provided to all relevant personnel (e.g. contractors and Woodside representatives) before mobilising to or on arrival at the Petroleum Activity location. The induction covers the HSE requirements and environmental information specific to the Petroleum Activity location. Attendance records will be maintained.

The induction may include:

- description of the Petroleum Activity
- ecological and socioeconomic values of the Petroleum Activity location
- regulations relevant to the Petroleum Activity
- Woodside's Environmental Management System –Environment and Biodiversity Policy
- EP importance, structure, implementation, roles and responsibilities
- main environmental aspects/hazards and potential environmental impacts and related EPOs
- oil spill preparedness and response
- monitoring and reporting on EPOs and EPSs using MC
- incident reporting.

7.4.3 Petroleum Activity-specific environmental awareness

Before starting a LWI campaign, a pre-activity meeting will be held aboard the LWIV with all relevant personnel. The pre-activity meeting provides an opportunity to reiterate environmental sensitivities or commitments associated with the Petroleum Activity. Relevant sections of the pre-activity meeting will also be communicated to the support vessel personnel. Attendance lists are recorded and retained.

During operations, regular HSE meetings will be held. During these meetings, recent environmental incidents are reviewed and awareness material is presented.

7.4.4 Management of training requirements

All personnel on the project vessels must be competent to perform their assigned positions. This may be in the form of external or 'on the job' training. The vessel Safety Training Coordinator (or equivalent) is responsible for identifying training needs, keeping records of training performed and identifying minimum training requirements.

7.5 Monitoring, auditing, and managing non-conformance and review

7.5.1 Monitoring

Regulation 22(5) of the Environment Regulations states the implementation strategy is to provide for sufficient monitoring, recording, auditing, managing non-conformance and reviewing titleholders'

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

environmental performance and the implementation strategy itself to ensure that the EPOs and EPSs in the EP are being met.

This section of the EP outlines the measures undertaken by Woodside to regularly monitor the management of environmental risks and impacts of the Petroleum Activity against the EPOs, EPSs and MC, with a view to continuously improve environmental performance. The effectiveness of the implementation strategy is also reviewed periodically as part of the monitoring and assurance process.

A key tool that is used when implementing the EP is Woodside's Environmental Compliance and Action Register. This is an internal tool that is developed at EP acceptance and is maintained until the EP is closed. The register contains all the commitments, controls, EPSs and MC from the EP and tracks compliance against each of these items. Before a project vessel is mobilised, Woodside confirms the compliance systems in place on the vessel and identifies, and records in the Environmental Compliance and Action Register, the specific records the vessel contractor shall provide during the offshore campaign. This provides Woodside with the opportunity to confirm the records provided during the Petroleum Activity are sufficient for demonstrating compliance against the EP. It also serves as a central repository for compliance information relevant to each Petroleum Activity.

7.5.2 Auditing

Environmental performance will be audited to:

- identify potential new or changes to existing environmental impacts and risk, and methods for reducing those to ALARP
- confirm mitigation measures detailed in this EP are effectively reducing environmental impacts and risk, that mitigation measures proposed are practicable and provide appropriate information to verify compliance
- confirm compliance with the controls, EPOs and EPSs detailed in this EP.
- internal auditing will be performed to cover each key project activity as summarised below.

7.5.2.1 Light well intervention vessel activities

Internal auditing is performed on an LWIV-specific schedule rather than to align with the Petroleum Activity. This enables continuous review and improvement of environmental performance over the term of the LWIV contract. The following internal audits, inspections and reviews will be performed to review the environmental performance of the activities:

- Survey environment equipment for a newly contracted LWIV (if not previously contracted to Woodside within the last two years). An environment equipment survey scope typically includes environmental discharge control (including drainage management) and loss of containment management.
- Complete an environmental inspection (conducted by offshore Woodside personnel or a delegate) during a LWI campaign, which may include verifying:
  1– bunkering/transfers between support vessels and the LWIV
  2– environment containment, including chemical storage, spill response equipment and housekeeping
  3– general LWIV environment risks, including waste management, drilling fluids oil/water separation, and inspection of subsea and moonpool areas.
- Perform an environment audit during a LWI campaign, while the LWIV is on location (by a Woodside Environment Adviser or delegate), which may include:
  1– operational compliance audits relevant to environmental risk of activities, which may include compliance with training commitments, discharge requirements, bunkering activities, verification of use of approved chemicals, and satisfactory closeout of items from previous audits
  2– inspection of selected risk areas/activities, determined by risk, previous incidents or operation-specification requirements.

The timing and frequency of LWIV activity inspections and audits will be commensurate with the LWIV campaign. For example, a short duration campaign (i.e. less than approximately 2 months) may only require

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

one environmental inspection/audit covering a combination of aspects determined by risk, previous incidents or operation specific requirements.

Audit findings relevant to continuously improving environmental performance will be tracked through the LWIV or vessel compliance action register, a contractor register between the LWIV operator or vessel contractor and Woodside.

7.5.2.2 Marine assurance

Woodside's marine assurance is managed by the Marine Assurance Team of the Logistics Function in accordance with Woodside's Offshore Vessel Assurance Standard. Woodside's process is based on industry standards and on guidelines and recommendations from recognised industry organisations such as Oil Companies International Marine Forum and International Maritime Contractors Association.

The process is mandatory for all project vessels (other than tankers and FPSOs) hired for Woodside operations, including for short-term hires (i.e. less than three months). It defines applicable marine assurance activities, ensuring all project vessel operators operate seaworthy vessels that meet the requirements for a defined scope of work and are managed with a robust safety management system.

The process is multi-faceted and encompasses the following marine assurance activities:

- offshore vessel management system assessment
- DP system verification
- vessel inspections
- Offshore Vessel Inspection Database or condition and suitability assessment
- project support for tender review, evaluation and pre- and post-contract award.

Vessel inspections are used to verify actual levels of compliance with the company's Safety Management System, the overall condition of the vessel, and the status of the planned maintenance system onboard. Woodside's Marine Assurance Specialist will conduct a risk assessment on the vessel to determine the level of assurance applied and the type of vessel inspection required.

Methods of vessel inspection may include:

- Woodside Marine Vessel Inspection
- Oil Companies International Marine Forum Offshore Vessel Inspection Database Inspection
- International Marine Contractors Association Common Marine Inspection Document Inspection
- Marine Warranty Survey.

Upon completion of the marine assurance process, to confirm identified concerns are addressed appropriately and conditions imposed are managed, the Woodside Marine Assurance Team will issue the vessel a statement of approval. Should a vessel not meet the requirements of the Woodside marine offshore vessel assurance process and be rejected, there does exist an opportunity to further scrutinise the proposed vessel.

If a vessel inspection or offshore vessel management system assessment verification review is not available, and all reasonable efforts based on time and resource availability have been made to complete this (e.g. short-term vessel hire), the Marine Assurance Specialist Offshore may approve the use of an alternative means of inspection, known as a risk assessment.

7.5.2.3 Risk assessment

Woodside conducts a risk assessment of project vessels where either an offshore vessel management system assessment verification review or a vessel inspection cannot be completed. This is not a regular occurrence and is typically used when the requirements of the assurance process are unable to be met or the processes detailed are not applicable to a proposed vessel. The marine vessel risk assessment will be conducted by a Marine Assurance Specialist, where the vessel meets the short-term hire prerequisites.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

The risk assessment is a semi-quantitative method of determining what further assurance process activity, if any, is needed to assure a project vessel for a particular task or role. The process compares the level of management control a project vessel is subject to against the risk factors associated with the activity or role.

several factors are assessed as part of a vessel risk assessment, including:

- management control factors:
  1– company audit score (i.e. management system)
  2– vessel HSE incidents
  3– vessel Port State Control deficiencies
  4– instances of Port State Control vessel detainment
  5– years since previous satisfactory vessel inspection
  6– age of vessel
  7– contractors' prior experience operating for Woodside
- activity risk factors:
  1– people health and safety risks, a function of the nature of the work and the area of operation
  2– environmental risks, a function of environmental sensitivity, activity type and magnitude of potential environment damage (e.g. largest credible oil spill scenario))
  3– value risk, likely time and cost consequence to Woodside if the vessel becomes unusable
  4– reputation risk
  5– exposure to risk based on the duration of the project
  6– industrial relations risk.

The acceptability of the vessel or requirement for further vessel inspections or audits is based on the ratio of vessel score to activity risk. If the vessel management control is not deemed to appropriately manage activity risk, a satisfactory company audit and vessel inspection may be needed before awarding work.

The risk assessment is valid for the period a vessel is on hire and for the defined scope of work.

7.5.3 Management of non-conformance

Woodside classifies non-conformances with EPOs and EPSs in this EP as environmental incidents. Woodside employees and contractors are required to report all environmental incidents, and these are managed as per Woodside's HSE Event Reporting and Investigation Procedure, which includes learning requirements.

An internal computerised database called First Priority is used to record and report these incidents. Details of the event, immediate action taken to control the situation, investigation outcomes and corrective actions to prevent recurrence are all recorded. Corrective actions are monitored using First Priority and closed out in a timely manner.

Woodside uses a consequence matrix to classify environmental incidents, with the significant categories being A, B and C. Detailed investigations are completed for all categories A, B, C and high potential environmental incidents.

7.5.4 Review

7.5.4.1 Management review

Within the Environment teams, the effectiveness of the EP implementation strategy is regularly reviewed at a frequency commensurate with the Petroleum Activity duration and risk. This review may consider:

- LWI key performance indicators
- effectiveness of tools and systems to monitor environmental performance

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- lessons learned about implementation tools and throughout each campaign
- reviews of oil spill arrangements and testing are performed in accordance with this EP.

Within each Asset Team, Project Team or Business Unit, managers review environmental performance regularly, usually though incident and event reporting and monthly HSE reports. The outcome of such reviews will inform whether further action is needed to address key or recurring environmental performance matters.

7.5.4.2 Learning and knowledge sharing

Learning and knowledge sharing occurs via several methods, including:

- event investigations
- event bulletins
- after-action review conducted at the end of each well, including review of environmental incidents as relevant
- ongoing communication with vessel operators
- formal and informal industry benchmarking
- cross-asset learnings
- engineering and technical authorities discipline communications and sharing.

7.5.4.3 Review of impacts, risks and controls across the life of the Environment Plan

Where activities described in this EP do not occur continuously or sequentially, before recommencing activities after a period greater than 12 months, impacts, risks and controls will be reviewed.

The process will identify or review impacts and risks associated with the newly-recommencing activity, and will identify or review controls to ensure impacts and risks remain or are reduced to ALARP and acceptable levels. Information from previous activities conducted under this EP will be considered. Controls that have previously been excluded based on proportionality will be reconsidered. Any required changes will be managed by the MOC process outlined in Section 7.8.

7.6 Management of knowledge

Knowledge relevant to the existing environment is reviewed to identify changes relating to the understanding of the environment or legislation that supports the risk and impact assessments for EPs (in-force and in-preparation). New knowledge checks take place both routinely, primarily via quarterly and annual knowledge reviews, and ad hoc (as information is obtained), and encompasses the following topics:

- environmental science – update checks conducted via desktop reviews: scientific literature, government publications and Woodside supported publications and studies relating to existing environment topics (including species and habitats), EPBC Act Matters of National Environmental Significance (Part 3) and Part 13 statutory instruments
- socioeconomic environment and stakeholder information – update checks conducted via desktop reviews: scientific literature, government publications and Woodside consultation
- environmental legislation – monitoring of emerging regulatory changes and the subsequent management of regulatory change, as outlined in Regulatory Compliance Our Expectations .

A management of knowledge tracker is maintained to record reviews and updates. Communication of relevant new knowledge is addressed at the EP regular cross team environment meetings where changes in knowledge prompt a consideration of MOC. This is actioned and documented appropriately.

The frequency and documentation of reviews, communication of relevant new knowledge and consideration of MOC are documented in the WMS EP Guideline.

Any relevant new information about cultural values and heritage will be assessed using the EP MOC process.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Under the oil spill Operational and Scientific Monitoring Program, an annual review and update to the environmental baseline studies database is completed and documented. Periodic location-focused environmental studies and baseline data gap analyses are completed and documented. Any subsequent studies scoped and executed as a result of such gap analysis are managed by the Biodiversity and Science Team and tracked via the Corporate Environment Baseline Database.

7.7 Management of Newly Identified Impacts and Risks

New sources of receptor based impacts and risks identified through monitoring and auditing systems and tools and the Woodside Environment Knowledge Management System are assessed using the Change Management Process.

7.8 Management of change and revision

7.8.1 Environment Plan management of change

Changes are managed in accordance with Woodside's Environmental Approval Requirements Australia Commonwealth Waters Guideline. Changes relevant to the scope of the Petroleum Activity described in this EP – including review of advances in technology at stages where new equipment may be selected such as vessel contracting; changes in understanding of the environment, EPBC Act listed threatened and migratory species status, Part 13 statutory instruments (recovery plans, threat abatement plans, conservation advice, wildlife conservation plans) and current requirements for AMPs; and potential new advice from external stakeholders – will be managed in accordance with section 39 of the Environment Regulations.

Risk will be assessed in accordance with the environmental risk management methodology detailed in this EP to determine the significance of any potential new environmental impacts or risks not provided for in this EP. Risk assessment outcomes are reviewed in compliance with section 39 of the Environment Regulations.

Minor changes where a review of the Petroleum Activity and the environmental risks and impacts of the Petroleum Activity do not trigger a requirement for a formal revision under section 39 of the Environment Regulations, will be considered a 'minor revision'. Minor administrative changes to this EP, where an assessment of the environmental risks and impacts is not required (e.g. document references, phone numbers), will also be considered a 'minor revision'. Minor revisions as defined above will be made to this EP using Woodside's document control process. Minor revisions will be tracked in an MOC Register to ensure visibility of cumulative risk changes, as well as enable internal EP updates/reissuing as required. This document will be made available to NOPSEMA during regulator environment inspections.

7.8.2 Oil Pollution Emergency Plan management of change

Relevant documents from the OPEP will be reviewed in the circumstances of:

- implementation of improved preparedness measures
- a change in the availability of equipment stockpiles
- a change in the availability of personnel that reduces or improves preparedness and the capacity to respond
- the introduction of a new or improved technology that may be considered in a response for this Petroleum Activity
- to incorporate, where relevant, lessons learned from exercises or events
- if national or state response frameworks and Woodside's integration with these frameworks changes.

Where changes are required to the OPEP, based on the outcomes of the reviews described above, they will be assessed against Regulation 38 and 39 of the Environment Regulations to determine if EP, including OPEP, resubmission is required. Changes with potential to influence minor or technical changes to the OPEP are tracked in MOC records and project records and incorporated during internal updates of the OPEP.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

7.9 Record keeping

Woodside will maintain compliance records referenced in the MC contained within Sections 6.6 and 6.7 of this EP. Many of the MC refer to 'records', which in this context Woodside considers to mean any hard or soft copy of information such as data, observations, certifications or photographs that can show a point in time and can be duplicated, such that they can be stored in compliance systems and provided to internal and external auditors (i.e. NOPSEMA) on request.

Record keeping will be in accordance with regulation 22(6), which addresses maintaining records of emissions and discharges.

7.10 Ongoing consultation

Although consultation for the purpose of regulation 25 is complete, in accordance with regulation 22(15) of the Environment Regulations, the implementation strategy must provide for appropriate consultation with relevant authorities of the Commonwealth, a State or Territory and other relevant interested persons or organisations.

Woodside proposes to engage with relevant interested persons or organisation throughout the life of the EP. Recent new information identified during ongoing consultation will be assessed as appropriate.

Woodside hosts community forums at which members are regularly provided updates on Woodside activities (for example, at community reference group meetings). Representatives who are at those meetings are from community and industry and include Woodside, state government (for instance, relevant regional development commissions), local government, Indigenous groups, industry representative bodies, community and industry organisations.

Relevant persons and those who are simply interested in the Petroleum Activity, can otherwise remain up-to-date on the Petroleum Activity through subscribing to the Woodside website, or by reading the publicly available version of the EP on NOPSEMA's website, where available.

Should consultation feedback be received after EP acceptance that identifies relevant new information, or a measure or control that requires implementation or update to meet the intended outcome of consultation, Woodside will apply its EP management of knowledge process (Section 7.6) and MOC process (Section 7.8) as appropriate.

Woodside supports ongoing engagement with Traditional Custodians, which complies with Woodside policies, strategies and procedures and is directly informed by feedback from Traditional Custodians.

It provides a mechanism for ongoing dialogue so Traditional Custodians can, on an ongoing basis, provide Woodside with feedback relating to the Petroleum Activity and in relation to caring for and managing Country, including Sea Country. The approach will be tailored to each Traditional Custodian group and may include, as agreed with relevant Traditional Custodians:

- social investment to support Indigenous ranger programs
- support for Indigenous oil spill response capabilities
- support for recording Sea Country values
- support to Traditional Custodian groups to build capabilities and capacity with respect to ability to engage with Woodside and the broader oil and gas industry on activities
- development of ongoing relationships with Traditional Custodian groups
- any other initiatives proposed for protecting Country, including cultural values.

At the time of EP submission, a number of specific activities as part of ongoing consultation regarding the Petroleum Activity are planned with Traditional Custodians. Where Traditional Custodian relevant persons have requested information or further engagement considered as ongoing consultation, but have not requested a framework agreement, these requests have been captured in Table 7-5. However, a framework agreement may still be initiated by these groups at any time.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 7-5: Ongoing consultation engagements

Report/ information	Recipient	Purpose	Frequency	Content
Notification (email)	AHO	As requested by AMSA and AHO during consultation	Notify AHO no less than four weeks prior to the commencement of the first activity, and then subsequently when vessels are undertaking activities within the Operational Area for more than three weeks at a time.	PS 1.3.1 (Section 6.6.1) Date of activity start and duration
Notification (email)	AMSA	As requested during consultation	Notify AMSA's JRCC at least 24 to 48 hours, where operationally practicable, before operations commence.	PS 1.5.1 (Section 6.6.1) Date of activity start and end
Notification (email)	AFMA. ASBTIA. CFA, DAFF-Fisheries, DPIRD, Recfishwest, Tuna Australia, WAFIC	Standard practice	Notify at least 10 days prior to commencement and following completion of first activity, and then subsequently when vessels are undertaking activities within the Operational Area for more than three weeks at a time. .	PS 1.4.1 (Section 6.6.1) Date of activity start and end
Notification of significant change (email)	All relevant persons	Standard practice (when notification of significant change is needed)	As required	PS 1.4 (Section 6.6.1) Notification of significant change
Emails/ meetings	Persons or organisations who provide feedback to Woodside post EP submission	Identification, assessment and consideration of feedback, claims and/or objections	As appropriate	Assessment of claims and/or objections Relevant new information will be assessed using the EP management of knowledge (Section 7.6) and MOC (refer to Section 7.8) processes
Notification (email)	Australasian Underwater Cultural Heritage Database Any other stakeholders as required in the Unexpected Finds Procedure (Section 7.2.3)	Report any unexpected find of potential Underwater Cultural Heritage	If triggered by Unexpected Finds Procedure (7.2.3)	Refer to Unexpected Finds Procedure (Section 7.2.3 and PS 3.1.1)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Report/ information	Recipient	Purpose	Frequency	Content
Various forms of engagement including but not limited to emails, phone calls and meetings.	Relevant cultural authorities who provide information to Woodside following submission,	Identification, assessment and consideration of cultural values relevant to the Petroleum Activity.	When engaged or as appropriate.	Relevant new information on cultural values received by Woodside will be assessed using the EP Management of Knowledge (Section 7.6) and Management of Change Process (Section 7.8)

7.11 Reporting

To meet the EPOs and EPSs outlined in this EP, Woodside reports at a number of levels, as outlined in the next sections.

7.11.1 Routine reporting (internal)

7.11.1.1 Regular health, safety and environment meetings

The LWIV and support vessel will hold regular HSE meetings that cover all crews. During these meetings, environmental incidents will be reviewed, and awareness material presented. All personnel are required to attend the HSE meetings and attendance records are managed by the contractor. Daily meetings held aboard the project support vessel will also serve to reinforce environmental awareness during the Petroleum Activity.

Dedicated HSE meetings will also be held with the offshore and Perth-based management to address targeted HSE incidents and initiatives.

7.11.1.2 Performance reporting

Monthly and quarterly performance reports are developed and reviewed by the Function and Business Unit Leadership teams. These reports cover several subject matters, including:

- HSE incidents (including high potential incidents and those related to this EP) and recent activities
- corporate key performance indicator targets, which include environmental metrics
- outstanding actions as a result of audits or incident investigations
- technical highlights and lowlights.

7.11.2 Routine reporting (external)

7.11.2.1 Start and end notifications of the Petroleum Activity

In accordance with regulation 54, Woodside will notify NOPSEMA of the start of the Petroleum Activity at least 10 days before it starts and will notify NOPSEMA in writing within 10 days of completing the Petroleum Activity.

7.11.2.2 Environmental performance review and reporting

In accordance with applicable environmental legislation for the Petroleum Activity, Woodside is required to report information about environmental performance to the appropriate regulator. Regulatory reporting requirements are summarised in Table 7-6.

Table 7-6: Routine external reporting requirements

Report	Recipient	Frequency	Content
Monthly Recordable Incident Reports (Appendix D)	NOPSEMA	Monthly, by the 15th of each month	Details of recordable incidents that have occurred during the Petroleum Activity for previous month (if

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Report	Recipient	Frequency	Content
			applicable). See 7.11.4.2 for more details.
Environmental Performance Report	NOPSEMA	Annually, with the first report submitted within 12 months of the start of the Petroleum Activity covered by this EP, as per the requirements of regulation 22(7)	Compliance with EPOs and EPSs outlined in this EP, in accordance with the Environment Regulations

7.11.2.3 End of the Environment Plan

The EP will end when Woodside notifies NOPSEMA that the Petroleum Activity has ended and all the obligations identified in this EP have been completed, and NOPSEMA has accepted the notification, in accordance with regulation 46 of the Environment Regulations.

7.11.3 Incident reporting (internal)

It is the responsibility of the Woodside Project Manager to ensure reporting of environmental incidents meets Woodside and regulatory requirements, as detailed in the Woodside HSE Event Reporting and Investigation Work Instruction and this section of the EP.

7.11.4 Incident reporting (external) – Reportable and recordable

7.11.4.1 Reportable incidents

Definition

A reportable incident is defined under regulation 5 of the Environment Regulations as: ‘an incident relating to the activity that has caused, or has the potential to cause, moderate to significant environmental damage’.

A reportable incident for the Petroleum Activity is an incident that:

- has caused environmental damage with a consequence level of Moderate (C) or above (as defined under Woodside’s Risk Table, Section 2.3.6)
- has the potential to cause environmental damage with a consequence level of Moderate (C) or above (as defined under Woodside’s Risk Table, Section 2.3.6).

The environmental risk assessment for the Petroleum Activity identifies those risks with a potential consequence level of Moderate (C) or above for environment. The incidents that have the potential to cause this level of impact are:

- an accidental loss of hydrocarbons from a wellbore release (Section 6.7.2)
- an accidental loss of hydrocarbons from a vessel collision (Section 6.7.3)

Any such incidents represent potential events that would be reportable incidents. Incidents are reported with consideration of NOPSEMA’s Guidance Note (N-03300-GN2303 A1179039) (NOPSEMA, 2026), stating “if in doubt, notify NOPSEMA”, and assessed on a case-by-case basis to determine if they trigger a reportable incident as defined in this EP and by the Environment Regulations.

Notification

NOPSEMA will be notified of all reportable incidents, according to the requirements of regulations 47, 48 and 49 of the Environment Regulations. Woodside will:

- report all reportable incidents to the regulator (orally) as soon as practicable, but within two hours of the incident or of its detection by Woodside

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- provide a written record of the reported incident to NOPSEMA, the National Offshore Petroleum Titles Administrator (NOPTA) and the department of the responsible State Minister (DMPE) as soon as practicable after orally reporting the incident
- complete a written report for all reportable incidents using a format consistent with the NOPSEMA form FM0831 – Reportable Environmental Incident (Appendix D), which must be submitted to NOPSEMA as soon as possible, but within three days of the incident or of its detection by Woodside
- provide a copy of the written report to NOPTA and DMPE, within seven days of the written report being provided to NOPSEMA.

AMSA will be notified of oil spill incidents as soon as possible after their occurrence, and DCCEEW notified if MNES are to be affected by it.

7.11.4.2 Recordable incidents

Definition

A recordable incident as defined under regulation 5 of the Environment Regulations is an incident arising from the Petroleum Activity (for which there is an environment plan in force) that is a 'breach of an environmental performance outcome for the activity, or an environmental performance standard relating to the activity, that is not a reportable incident'.

Notification

NOPSEMA will be notified of all recordable incidents, according to the requirements of regulation 50(2)(b) of the Environment Regulations, no later than 15 days after the end of the calendar month using the NOPSEMA form – Recordable Environmental Incident Monthly Summary Report (Appendix D), detailing:

- all recordable incidents that occurred during the calendar month
- all material facts and circumstances concerning the recordable incidents that the titleholder knows or is able, by reasonable search or enquiry, to find out
- any action taken to avoid or mitigate adverse environment impacts of the recordable incidents
- the corrective action that has been taken, or is proposed to be taken, to stop, control or remedy the recordable incident
- the action that has been taken, or is proposed to be taken, to prevent a similar incident occurring in the future.

7.11.4.3 Other external incident reporting requirements

In addition to the notification and reporting of environmental incidents defined under the Environment Regulations and Woodside requirements, Table 7-7 describes the incident reporting requirements that also apply in the Operational area.

The pollution activities that should also be reported to AMSA's JRCC by Vessel Master are:

- any loss of plastic material
- garbage disposed of in the sea within 12 NM of land (garbage includes food, paper, bottles and such)
- any loss of hazardous materials.

For oil spill incidents, other agencies and organisations will be notified as appropriate to the nature and scale of the incident, as per procedures and contact lists in the Hydrocarbon Spill Australia Regulatory Framework[65] and the Oil Pollution First Strike Plan (Appendix H).

[65] *In accordance with section 56 of the Environment Regulations, references to the Woodside Hydrocarbon Spill Australia Regulatory Framework within this EP refer to Appendix K of the North West Shelf Phase 1 Plug and Abandonment and TPA03 Well Intervention EP, which is available on NOPSEMA's website using the following link: https://docs.nopsema.gov.au/A1282745.*

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 7-7: External incident reporting requirements

Event	Responsibility	Notifiable party	Notification requirements	Contact	Contact detail
Any marine incidents during the Petroleum Activity	Vessel Master	AMSA's JRCC	Incident Alert Form 18 as soon as reasonably practicable. Within 72 hours after becoming aware of the incident, submit Incident Report Form 19.	AMSA	reports@amsa.gov.au
Oil pollution incidents in Commonwealth waters	Vessel Master	AMSA's JRCC	As per Article 8 and Protocol I of MARPOL within two hours via the national emergency 24-hour notification contacts and a written report within 24 hours of the request by AMSA.	JRCC	If the ship is at sea, reports are to be made to: Free call: 1800 641 792 Phone: 08 9430 2100 (Fremantle)
			Without delay as per the *Protection of the Sea (Prevention of Pollution from Ships) Act 1983* (Cth), part II, section 11(1), AMSA's JRCC notified verbally via the national emergency 24-hour notification contact of the hydrocarbon spill. Follow up with a written Pollution Report as soon as possible after verbal notification.		Phone: 1800 641 792 OR +61 2 6230 6811

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Event	Responsibility	Notifiable party	Notification requirements	Contact	Contact detail
Any oil pollution incident that has the potential to enter a National Park or requires oil spill response activities to be conducted within a National Park	Vessel Master	DCCEEW	Reported verbally, as soon as possible.	Director of National Parks	Phone: 02 6274 2220
Activity that causes unintentional death of or injury to fauna species listed as threatened or migratory under the EPBC Act	Vessel Master	DCCEEW	Within seven days of becoming aware.	Secretary of the DCCEEW	Phone: 1800 803 772 Email: protected.species@environment.gov.au

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Event	Responsibility	Notifiable party	Notification requirements	Contact	Contact detail
Within two hours of becoming aware of a marine pollution incident that occurs in or may impact State waters	Corporate Incident Management Team (CIMT IC) or delegate	DTMI	Verbally notify DTMI's Maritime Environmental Emergency Response Unit (DTMI MEER) Duty Officer that a spill has occurred and, if required, request use of equipment stored in Karratha. Follow up with a written pollution reports as soon as practicable following verbal notification. Additionally, notify DTMI if spill is likely to extend into WA waters. Request DTMI to provide liaison to Woodside CIMT.	DTMI MEER Duty Officer	Phone: 08 9480 9924
Within 24 hours of Woodside reporting an oil spill or discharge of any pollutant that impacts State waters to the appropriate authority (e.g. DTMI)	CIMT Incident Commander or delegate	DPIRD	Notify DPIRD via email within 24 hours of Woodside reporting the incident to the appropriate authority.	-	Email: environment@dpird.wa.gov.au
Within 24 hours of detection of suspected or confirmed presence or introduction of any marine pest in WA waters	Qualified IMS inspector, Woodside Environment Adviser or contractor	DPIRD	Report suspected or confirmed presence or introduction of any marine pest detected within WA waters to the department within 24 hours by email or phone.	DPIRD WA FishWatch	Email: aquatic.biosecurity@dpird.wa.gov.au Phone:1800 815 507

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

7.12 Emergency preparedness and response

7.12.1 Overview

Under regulation 22(8) of the Environment Regulations, the implementation strategy must contain an OPEP and provide for updating it. Regulation 22(9) outlines the requirements for the OPEP, which must include adequate arrangements for responding to and monitoring oil pollution.

Table 7-8 summarises how this EP and supporting documents address the various requirements of Environment Regulations relating to oil pollution response arrangements.

Table 7-8: Oil pollution preparedness and response overview

Content	Environment Regulations reference	Document/section reference
Details (oil pollution response) control measures that will be used to reduce the impacts and risks of the activity to ALARP and an acceptable level	Regulations 21(5), (6), 22(2), 22(9)	Oil Spill Preparedness and Response Mitigation Assessment (Appendix G)
Describes the OPEP	Regulation 22(8)	Woodside's OPEP has these components: • Hydrocarbon Spill Australia Regulatory Framework [65] • Oil Pollution First Strike Plan (Appendix H) • Oil Spill Preparedness and Response Mitigation Assessment (Appendix G)
Details the arrangements for responding to and monitoring oil pollution (to inform response activities), including control measures	Regulation 22(9)	Oil Spill Preparedness and Response Mitigation Assessment (Appendix G) Oil Pollution First Strike Plan (Appendix H)
Details the arrangements for updating and testing the oil pollution response arrangements	Regulations 22(8), 22(12), 22(13), 22(14)	EP: Section 7.12.5 Oil Spill Preparedness and Response Mitigation Assessment (Appendix G)
Details provisions for monitoring impacts to the environment from oil pollution and response activities	Regulation 22(10)	Oil Spill Preparedness and Response Mitigation Assessment (Appendix G)
Demonstrates the response arrangements in the oil pollution emergency plan are consistent with the national system for oil pollution preparedness and response	Regulation 22(11)	Hydrocarbon Spill Australia Regulatory Framework [65]

7.12.2 Emergency response training

Regulation 22(4) requires that the implementation strategy includes measures to ensure employees and contractors have the appropriate competencies and training. Woodside has conducted a risk-based training needs analysis on positions required for effective oil spill response. After mapping the training to Woodside-identified competencies, training was mapped to positions based on their required competencies (Table 7-9).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 7-9: Emergency response training requirements

IMT position	Minimum competency
CIMT Incident Commander and Deputy Incident Commander	IMT Fundamentals (internal course) or equivalent Incident Command System 100/200 IMO3 or equivalent spill response specialist level with an oil spill response organisation Participation in Level 2 activation, exercise or skills maintenance
Operations, Planning, Logistics and Finance Sections, and other rostered members of the CIMT	IMT Fundamentals course or equivalent Incident Command System 100/200 Oil Spill Theory Participation in Level 2 activation, exercise or skills maintenance
Environment Unit Lead	IMT Fundamentals course Incident Command System 100/200 IMO2 or equivalent spill response specialist level with an oil spill response organisation Participation in Level 2 activation, exercise or skills maintenance
Note on competency/equivalency	
In 2023, Woodside reviewed its incident and crisis systems, processes and tools to assess whether these were fit for purpose, and rolled out a change to the crisis and emergency management training and the oil spill response training requirements for IMT roles. The revised IMT Fundamentals training program was developed in alignment with the performance requirements of PMAOMIR320 – Manage Incident Response Information and PMAOM0R418 – Coordinate Incident Response. In 2023, Woodside decided to align its global incident command arrangements to the Incident Command System. As such, all rostered members of the IMT are trained up to Incident Command System 200. In addition to incident management fundamentals training, all rostered members of the IMT undertake a level of hydrocarbon spill response training. Depending upon the role, this may take the form of IMO training or completion of Woodside's internal oil spill training course and face-to-face training. Woodside Learning Services is responsible for collating and maintaining personnel training records. The Hydrocarbon Spills Preparedness Dashboard reflects the competencies required for each IMT and operational spill response roles.	

7.12.3 Emergency response preparation

The Emergency Operations Centre, based in Woodside's head office in Perth, is the onshore coordination point for a Level 2 offshore incident, and the location for the CIMT during an incident. The Emergency Operations Centre is staffed by an appropriately skilled team available on call 24 hours a day. This team coordinates incidents that have the potential to impact people, environment, assets, company reputation and livelihood (PEARL), and liaises with external agencies where relevant. Woodside's incident command structure is included in the Oil Pollution First Strike Plan (Appendix H) and response arrangements are further detailed in the Hydrocarbon Spill Australia Regulatory Framework [65]. Roles and responsibilities for emergency response are detailed in Woodside's Incident Management Handbook.

Woodside will have Emergency Response Plan Bridging Document (ERPBD) in place for project activities which bridges between Woodside's emergency response arrangements and those of the contractor.

In a vessel-based emergency, the Vessel Master will assume overall onsite command and act as the Incident Commander. All persons aboard the vessel will be required to act under the Incident Commander's directions. The vessel will maintain communications with the onshore Project Manager and other emergency services. Emergency response support can be provided by the contractor's emergency centre or via the Woodside Communication Centre if requested by the Incident Commander.

The project vessels will have onboard equipment for responding to emergencies, including medical, firefighting and hydrocarbon spill response equipment.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

7.12.4 Oil and other hazardous materials spill

A significant hydrocarbon spill during the Petroleum Activity is unlikely, but should such an event occur, it has the potential to cause serious environmental and reputational damage if not managed properly. The Hydrocarbon Spill Australia Regulatory Framework [65] supported by the Oil Pollution First Strike Plan (Appendix H), which provides tactical response guidance to the Petroleum Activity or area, cover spill response for this Petroleum Activity.

The Hydrocarbon Spill Preparedness Team manages Woodside's hydrocarbon spill response equipment stockpile. Woodside also maintains a suite of contracts for access to additional specialist response equipment and trained personnel, as required, via Australian and international spill response organisations and labour supply companies. In the event of a major spill, Woodside will enact first strike response actions, in liaison with the relevant control agency, as detailed in the activity-specific Oil Pollution First Strike Plan (Appendix H).

Vessels will have SOPEPs in accordance with the requirements of MARPOL 73/78 Annex I. These plans outline responsibilities, specify procedures and identify resources available in the event of a hydrocarbon or chemical spill from project vessels. The Oil Pollution First Strike Plan (Appendix H) is intended to work in conjunction with the SOPEPs if hydrocarbons are released to the marine environment from a project vessel.

Woodside has established EPOs, EPS and MC to be used for hydrocarbon spill response during the Petroleum Activity, as detailed in Appendix G

7.12.5 Emergency and spill response

Woodside categorises incidents in relation to response requirements:

- **Level 1** incidents are those that can be resolved using existing resources, equipment and personnel. A Level 1 incident is contained, controlled and resolved by site- or regionally-based teams using existing resources and functional support services.
- **Level 2** incidents are characterised by a response that requires external operational support to manage the incident. It is triggered if the capabilities of the tactical level response are exceeded. This support is provided to the Petroleum Activity by activating all or part of the responsible CIMT.
- **A Level 3** incident or crisis is identified as a critical event that seriously threatens the organisation's people, the environment, company assets, reputation or livelihood. At Woodside, the Crisis Management Team manages the strategic impacts to respond to and recover from the threat to the company (material impacts, litigation, legal and commercial, reputation, etc). The CIMT may also be activated as needed to manage the operational incident response.

7.12.6 Emergency and spill response drills and exercises

Woodside's capability to respond to incidents will be tested periodically, in accordance with the Crisis and Emergency Management Training, Drill and Exercise Standard. The scope, frequency and objective of these tests is described in Table 7-10. Emergency response testing is aligned to existing or developing risks associated with Woodside's operations and activities. Corporate hazards and risks outlined in the corporate risk register, respective safety cases or project risk registers, are reference points for developing and scheduling crisis and emergency management exercises. External participants may be invited to attend exercises; for example, government agencies, specialist service providers, oil spill response organisations, or industry members with which Woodside has mutual aid arrangements.

The overall objective of exercises is to test procedures, IMT interfaces, skills and the teamwork of the emergency response teams and IMTs in their ability to respond to major accident and major environment events. After each exercise, the team holds a debriefing session during which the exercise is reviewed. Any lessons learned or areas for improvement are identified and incorporated into revised procedures, where appropriate.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 7-10: Testing of response capability

Response category	Scope	Response testing frequency	Response testing objective
Level 1 Response	Drills are LWIV-specific	One 'First Strike' drill must be conducted within two weeks of starting a Petroleum Activity. For campaigns with an operational duration of greater than one month, this will occur within the first two weeks of starting the Petroleum Activity, then at least every six-month hire period thereafter.	Comprehensive exercises test elements of the Oil Pollution First Strike Plan (Appendix H). Emergency drills test other aspects of the Emergency Response Plan.
Level 2 Response	Exercises are LWIV-specific	Level 2 Emergency Management exercises are relevant to LWIV activities with an operational duration of one month or greater. At least one emergency management exercise per LWIV campaign must be conducted within the first month of commencing the hire period, then at every six-month hire period thereafter, where applicable based on duration..	Test both the facility LWIV IMT response and that of the CIMT following handover of incident control. Exercises may include testing of source control response strategies.
Level 3 Response	Exercises are relevant to all Woodside assets	The number of Crisis Management Team exercises conducted each year is determined by the Chief Executive Officer, in consultation with the Vice President of Security and Emergency Management.	Test Woodside's ability to respond to and manage a crisis-level incident.

7.12.7 Testing of hydrocarbon spill response arrangements

Woodside is required to test hydrocarbon spill response arrangements as per regulations 22(12), 22(13) and 22(14) of the Environment Regulations. Woodside's arrangements for spill response are common across Australian operating assets and activities to ensure controls are consistent. The overall objective of testing these arrangements is to ensure Woodside maintains an ability to respond to a hydrocarbon spill, specifically to:

- ensure relevant responders, contractors and key personnel understand and practice their assigned roles and responsibilities
- test response arrangements and actions to validate response plans
- ensure lessons learned are incorporated into Woodside processes and procedures, and improvements made where required.

If new response arrangements are introduced, or existing arrangements significantly amended, additional testing is undertaken accordingly. Additional activities or activity locations are not anticipated to occur; however, if they do, relevant response arrangements will be tested as soon as practicable.

In addition to the testing of response capability described in Table 7-10, up to eight of the response arrangements shown in Figure 7-3 are tested annually., The objective is to verify effective response to a hydrocarbon spill to the marine environment.

7.12.8 Testing of arrangements schedule

Woodside's Testing of Arrangements **Schedule (**Figure 7-3) aligns with international good practice for spill preparedness and response management; the testing is compatible with the IPIECA Good Practice Guide and the Australian Institute for Disaster Resilience Australian Emergency Management Arrangements Handbook. If a spill occurs, enacting these arrangements will underpin Woodside's ability to implement a response across its petroleum activities.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

The hydrocarbon spill arrangements shown in the rows of the schedule are tested against Woodside's regulatory commitments. Each arrangement has a support agency or company and an area to be tested (e.g. capability, equipment and personnel). For example, an arrangement could be to test Woodside personnel's capability for conducting shorelines assessment, or the ability of Woodside's operational and scientific monitoring third party contractor to provide appropriate personnel and equipment.

The vertical columns relate to how hydrocarbon spill arrangements will be tested over the three-year rolling schedule. The subheading for the column describes the standard method of testing likely to be undertaken (e.g. discussion exercise, desktop exercise), and the green cells indicate the arrangements that could be tested for each method.

Some arrangements may be tested across multiple exercises e.g. critical arrangements, or via other additional assurance methods outside the formal Testing of Arrangements Schedule. These also constitute sufficient evidence of testing of arrangements e.g. audits, no-notice drills, internal exercises, assurance drills.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

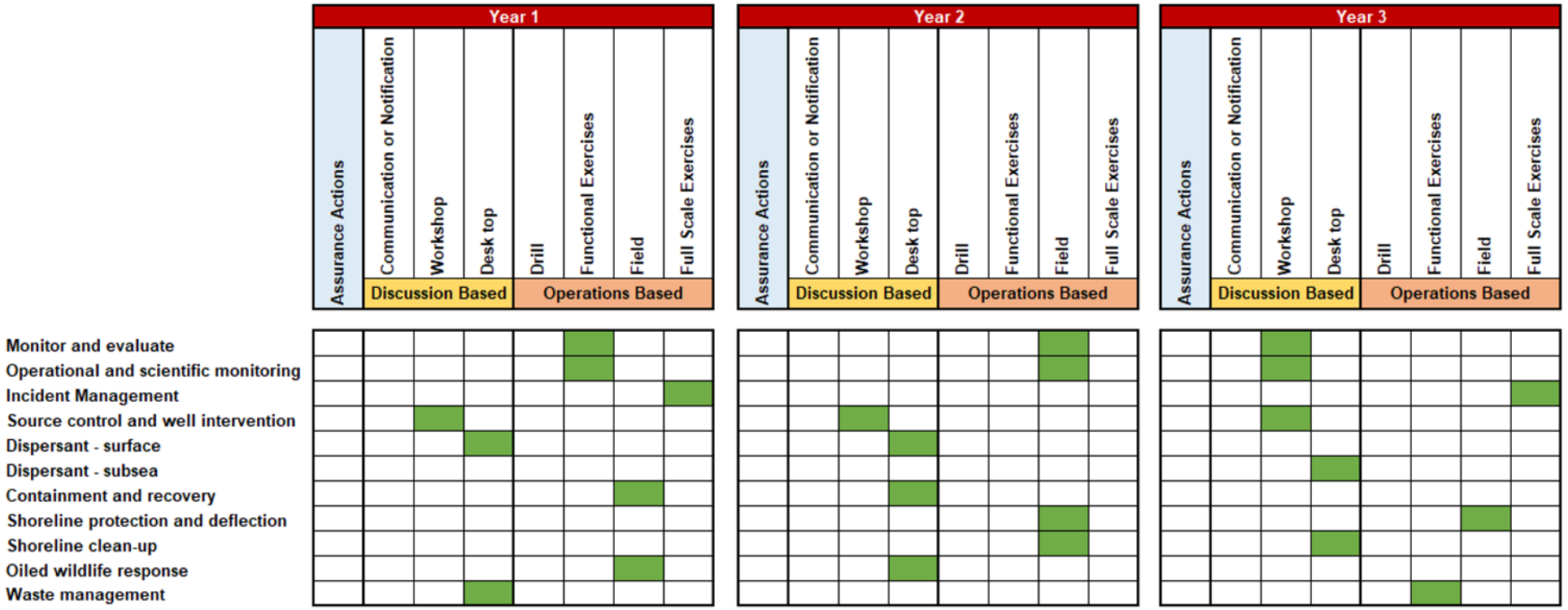


Figure 7-3: Indicative three-yearly testing of arrangements schedule

Note: Schedule is subject to change, additional detail is included in the live document.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

7.12.9 Cyclone and dangerous weather preparation

Tropical cyclones and other severe weather events are a potential risk to the safety and health of personnel and can potentially cause spills of hazardous materials into the environment from infrastructure or damaged vessels.

As the timing of some activities associated with the Petroleum Activity are not yet determined, it is possible drilling and subsea activities will overlap with the cyclone season (November to April, with most cyclones occurring between January and March). If drilling in cyclone season, the LWIV contractor and vessel contractors must have a Cyclone Contingency Plan (or equivalent) in place that outlines the processes and procedures that would be implemented during a cyclone event, which will be reviewed and accepted by Woodside.

Facilities and relevant support vessels on hire to Woodside receive regular forecasts from Woodside Meteorologists, who liaise closely with the Bureau of Meteorology. If a cyclone (or severe weather event) is forecast, the path and its development are plotted and monitored using the Bureau of Meteorology data. If there is the potential for the cyclone (severe weather event) to affect the Petroleum Activity, the asset Cyclone Contingency Plan and the vessel's Cyclone Contingency Plan will be actioned. If required, vessels can transit from the proposed track of the cyclone (severe weather event).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

8. REFERENCES

Accomando, A., Finneran, J., Henderson, E., Jenkins, K., Kotecki, S., Martin, C., Mulso, J. and Zapetis, M., 2025. Criteria and Thresholds for US Navy Acoustic and Explosive Effects Analysis (Phase IV), California: Report by Naval Information Warfare Center Pacific and National Marine Mammal Foundation for the US Navy.

Aichinger Dias, L., Litz, J., Garrison, L., Martinez, A., Barry, K. and Speakman, T. 2017. Exposure of cetaceans to petroleum products following the Deepwater Horizon oil spill in the Gulf of Mexico. Endangered Species Research, Volume 33, p. 119–125.

Aulich, M.G., Mccauley, R.D., Miller, B.S., Samaran, F., Giorli, G. 2022. Seasonal Distribution of the Fin Whale (Balaenoptera physalus) in Antarctic and Australian Waters Based on Passive Acoustics. Frontiers in Marine Science, 2022, 9, ff10.3389/fmars.2022.864153ff. ffhal-03859956

Australian Fisheries Management Authority, 2025. Skipjack tuna. Available at: https://www.afma.gov.au/fisheries/southern-bluefin-tuna-fishery.

Australian Institute of Marine Science, 2014. AIMS 2013 Biodiversity Survey of Glomar Shoal and Rankin Bank. Report prepared by the Australian Institute of Marine Science for Woodside Energy Ltd. Australian Institute of Marine Science, Townsville. October 2014 Rev 1 (153pp).

Australian Maritime Safety Authority, 2003. Oil Spill Monitoring Handbook. Prepared by Wardrop Consulting and the Cawthron Institute for the Australian Maritime Safety Authority and the Marine Safety Authority of New Zealand. Published by AMSA, Canberra. 115pp.

Bartol, S.M. and Musick, J.A., 2003. Sensory biology of sea turtles. In: Biology of Sea Turtles, Vol. 2. Lutz, P.L., Musick, J.A., Wyneken, J. (Eds.), pp. 79–102. Boca Raton, FL: CRC Press.

Batten, S., Allen, R. and Wotton, C., 1998. The effects of the Sea Empress oil spill on the plankton of the southern Irish Sea. Marine Pollution Bulletin 36: 764–774.

Bejarano, A.C., Gardiner, W.W., Barron, M.G. & Word, J.Q. (2017). Relative sensitivity of marine species to physically and chemically dispersed oil determined from multiple hydrocarbon exposure metrics. Marine Pollution Bulletin, 122(1–2), 316–322.

Berrow, S., Holmes, B. and Goold, J., 2002. The distribution and intensity of ambient and point source noises in the Shannon estuary.

BMT, 2021. Offshore Water and Sediment Sampling Program Okha R-1773-10 November 2021 Perth Australia.

BMT Oceanica, 2015. Offshore water quality monitoring verification and sediment quality study – Okha A survey report (No. 11668_003/1 Rev 0). BMT Oceanica Pty Ltd, Perth Australia.

Braccini, M. and Rynvis, L., 2023. Temperate Demersal Gillnet and Demersal Longline Fisheries Resource Status Report. In: S. Newman, K. Santoro & D. Gaughan, eds. Status Reports of the Fisheries and Aquatic Resources of Western Australia 2022/23: The State of the Fisheries. Perth: Department of Primary Industries and Regional Development, Western Australia, p. 238–244.

Brewer, D., Lyne, V., Skewes, T. and Rothlisberg, P., 2007. Trophic Systems of the North West Marine Region, Report to the Department of the Environment and Water Resources, CSIRO Marine and Atmospheric Research, Cleveland. 167 pp.

Bonn Agreement, 2015. Bonn Agreement Counter Pollution Manual, London: Bonn Agreement Secretariat.

BP Azerbaijan, 2013. Drilling and Completion Environmental Impact Assessment, Mitigation and Monitoring. BP Development Pty Ltd. https://www.bp.com/content/dam/bp/countrysites/en_az/azerbaijan/home/pdfs/esias/sd/sd2/9_drilling_eia.pdf.

Cannell, B., Hamilton, S. and Driessen, J., 2019. Wedge-tailed shearwater foraging behaviour in the Exmouth region, Perth: University of Western Australia and Birdlife Australia.

Catry, T., Ramos, J., Le Corre, M. and Phillips, R., 2009. Movements, at-sea distribution and behaviour of a tropical pelagic seabird: the wedge-tailed shearwater in the western Indian Ocean. Marine Ecology Progress Series 391, 231–242. https://doi.org/10.3354/meps07717.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Cerchio, S., Yamada, T. & Brownell Jr, R., 2019. Global Distribution of Omura's Whales (Balaenoptera omurai) and Assessment of Range-Wide Threats. Frontiers in Marine Science, 6(67).

Cianchetti-Benedetti, M., Becciu, P., Massa, B. and Dell'Omo, G., 2018. Conflicts between touristic recreational activities and breeding shearwaters: short-term effect of artificial light and sound on chick weight. European Journal of Wildlife Research 64, 1–6.

Cohen, A., Gagnon, M.M. and Nugegoda, D., 2005. Alterations of metabolic enzymes in Australian bass, *Macquaria novemaculeata*, after exposure to petroleum hydrocarbons. Archives of Environmental Contamination and Toxicology 49: 200–205. doi:10.1007/s00244-004-0174-1.

Commonwealth of Australia, 2014. Recovery Plan for the Grey Nurse Shark (*Carcharias taurus*) 2014.

Commonwealth of Australia, 2015a. Conservation Management Plan for the Blue Whale: A Recovery Plan under the *Environment Protection and Biodiversity Conservation Act 1999* 2015–2025. Canberra, ACT: Commonwealth of Australia. Available from: http://www.environment.gov.au/biodiversity/threatened/publications/recovery/blue-whaleconservation-management-plan.

Commonwealth of Australia, 2015b. Sawfish and river shark multispecies recovery plan. Department of the Environment, Canberra.

Commonwealth of Australia, 2017. Recovery Plan for Marine Turtles in Australia. Department of the Environment and Energy, Australian Government, Canberra. Available from: http://www.environment.gov.au/marine/publications/recovery-plan-marine-turtles-australia-2017. In effect under the EPBC Act from 03-Jun-2017.

Commonwealth of Australia, 2018. Threat abatement plan for the impacts of marine debris on the vertebrate wildlife of Australia's coasts and oceans, Department of the Environment and Energy. Australian Government, Canberra.

Dean, T.A., Stekoll, M.S., Jewett, S.C., Smith, R.O. and Hose, J.E., 1998. Eelgrass (*Zostera marina L.*) in Prince William Sound, Alaska: Effects of the Exxon Valdez oil spill. Marine Pollution Bulletin 36: 201–210.

Deepwater Horizon Natural Resource Damage Assessment Trustees, 2016. Deepwater Horizon oil spill: final programmatic damage assessment and restoration plan and final programmatic environmental impact statement. National Oceanic and Atmospheric Administration, Silver Spring.

Delisle, A., Kim, M., Stoeckl, N., Lui, F.W. and Marsh, H., 2018. The socio-cultural benefits and costs of the traditional hunting of dugongs *Dugong dugon* and green turtles *Chelonia mydas* in Torres Strait, Australia. Oryx, 52(2), 250–261.

Department of Biodiversity, Conservation and Attractions, 2017. Shorebirds and seabird of the Pilbara Coast and Islands, Perth: Department of Biodiversity, Conservation and Attractions and Parks and Wildlife Service.

Department of Biodiversity, Conservation and Attractions, 2022. Nyinggulu (Ningaloo) Coastal Reserves: Red Bluff to Winderabandi joint management plan 101, Perth: Parks and Wildlife Service, Department of Biodiversity, Conservation and Attractions

Department of Climate Change, Energy, Environment and Water, 2023. National Light Pollution Guidelines for Wildlife Including Marine Turtles, Seabirds and Migratory Shorebirds, Canberra: Australian Government.

Department of Climate Change, Energy, Environment and Water, 2024a. Guidelines to Assessing and Managing Impacts to Underwater Cultural Heritage in Australian Waters. Available at: https://www.dcceew.gov.au/parks-heritage/heritage/publications/assessing-managing-impacts-underwater-cultural-heritage.

Department of Climate Change, Energy, Environment and Water, 2024b. National Greenhouse Gas Inventory Quarterly Update: December 2024. [Online]. Available at: https://www.dcceew.gov.au/climate-change/publications/national-greenhouse-gas-inventory-quarterly-update-december-2024.

DCCEEW, 2026a. Species Profile and Threats Database. [Online] Available at: https://www.environment.gov.au/sprat.

Department of Climate Change, Energy, Environment and Water, 2026b. Biologically Important Areas for Protected Marine Species. Available at: https://www.dcceew.gov.au/parks-heritage/heritage/publications/assessing-managing-impacts-underwater-cultural-heritage.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Department of Parks and Wildlife, 2013. Whale shark management with particular reference to Ningaloo Marine Park. Wildlife Management Program No. 57, Perth: Department of Parks and Wildlife.

Department of Environment Conservation, 2007. Management Plan for the Montebello/Barrow Islands Marine Conservation Reserves 2007–2017. Management Plan No 55, Perth: Western Australian Government.

Department of the Environment, Water, Heritage and the Arts, 2013. Significant Impact Guidelines 1.1 – Matters of National Environmental Significance. https://www.dcceew.gov.au/environment/epbc/publications/significant-impact-guidelines-11-matters-national-environmental-significance#:~:text=This%20Significant%20impact%20guidelines%20provide%20overarching%20guidance%20on,the%20Environment%20Protection%20.

Department of Environment and Heritage Protection, 2016. Operational Policy: Environmental Management of Firefighting Foam, Brisbane: Queensland Government.

Department of Sustainability, Environment, Water, Population and Communities, 2012a. Marine Bioregional plan for the North-west Marine Region. Canberra: Commonwealth of Australia. Available at: https://www.dcceew.gov.au/sites/default/files/env/pages/1670366b-988b-4201-94a1-1f29175a4d65/files/north-west-marine-plan.pdf.

Department of Sustainability, Environment, Water, Population and Communities, 2012b. Species group report card – cetaceans. Canberra: Commonwealth of Australia. Available at: https://www.dcceew.gov.au/environment/marine/marine-bioregional-plans/north-west.

Det Norske Veritas, 2011. Assessment of the risk of pollution from marine oil spills in Australian ports and waters (Report No. PP002916 Rev 5). Prepared for the Australian Maritime Safety Authority. Available at: https://www.amsa.gov.au/sites/default/files/2011-12-mp-dnv-risk-assessment-finalreport-oil-spill.pdf.

Diercks, A.R., Highsmith, R.C., Asper, V.L., Joung, D., Zhou, Z., Guo, L., Shiller, A.M., Joye, S.B., Teske, A.P., Guinasso, N. and Wade, T.L., 2010. Characterization of subsurface polycyclic aromatic hydrocarbons at the Deepwater Horizon site. Geophysical Research Letters, 37(20).

Double, M.C., Andrews-Goff, V., Jenner, K.C.S., Jenner, M-N., Laverick, S.M., Branch, T.A. and Gales, N., 2014. Migratory movements of pygmy blue whales (*Balaenoptera musculus brevicauda*) between Australia and Indonesia as revealed by satellite telemetry. PLoS ONE, 9(4), p. e93578.

Dunlop, J.N., 2018. Fairy Tern (*Sternula nereis*) conservation in south-western Australia. Second Edition. Conservation Council (WA): Perth.

Erbe, C., 2012. Effects of Underwater Noise on Marine Mammals. In: A. Popper & A. Hawkins, eds. The Effects of Noise on Aquatic Life. Advances in Experimental Medicine and Biology, Volume 730. New York: Springer.

Falkner, I., Whiteway, T., Przeslawski, R. and Heap, A., 2009. Review of ten key ecological features in the northwest marine region, record 2009/13, Canberra: Geoscience Australia.

Fijn, N., 2021. Donald Thomson: Observations of Animal Connections in Visual Ethnography in Northern Australia. Ethnos, 86(1), 44–68.

French-McCay, D.P., 2002. Development and application of an oil toxicity and exposure model, OilToxEx. Environ Toxicol Chem. 2002 Oct;21(10):2080-94. PMID: 12371484.

French-McCay, D.P., Frediani, M. & Gloekler, M.D., 2018. The aquatic hazard of hydrocarbon liquids and the relationship between dissolved and entrained oil exposures. Marine Pollution Bulletin, 129, 262–274.

French-McCay, D.P., 2026. Considerations for development of oil-in-water thresholds for oil spill risk assessment. RPS Ocean Science / Tetra Tech, Technical Report. Oil-in-Water-Threshold-Review_French-McCay-2026Mar18.pdf

French-McCay, D., 2009. “State-of-the-Art and Research Needs for Oil Spill Impact Assessment Modelling.” In Proceedings of the 32nd AMOP Technical Seminar on Environmental Contamination and Response, 601–53. Ontario, Canada.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

French, D., Schuttenberg, H. and Isaji, T., 1999. Probabilities of Oil Exceeding Thresholds of Concern: Examples from an Evaluation for Florida Power and Light, Calgary: AMOP 99 Technical Seminar, June 2–4, 1999, Alberta, Canada, p. 243–270.

French-McCay, D., 2002. Development and application of an oil toxicity and exposure model, OilToxEx. Environmental Chemistry, 21(10), pp. 2,080–2,094.

Fodrie, F.J. and Heck, K.L., 2011. Response of coastal fishes to the Gulf of Mexico oil disaster. PloS ONE 6: e21609. Doi:10.1371/journal.pone.0021609.

Gagnon, M.M. and Rawson, C., 2010. Montara well release: Report on necropsies from a Timor Sea green turtle. Curtin University, Perth.

Gallaway, B.J., Martin, L.R., Howard, R.L., Boland, G.S. and Dennis, G.D., 1981. Effects on artificial reef and demersal fish and macrocrustacean communities, in: Middleditch, B.S. (Ed.), Environmental Effects of Offshore Oil Production. Springer, New York, pp. 237–299.

Gaston, K.J., Duffy, J.P., Gaston S., Bennie J. and Davies, T.W., 2014. Human alteration of natural light cycles: causes and ecological consequences. Oecologia 176: 917–931.

Geiling, N., 2014. Arctic Shipping: Good for invasive species, bad for the rest of nature. Smithsonian. Available at: http://www.smithsonianmag.com/science-nature/global-warmings-unexpectedconsequence-invasivespecies-180951573/?no-ist.

Geraci, J., 1988. Physiologic and toxicologic effects of cetaceans, in: Geraci, J., St Aubin, D. (Eds.), Synthesis of Effects of Oil on Marine Mammals, OCS Study. Department of Interior, Ventura, pp. 168–202.

Gilmour, J., Smith, L., Pincock, S. and Cook, K., 2013. Discovering Scott Reef: 20 years of exploration and research. Australian Institute of Marine Science, Townsville.

Gomez Isaza, D., Jones, R., Wilson., P, Pendoley, K., Fossette, S. and Thums, M., 2025. The effect of artificial light at night on sea turtle hatchling early dispersal: A systematic review of methods, impacts and findings. Biological Conservation, Volume 309.

Hannay, D., MacGillivary, A., Laurinolli, M. and Racca, R., 2004. Source Level Measurements from 2004 Acoustics Programme. Sakhalin Energy. 66 p.

Hanson, C.E., Waite, A.M., Thompson, P.A. and Pattiaratchi, C.B., 2007. Phytoplankton community structure and nitrogen nutrition in Leeuwin Current and coastal waters off the Gascoyne region of Western Australia. Deep Sea Research Part II: Topical Studies in Oceanography 54: 902–924.

Helm, R.C., Costa, D.P., DeBruyn, T.D., O'Shea, T.J., Wells, R.S. and Williams, T.M., 2015. Overview of effects of oil spills on marine mammals, in: Fingas, M. (Ed.), Handbook of Oil Spill Science and Technology. Wiley, pp. 455–475.

Hjermann, D.Ø., Melsom, A., Dingsør, G.E., Durant, J.M., Eikeset, A.M., Røed, L.P., Ottersen, G., Storvik, G. and Stenseth, N.C., 2007. Fish and oil in the Lofoten–Barents Sea system: synoptic review of the effect of oil spills on fish populations. Marine Ecology Progress Series 339: 283–299.

Houser, D.S., 2017. Temporary threshold shift (TTS): Causes, effects and its role in acoustic impact assessment.

Hu, X.C., Andrews, D.Q., Lindstrom, A.B., Bruton, T.A., Schaider, L.A., Grandjean, P., Lohmann, R., Carignan, C.C., Blum, A. and Balan, S.A., 2016. Detection of Poly-and Perfluoroalkyl Substances (PFASs) in U.S. Drinking Water Linked to Industrial Sites, Military Fire Training Areas, and Wastewater Treatment Plants. Environmental Science and Technology Letters, 3(10), 344–350. International Association of Oil and Gas Producers 2010.

International Maritime Organization, 2023. Guidelines for the control and management of ships' biofouling to minimise the transfer of invasive aquatic species, available from: https://www.imo.org/en/OurWork/Environment/Pages/Biofouling.aspx.https://wwwcdn.imo.org/localresources/en/KnowledgeCentre/IndexofIMOResolutions/MEPCDocuments/MEPC.378%2880%29.pdf.

International Petroleum Industry Environmental Conservation Association, 2004. A guide to oiled wildlife response planning (IPIECA Report Series No. 13). International Petroleum Industry Environmental (IPIECA) Conservation Association, London.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

International Tanker Owners Pollution Federation, 2011. Effects of oil pollution on the marine environment (Technical Information Paper No. 13). International Tanker Owners Pollution Federation Limited, London. Available at: https://www.itopf.org/fileadmin/uploads/itopf/data/Documents/TIPS_TAPS_new/TIP_13_Effects_of_Oil_Pollution_on_the_Marine_Environment.pdf.

Jacobs, 2014. Lambert Deep Development: Environmental Baseline Report. Report prepared for Woodside Energy Ltd. Jacobs Group (Australia) Pty Ltd, Perth.

Jarman, S. and Wilson, S., 2004. DNA-based species identification of krill consumed by whale sharks. Journal of Fish Biology 65: 586–591.

JASCO, 2024, Acoustic Modelling for Assessing Noise from Seabed Wellheads. Document 03561. Technical memo by JASCO Applied Sciences for Woodside Energy.

JASCO, 2026, Woodside Greater Western Flank 4 (GWF4): Acoustic Modelling for Assessing Marine Fauna Sound Exposures. Document 04217. Technical report by JASCO Applied Sciences for Woodside Energy.

Jensen, A. and Silber, G., 2004. Large whale ship strike database (NOAA Technical Memorandum No. NMFS-OPR). National Marine Fisheries Service, Silver Spring.

Jiménez-Arranz, G., Banda, N., Cook, S. and Wyatt, R., 2020. Review of Existing Data on Underwater Sounds Produced by the Oil and Gas Industry. JIP topic-sound source characterisation and propagation.

Keller, K., Clayton, C. and Dylewksi, M., 2025a. North West Slope Trawl Fishery. In: Fishery status reports 2025. Canberra: Australian Bureau of Agricultural and Resource Economics and Sciences. Available at https://doi.org/10.25814/ewe9-4p7. CC BY 4.0.

Keller, K., Clayton, C. Blake, S and Cao, A., 202ba. Western Deepwater Trawl Fishery. In: Fishery status reports 2025. Canberra: Australian Bureau of Agricultural and Resource Economics and Sciences. Available at https://doi.org/10.25814/ewe9-4p7. CC BY 4.0.

King, D., Lyne, R., Girling, A., Peterson, D., Stephenson, R. and Short, D., 1996. Environmental risk assessment of petroleum substances: The hydrocarbon block method (CONCAWE No. 96/52). CONCAWE, Brussels.

Koeford, I., Wilkin, S., Shanks, M. and How, J., 2024b. North Coast Prawn Resources Status Report. In: S. Newman, J. Moore & D. Gaughan, eds. State of the fisheries: Status reports of the fisheries and aquatic resources of Western Australia 2023/24. Perth: Department of Primary Industries and Regional Development.

Koops, W., Jak, R. and van der Veen, D., 2004. Use of dispersants in oil spill response to minimize environmental damage to birds and aquatic organisms. Interspill.

Laist, D.W., Knowlton, A.R., Mead, J.G., Collet, A.S. and Podesta, M., 2001. Collisions between ships and whales. Marine Mammal Science 17, 35–75.

Last, P. and Stevens, J., 2009. Sharks and rays of Australia. 2nd ed. Melbourne: CSIRO Publishing.

Lewis, P. and Rynvis, L., 2024. Statewide Large Pelagic Finfish Resource Status Report. In: S. Newman, J. Moore & D. Gaughan, eds. Status Reports of the Fisheries and Aquatic Resources of Western Australia 2023/24: The State of the Fisheries. Perth: Department of Primary Industries and Regional Development, Western Australia, p. 283–290.

Li, Z., Spaulding, M.L. and French-McCay, D., 2017. An algorithm for modeling entrainment and naturally and chemically dispersed oil droplet size distribution under surface breaking wave conditions. Marine Pollution Bulletin, vol. 119, no. 1, pp. 145–152.

Liu, X.L., Lipp, J.S., Simpson, J.H., Lin, Y.S., Summons, R.E. and Hinrichs, K.U., 2012. Mono- and dihydroxyl glycerol dibiphytanyl glycerol tetraethers in marine sediments: Identification of both core and intact polar lipid forms. Geochimica et Cosmochimica Acta, 89, pp.102–115.

Lutcavage, M., Lutz, P., Bossart, G. and Hudson, D., 1995. Physiologic and clinicopathologic effects of crude oil on loggerhead sea turtles. Archives of Environmental Contamination and Toxicology 28: 417–422.

Marine Parks and Reserves Authority, 2005. Management Plan for the Ningaloo Marine Park and Muiron Islands Marine Management Area, 2005–2015. Management Plan Number 52, Canberra: Australian Government.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Matkin, C.O., Saulitis, E.L., Ellis, G.M., Olesiuk, P. and Rice, S.D., 2008. Ongoing population-level impacts on killer whales Orcinus orca following the 'Exxon Valdez' oil spill in Prince William Sound, Alaska. Marine Ecology Progress Series 356: 269–281.

McCauley, R., 1998. Radiated underwater noise measured from the drilling rig Ocean General, rig tenders Pacific Ariki and Pacific Frontier, fishing vessel Reef Venture and natural sources in the Timor Sea, Northern Australia (Report No. C98-20), Perth: Centre for Marine Science and Technology, Curtin University of Technology.

McCauley, R.D., Fewtrell, J., Duncan, A.J., Jenner, M.N., Jenner, C., Jenner, M.N., Penrose, J.D., Prince, R.I.T., Adhitya, A., Murdoch, J. and McCabe, K., 2000. Marine seismic surveys: a study of environmental implications. APPEA (Australian Petroleum Production and Exploration Association) Journal. 40: 692–708.

McCauley, R., 2005. Underwater sea noise in the Otway Basin – drilling, seismic and blue whales, Oct–Dec 2003, in: Howell, E. (Ed.), A Compilation of Recent Research into the Marine Environment. Australian Petroleum Exploration Association, Canberra, pp. 18–19.

McCauley, R. et al., 2018. Pygmy blue and Antarctic blue whale presence, distribution and population parameters in southern Australia based on passive acoustics. Deep-Sea Research Part II: Topical Studies in Oceanography, Volume 157–158, p. 154–168.

McCauley, R. & Jenner, C., 2010. Migratory patterns and estimated population size of pygmy blue whales (Balaenoptera musculus brevicauda) traversing the Western Australian coast based on, Morocco: Paper SC/62/SH26 presented to the IWC Scientific Committee, June 2010.

McIntyre, A.D. and Johnston, R., 1975. Effects of nutrient enrichment from sewage in the sea. In Discharge of Sewage from Sea Outfalls: Proceedings of an International Symposium Held at Church House, London, 27 August to 2 September 1974 (p. 131).

McPherson, C.R., Li, Z., Wilson, C.C., Kowarski, K.A. and Koessler, M.W., 2021. Beach Otway Development Acoustic Monitoring: Characterisation, Validation, and Marine Mammals. Document 02212, Version 2.0. Technical report by JASCO Applied Sciences for Beach Energy Ltd.

Meekan, M. and Radford, B., 2010. Migration Patterns of Whale Sharks: A summary of 15 satellite tag tracks from 2005 to 2008, Perth: Australian Institute of Marine Science.

Milton, S.L. and Lutz, P.L., 2003. Physiological and genetic responses to environmental stress, in: Lutz, P.L., Musick, J.A., Wyneken, J. (Eds.), The Biology of Sea Turtles. CRC Press, Boca Raton, pp. 164–198.

Mitkus, M., Nevitt, G.A. and Kelber, A., 2018. Development of the Visual System in a Burrow-Nesting Seabird: Leach's Storm Petrel. Brain Behaviour Evolution 91: 4–16.

Moody, C.A. and Field, J.A., 2000. Perfluorinated Surfactants and the Environmental Implications of their Use in Fire-Fighting Foams. Environmental Science and Technology, 34(18): 3,864–3,870.

National Energy Resources Australia, 2018. Environment Plan Reference Case: Anchoring of Vessels and Floating Facilities. Available at: Attachment (nera.org.au).

National Marine Fisheries Service, 2014. Marine Mammals: Interim Sound Threshold Guidance (webpage). National Marine Fisheries Service, National Oceanic and Atmospheric Administration, U.S. Department of Commerce. Available at: http://www.westcoast.fisheries.noaa.gov/protected_species/marine_mammals/threshold_guidance.html.

National Marine Fisheries Service, 2018. Revision to: Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (Version 2.0): Underwater Thresholds for Onset of Permanent and Temporary Threshold Shifts (No. NOAA Technical Memorandum NMFS-OPR-59), Washington: US Department of Commerce, NOAA.

National Marine Fisheries Service, 2024. Revision to: Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (Version 3.0): Underwater and In-Air Criteria for Onset of Auditory Injury and Temporary Threshold Shifts (NOAA Technical Memorandum NMFS-OPR-71), Washington: US Department of Commerce, NOAA.

National Oceanic and Atmospheric Administration (US), 2019. ESA Section 7 Consultation Tools for Marine Mammals on the West Coast (web page), 27 Sep 2019. https://www.fisheries.noaa.gov/westcoast/endangered-species-conservation/esa-section-7-consultation-tools-marine-mammals-west.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

National Oceanic and Atmospheric Administration, 1996. Aerial observations of oil at sea (HAZMAT Report No. 96–7), Seattle: National Oceanic and Atmospheric Administration.

National Oceanic and Atmospheric Administration, 2010. Oil and sea turtles: Biology, planning and response. National Oceanic and Atmospheric Administration, Washington.

National Oceanic and Atmospheric Administration, 2014. Oil spills in mangroves: Planning & response considerations. National Oceanic and Atmospheric Administration, Washington.

National Oceanic and Atmospheric Administration, 2024. ESA Section 7 Consultation Tools for Marine Mammals on the West Coast (webpage). Available from: https://www.fisheries.noaa.gov/west-coast/endangered-species-conservation/esa-section-7-consultation-tools-marine-mammals-west.

National Offshore Petroleum Safety and Environmental Management Authority, 2025a. Application of oil spill modelling in Environment Plans information paper (N-04750-IP2376, A1289237).

National Offshore Petroleum Safety and Environmental Management Authority, 2026. Notification, Reporting and Recording Requirements for Incidents. Guidance Note (N-03300-GN2303 A1179039)

National Research Council, 2005. Oil spill dispersants: efficacy and effects, Washington: The National Academies Press.

Negri, A.P. and Heyward, A.J., 2000. Inhibition of fertilization and larval metamorphosis of the coral *Acropora millepora* (Ehrenberg, 1834) by petroleum products. Marine Pollution Bulletin 41: 420–427.

Newman, S.J., Harry, A., Bruce, C., Steele, A. and Cox, J., 2024. Statewide Marine Aquarium Fish and Hermit Crab Resources Status Report 2024. In: D. Newman, J. Moore & K. Gaughan, eds. Status Reports of the Fisheries and Aquatic Resources of Western Australia 2023/24: The State of the Fisheries. Perth: Department of Primary Industries and Regional Development, p. 291–288.

Nicholson, L., 2002. Breeding strategies and community structure in an assemblage of tropical seabirds on the Lowendal Islands, Western Australia (PhD Thesis), Perth: Murdoch University.

Norman, B.M., Whitty, J.M., Beatty, S.J., Reynolds, S.D. and Morgan, D.L., 2017. Do they stay or do they go? Acoustic monitoring of whale sharks at Ningaloo Marine Park, Western Australia. Journal Fish Biology 9(6): 1,713–1,720.

Owens, E.H., Humphrey, B., & Sergy, G,A., 1994, 'Natural cleaning of oiled coarse sediment shorelines in Arctic and Atlantic Canada', Spill Science & Technology Bulletin, vol.1, Issue 1, pp. 37-52.

Patterson, H., Bromhead, D., Cottrell, R. and Dylewski, M., 2025a. Western Tuna and Billfish Fishery. In: I. Butler, et al. eds. Fishery status reports 2025. Canberra: Australian Bureau of Agricultural and Resource Economics and Sciences.

Patterson, H. and Dylewski, M., 2025. Skipjack Tuna Fishery. In: I. Butler, et al. eds. Fishery status reports 2025. Canberra: Australian Bureau of Agricultural and Resource Economics and Sciences.

Patterson, H., Wise, B. and Dylewski, M., 2025b. Southern Bluefin Tuna Fishery. In: I. Butler, et al. eds. Fishery status reports 2025. Canberra: Australian Bureau of Agricultural and Resource Economics and Sciences.

Paulay, G., Kirkendale, L., Lambert, G. and Meyer, C., 2002. Anthropogenic biotic interchange in a coral reef ecosystem: A case study from Guam. Pacific Science 56(4):403–422.

Peck, D. and Congdon, B., 2005. Colony-specific foraging behaviour and co-ordinated divergence of chick development in the wedge-tailed shearwater *Puffinus pacificus*. Marine Ecology Progress Series, p. 289–296.

Peel, D., Smith, J. and Childerhouse, S., 2016. Historical data on Australian whale vessel strikes, London: Presented to the IWC Scientific Committee. SC/66b/HIM/05.

Pendoley Environmental, 2019. Perdaman urea project: Marine fauna desktop assessment, Perth: Pendoley Environmental Pty Ltd.

Pendoley Environmental, 2020a. Scarborough Desktop Lighting Impact Assessment, Perth: Unpublished report prepared by Pendoley Environmental Pty for Advisian.

Pendoley Environmental, 2020b. Proposed Browse Project Desktop Lighting Assessment, Perth: Unpublished Report, prepared by Pendoley Environmental for Jacobs.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Pendoley, K., 2000. The influence of gas flares on the orientation of green turtle hatchlings at Thevenard Island, Western Australia. Presented at the 2nd ASEAN Symposium and Workshop on Sea Turtle Biology and Conservation. In: Proceedings of the 2nd ASEAN Symposium and Workshop on Sea Turtle Biology and Conservation. Kota Kinabalu: ASEAN Academic Press, p. 130–142.

Petroleumstilsynet, 2014. Anchor line failures Norwegian continental shelf 2010–2014 (Report No. 992081). Petroleumstilsynet, Stavanger.

Popper, A.N., Hawkins, A.D., Fay, R.R., Mann, D., Bartol, S., Carlson, T., Coombs, S., Ellison, W.T., Gentry, R., Halvorsen, M.B., Lokkeborg, S., Rogers, P., Southall, B.L., Zeddies, D. and Tavolga, W.N., 2014. Sound Exposure Guidelines for Fishes and Sea Turtles: A Technical Report, ASA S3/SC1.4 TR2014 prepared by ANSI-Accredited Standards Committee S3/SC1 and registered with ANSI. Springer and ASA Press, Cham, Switzerland.

Richardson, W., Greene, C., Malme, C. and Thomson, D., 1995. Marine Mammals and Noise, California: Academic Press, San Diego.

Romero, I.C., Schwing, P.T., Brooks, G.R., Larson, R.A., Hastings, D.W., Ellis, G., Goddard, E.A. and Hollander, D.J., 2015. Hydrocarbons in deep-sea sediments following the 2010 Deepwater Horizon blowout in the northeast Gulf of Mexico. PLOS ONE 10: e0128371. Doi:10.1371/journal.pone.0128371.

RPS, 2011. Apache Biological Seabed Survey: Balnaves Development Project – Field Report. Prepared for Apache Energy Limited, October 2011. Perth, Western Australia.

RPS, 2019. MAW0840J. Woodside Okha Operations EP QSRA. Rev 0. 4 July 2019.

RPS, 2025. 604-OEOSCPER-406000. Woodside Okha Vessel Collision: Quantitative Spill Risk Assessment. Rev 1. August 2025.

RPS, 2026. 604-OEOSCPER-439182. Woodside Scenario 4 Quantitative Spill Risk Assessment. April 2026. Rev 0.

Runcie, J., Macinnis-Ng, C. and Ralph, P., 2010. The toxic effects of petrochemicals on Microzooplankton – literature review. Institute for Water and Environmental Resource Management, University of Technology Sydney, Sydney.

Salgado Kent, C. et al., 2012. Southern Hemisphere breeding stock D humpback whale population estimates from North West Cape, Western Australia. Journal of Cetacean Research and Management, 12(1), p. 29–38.

Salmon, M., Tolbert, M.G. Painter, D.P. Goff, M. and Reiners, R., 1995. Behaviour of loggerhead sea turtles on an urban beach. II. Hatchling orientation. Journal of Herpetology 568–576.

Shigenaka, G., 2001. Toxicity of oil to reef building corals: a spill response perspective (NOAA Technical Memorandum No. NOS OR&R 8). National Oceanic and Atmospheric Administration, Seattle.

Simmonds, M., Dolman, S. and Weilgart, L., 2004. Oceans of noise, WDCS Science Report. Whale and Dolphin Conservation Society, Chippenham.

Sinclair Knight Merz, 2006. Marine Survey for Proposed Angel Pipeline Route – Survey Report. Report prepared for Woodside Australian Energy. Sinclair Knight Merz, Perth.

Southall, B.L., Finneran, J.J., Reichmuth, C., Nachtgall, P.E., Ketten, D.R., Bowles, A.E., Ellison, W.T., Nowacek, D.P. and Tyack, P.L., 2019. Marine mammal noise exposure criteria: updated scientific recommendations for residual hearing effects.

Spaulding, M.L., Abdul Wahab, M.A., Radford, B., Cappo, M., Colquhoun, J., Stowar, M., Depczynski, M., Miller, K. and Heyward, A., 2017. Biodiversity and spatial patterns of benthic habitat and associated demersal fish communities at two tropical submerged reef ecosystems. Coral Reefs, 37(2), pp.327– 343. https://doi.org/10.1007/s00338-017-1655-9.

Strain, L., Brown, J. and Nolan, D., 2024a. West Coast Abalone Resources Status Report. In: S. Newman, J. Moore & D. Gaughan, eds. State of the fisheries: Status reports of the fisheries and aquatic resources of Western Australia 2023/24. Perth: Department of Primary Industries and Regional Development, Western Australia, p. 53–58.

Strain, L., Murphy, D. and Steele, A., 2024b. Pearl Oyster Managed Fishery Resources Status Report. In: S. Newman, J. Moore & D. Gaughan, eds. State of the fisheries: Status reports of the fisheries and aquatic

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

resources of Western Australia 2023/24. Perth: Department of Primary Industries and Regional Development, Western Australia.

Taylor, J.G., 2007. Ram filter-feeding and nocturnal feeding of whale sharks (*Rhincodon typus*) at Ningaloo Reef, Western Australia. Fisheries Research 84: 65–70.

Taylor, H.A. and Rasheed, M.A., 2011. Impacts of a fuel oil spill on seagrass meadows in a subtropical port, Gladstone, Australia – the value of long-term marine habitat monitoring in high risk areas. Marine Pollution Bulletin 63, 431–437. Available from: https://doi.org/10.1016/j.marpolbul.2011.04.039.

Threatened Species Scientific Committee, 2015. Conservation Advice for *Rhincodon typus* (whale shark). Canberra: Commonwealth of Australia.

Thums, M., Whiting, S.D., Reisser, J., Pendoley, K.L., Pattiaratchi, C.B., Proietti, M., Hetzel, Y., Fisher, R. and Meekan, M.G., 2016. Artificial light on water attracts turtle hatchlings during their nearshore transit. Royal Society of Open Science, Volume 3.

Thums, M., Ferreira, L.C., Jenner, C., Jenner, M., Harris, D., Davenport, A., Andrews-Goff, V., Double, M., Möller, L., Attard, C.R. and Bilgmann, K., 2022. Pygmy blue whale movement, distribution and important areas in the Eastern Indian Ocean. Global Ecology and Conservation, 35, p.e02054.

Tomajka, J., 1985. The influence of petroleum hydrocarbons on the primary production of the Danube River plankton. Acta Hydrochimica et Hydrobiologica 13: 615–618.

Truscott, Z., Booth, D. and Limpus, C., 2017. The effect of onshore light pollution on sea turtle hatchlings commencing their offshore swim. Wildlife Research, Volume 44, p. 127–134. https://doi.org/10.1071/WR16143.

Tuffley, E. & Wiberg, L., 2024. West Coast Deep Sea Crustacean Resource Status Report, s.l.: Department of Primary Industries and Regional Development.

Underwood, J.N., 2009. Genetic diversity and divergence among coastal and offshore reefs in a hard coral depend on geographic discontinuity and oceanic currents. Evolutionary Applications 2: 222–233. Doi:10.1111/j.1752-4571.2008.00065.x.

United Nations Educational, Scientific and Cultural Organisation, 2003. Text of the Convention for the Safeguarding of the Intangible Cultural Heritage – intangible heritage – Culture Sector – UNESCO, Paris: United Nations Educational, Scientific and Cultural Organization.

Vanderlaan, A. and Taggart, C., 2007. Vessel collisions with whales: the probability of lethal injury based on vessel speed. Marine Mammal Science, Volume 23, pp. 144–156. https://doi.org/10.1111/j.1748-7692.2006.00098.x.

Wakefield, C. et al., 2024b. North Coast Demersal Resource Status Report 2024. In: S. Newman, J. Moore & D. Gaughan, eds. Status Reports of the Fisheries and Aquatic Resources of Western Australia 2023/24: The State of the Fisheries. Perth: Department of Primary Industries and Regional Development, Western Australia, p. 173–183.

Warner, G.A. and McCrodan, A., 2011. Underwater sound measurements (Chapter 3). In Hartkin, K.G., Bisson, L.N., Case, S.A., Ireland, D.S. and Hannay, D.E. (eds.). Marine mammal monitoring and mitigation during site clearance and geotechnical surveys by Statoil USA E&P Inc. in the Chukchi Sea, August to October 2011: 90-day report. LGL Rep. P1193. Report from LGL Alaska Research Associates Inc, LGL Ltd. and JASCO Research Ltd. for Statoil USA E&P Inc., NMFS, and USFWS. 202 pp + appendices.

Weilgart, L.S., 2007. The impacts of anthropogenic ocean noise on cetaceans and implications for management. Canadian Journal of Zoology 85, 1,091–1,116.

Weimerskirch, H., de Grissac, S., Ravache, A., Prudor, A., Corbeau, A., Congdon, B., McDuie, F., Bourgeois, K., Dromzée, S., Butscher, J., Menkes, C., Allain, V., Vidal, E., Jaeger, A and Borsa, P., 2020. At-sea movements of wedge-tailed shearwaters during and outside the breeding season from four colonies in New Caledonia. Marine Ecology Progress Series 225-238. doi:10.3354/meps13171.

Whale and Dolphin Conservation Society, 2006. Vessel collisions and cetaceans: What happens when they don't miss the boat? A WDCS Science Report.

White, H.K., Hsing, P.-Y., Cho, W., Shank, T.M., Cordes, E.E., Quattrini, A.M., Nelson, R.K., Camilli, R., Demopoulos, A.W.J., German, C.R., Brookes, J.M., Roberts, H.H., Shedd, W., Reddy, C.M. and Fisher,

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

C.R., 2012. Impact of the Deepwater Horizon oil spill on a Deep-water coral community in the Gulf of Mexico, Proceedings of the National Academy of Sciences of the United States of America 109(5): 20,303–20,308.

Whittock, P., Pendoley, K. and Hamann, M., 2016. Flexible foraging: Post-nesting flatback turtles on the Australian continental shelf. Journal of Experimental Marine Biology and Ecology, Volume 477, p. 112–119.

Williamson, M. and Fitter, A., 1996. The Characteristics of Successful Invaders, Biological Conservation, vol. 78, pp. 163–170.

Wilson, E., Mau, R. and Hughes, M., 2006. Whale Shark Interaction Management: Progress Report 2006, Canberra: Department of Environment and Conservation. Wildlife Management Program No.27.

Wilson, P., Thums, M., Pattiaratchi, C., Meekan, M., Pendoley, K., Fisher, R. and Whiting, S., 2018. Artificial light disrupts the nearshore dispersal of neonate flatback turtles *Natator depressus*. Marine Ecology Progress Series, Volume 600, p. 179–192. https://doi.org/10.3354/meps12649.

Witherington, B., 1992. Behavioural response of nesting sea turtles to artificial lighting. Herpetologica, Volume 48, p. 31–39.

Witherington, B. and Martin, R., 2003. Understanding, assessing, and resolving light-pollution problems on sea turtle nesting beaches. 3rd ed. Jensen Beach, Florida: Florida Fish and Wildlife Conservation Commission FMRI Technical Report TR-2.

Woodside, 2011. Browse LNG Development Draft Upstream Environmental Impact Statement (EPBC Referral No. 2008/4111), Perth: Woodside Energy Limited.

Yender, R.A. and Mearns, A.J., 2010. Case studies of spills that threatened sea turtles, in: Shigenaka, G. (Ed.), Oil and Sea Turtles: Biology, Planning and Response. National Oceanic and Atmospheric Administration, Washington, pp. 69–84.

Zieman, J.C., Orth, R., Phillips, R.C., Thayer, G. and Thorhaug, A., 1984. Effects of oil on seagrass ecosystems, in: Cairns Jr., J., Buikema, A.L. (Eds.), Restoration of Habitats Impacted by Oil Spills. Butterworth-Heinemann, Boston, pp. 37–64.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

9. LIST OF TERMS AND ACRONYMS

Table 9-1: List of terms and definitions

Term	Definition
°	degrees
°C	degrees Celsius
AFC	antifouling coating
AFFF	aqueous film forming foam
AHO	Australian Hydrographic Office
AIMS	Australian Institute of Marine Science
ALARP	as low as reasonably practicable
AMP	Australian Marine Park
AMSA	Australian Maritime Safety Authority
AUV	autonomous underwater vessel
BIA	Biologically Important Are
CK4	Cossack-4H well
CEFAS	Centre for Environment, Fisheries and Aquaculture Science
CIMT	Corporate Incident Management Team
CONOPS	concurrent operations
cP	centipoise
CS	cost/sacrifice
CV	company values
CWLH	Cossack, Wanaea, Lambert and Hermes
dB	decibels
DCCEEW	Commonwealth Department of Climate Change, Energy, Environment and Water
DMPE	Western Australian Department of Mines, Petroleum and Energy
DP	dynamic positioning
DPIRD	Western Australian Department of Primary Industries and Regional Development
DTMI	Western Australian Department of Transport and Major Infrastructure
EC_{50}	effective concentration at which exposure to a substance results in a response of 50%
EMBA	environment that may be affected
ENVID	environment identification
Environment Regulations	Commonwealth Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023
EP	Environment Plan
EPBC Act	Commonwealth Environment Protection and Biodiversity Conservation Act 1999
EPBC Regulations 2025	Environment Protection and Biodiversity Conservation Regulations 2025
EPO	environmental performance outcome
EPS	environmental performance standard
ESD	ecologically sustainable development

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Term	Definition
F	feasibility
F-Pil)	Flatback turtle, Pilbara stock
FPSO	floating production, storage and offloading facility
g	grams
g/m²	grams per square metre
G-NWS	Green turtle, NWS stock
GHG	greenhouse gas
GP	good industry practice
H-WA	Hawksbill turtle, WA stock
HOCNF	Harmonised Offshore Chemical Notification Format
HQ	hazard quotient
HSE	health, safety and environment
Hz	hertz
ID	identity/identification
ILUA	Indigenous Land Use Agreement
IMO	International Maritime Organization
IMS	invasive marine species
IMSMA	IMS Management Area
IMT	Incident Management Team
IPA	Indigenous Protected Area
IUCN	International Union for Conservation of Nature
JRCC	Joint Response Coordination Centre
JSA	Job Safety Analysis
kg	kilograms
kg/m³	kilograms per cubic metre
kHz	kilohertz
km	kilometres
km/h	kilometres per hour
kW	kilowatts
L	litres
L/km²	litres per square kilometre
LBL	long baseline
LC_{50}	lethal concentration at which 50% of test subjects die after exposure to a substance
LCS	legislation, codes and standards
LH3	Lambert-3 well
LH-WA	Loggerhead turtle, WA stock
LWI	light well intervention
LWIV	light well intervention vessel
m	metres

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Term	Definition
m/s	metres per second
m²	square metres
m³	cubic metres
MARPOL	The International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978 (also known as MARPOL 73/78)
MC	measurement criteria
MFO	marine fauna observer
mg/kg	milligrams per kilogram
MGO	marine gas oil
mL/min	millilitres per minute
mm	millimetres
MNES	matters of national environmental significance
MOC	management of change
N/A	not applicable
NIMS	non-indigenous marine species
NM	nautical miles
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NOPSEMA	National Offshore Petroleum Safety and Environmental Management Authority
NWMR	North-west Marine Region
NWS	North West Shelf
OCNS	Offshore Chemical Notification Scheme
OIW	oil in water
OPEP	Oil Pollution Emergency Plan
OPGGS Act	Commonwealth Offshore Petroleum and Greenhouse Gas Storage Act 2006
OSPAR Convention	Convention for the Protection of the Marine Environment of the North-East Atlantic
Our WMS	Woodside Management System
PCE	pressure control equipment
PFOS	perfluoroctane sulfonic acid
PJ	professional judgement
PK	peak pressure
PMST	Protected Matters Search Tool
ppb	parts per billion
ppm	parts per million
PS	performance standard
PTS	permanent threshold shift
PTW	Permit to Work
RBA	risk-based analysis
rms	root square mean

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Term	Definition
ROV	remotely operated vehicle
SBMP	Offshore Seabird Management Plan
SEL	sound exposure level
SEL_{24h}	SEL accumulated from multiple impulses over 24 hours
SIMAP	Spill Impact Mapping and Analysis Program
SMPEP	Spill Monitoring Programme Execution Plan
SOLAS	International Convention for the Safety of Life at Sea 1974
SOPEP	Shipboard Oil Pollution Emergency Plan
SPL	sound pressure level
SV	societal value
t	tonne
t/d	tonnes per day
TRSV	tubing retrievable safety valve
TSSC	Threatened Species Scientific Committee
TTS	temporary threshold shift
µg/m²	*micrograms per square metres*
µm	*micrometres*
µPa	*micropascals*
UCH	underwater cultural heritage
UK	United Kingdom
US	United States
USBL	ultra-short baseline
VOC	volatile organic compound
WA	Western Australia
WCP	well control package
WOMP	Well Operations Management Plan
Woodside	Woodside Energy Limited
XT	xmas tree

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

APPENDIX A WOODSIDE ENVIRONMENT AND BIODIVERSITY, CLIMATE AND RISK MANAGEMENT POLICIES

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Environment and Biodiversity Policy

OBJECTIVE

Woodside recognises the intrinsic value of nature and the importance of conserving biodiversity and ecosystem services to support the sustainable development of our society. We are committed to doing our part. We understand and embrace our responsibility to undertake activities in an environmentally sustainable way.

PRINCIPLES

Woodside commits to:

- Implementing a systematic approach to the management of the impacts and risks of our operating activities on an ongoing basis, including emissions and air quality, discharge and waste management, water management, biodiversity and protected areas.
- Applying the mitigation hierarchy principle (avoid, minimise, restore) and a continuous improvement approach to ensure we maintain compliance, improve resource use efficiency and reduce our environmental impacts.
- Embedding environmental and biodiversity management, and opportunities, in our business planning and decision-making processes.
- Complying with relevant laws and regulations and applying responsible standards where laws do not exist.
- Not undertaking new activities[1] within the boundaries of natural sites on the UNESCO World Heritage List.[2]
- Not undertaking new activities within IUCN Protected Areas[3] unless compatible with management plans in place for the area.
- Achieving net zero deforestation[4] for new activities.
- Developing Biodiversity Management Plans for all new major projects (CAPEX >US$2 billion).
- Supporting positive biodiversity outcomes in regions and areas in which we undertake activities.
- Setting targets and publicly reporting on our environmental and biodiversity performance.

APPLICABILITY

Responsibility for the application of this Policy rests with all Woodside employees, contractors and joint venturers engaged in activities under Woodside operational control. Woodside managers are also responsible for promotion of this Policy in non-operated joint ventures.

This Policy will be reviewed regularly and updated as required.

Revised by the Woodside Energy Group Ltd Board in December 2024.

[1] Does not include non-industrial and existing activities that are compatible with maintenance of the listed outstanding universal values.

[2] New UNESCO World Heritage Listings that overlap existing activities will be assessed at the time of listing.

[3] New IUCN Protected Areas that overlap existing activities will be assessed at the time of listing.

[4] Definition of Forest: ‘native trees higher than 5 metres and a canopy cover of more than 10 percent on the land to be cleared’.

Climate Policy

BACKGROUND

The Intergovernmental Panel on Climate Change has stated that "it is unequivocal that human influence has warmed the atmosphere, ocean and land". An objective of the Paris Agreement is to hold "the increase in the global average temperature to well below 2ºC above pre-industrial levels" and to pursue "efforts to limit the temperature increase to 1.5ºC". Many countries have set targets to reduce greenhouse gas emissions, including by changing the way they produce and consume energy.

OBJECTIVE

Woodside's objective is to thrive in this energy transition as a low cost, lower carbon energy provider.

PRINCIPLES

Woodside aims to achieve the objective by:

- Setting science-based[1] near, mid, and long-term net emissions reduction targets that are consistent with Paris-aligned[2] scenarios, covering equity scope 1 and 2 emissions, both operated and non-operated.[3]
- Developing and operating oil and gas projects in a manner that is consistent with these targets. This includes the deployment of lower-emission technologies (Design Out), supporting efficient operations (Operate Out) and use of robust offsets (Offset) as methods to reduce and offset greenhouse gas emissions.
- Investing in new energy products and lower carbon services to reduce customers' emissions (part of Woodside's Scope 3 emissions), including but not limited to hydrogen, ammonia and carbon capture, utilisation and storage.
- Publishing transparent climate-related disclosures aligned to the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) or other recognised global reporting standards.
- Aligning our advocacy to the principles of this Climate Policy.

[1] Woodside is using the draft Prototype IFRS Sustainability Disclosure Standard definition of "science-based" (published 2021) which states "targets are considered 'science-based' if they are in line with what the most recent climate science sets out is necessary to meet the goals of the Paris Agreement—limiting global warming to below 2 degrees Celsius above pre-industrial levels and pursuing efforts to limit warming to 1.5 degrees Celsius.". See https://www.ifrs.org/content/dam/ifrs/groups/trwg/trwg-climate-related-disclosures- prototype.pdf (Appendix A).

[2] Woodside is using the draft Prototype IFRS Sustainability Disclosure Standard definition of "Paris-aligned scenarios" (published 2021) which states "scenarios consistent with limiting global warming to below 2 degrees Celsius above pre-industrial levels and pursuing efforts to limit warming to 1.5 degrees Celsius." See https://www.ifrs.org/content/dam/ifrs/groups/trwg/trwg-climate-related-disclosures- prototype.pdf (Appendix A).

[3] Equity emissions means the share of the total emissions arising from an activity that are attributable to Woodside in proportion to Woodside's ownership interest in the activity, irrespective of whether Woodside operates the activity. Operated emissions are the total emissions arising from an activity that Woodside operates, irrespective of Woodside's ownership interest.

APPLICABILITY

Responsibility for the application of this Policy rests with all Woodside employees, contractors and joint venture participants engaged in activities under Woodside operational control. Woodside managers are also responsible for promotion of this Policy in non-operated joint ventures.

This Policy will be reviewed regularly and updated as required.

Reviewed by the Woodside Energy Group Ltd Board in December 2024.

Risk Management Policy

OBJECTIVES

Woodside recognises that risk is inherent in our business and the effective management of risk is vital to deliver our strategic objectives, continued growth and success. We are committed to managing risks in a proactive and effective manner as a source of competitive advantage.

Our approach protects us against potential negative impacts, enables us to take risk for reward and improves our resilience against emerging risks. The objective of our risk management framework is to provide a single consolidated view of risks across the company to understand our full risk exposure and prioritise risk management and governance.

The success of our approach lies in the responsibility placed on everyone at all levels to proactively identify, assess and treat risks relating to the objectives they are accountable for delivering.

PRINCIPLES

Woodside achieves these objectives by:

- Applying a structured and comprehensive framework for the identification, assessment and treatment of current risks and response to emerging risks;
- Ensuring line of sight of financial and non-financial risks at appropriate levels of the organisation;
- Demonstrating leadership and commitment to integrating risk management into our business activities and governance practices;
- Recognising the value of stakeholder engagement, best available information and proactive identification of potential changes in external and internal context;
- Embedding risk management into our critical business processes and control framework;
- Understanding our exposure to risk and tolerance for uncertainty to inform our decision making and assure that Woodside is operating with due regard to the risk appetite endorsed by the Board; and
- Evaluating and improving the effectiveness and efficiency our approach.

APPLICABILITY

The Managing Director of Woodside is accountable to the Board of Directors for ensuring this Policy is effectively implemented.

Responsibility for the application of this Policy rests with all Woodside employees, contractors and joint venturers engaged in activities under Woodside operational control. Woodside managers are also responsible for promotion of this Policy in non-operated joint ventures.

This Policy will be reviewed regularly and updated as required.

Reviewed by the Woodside Energy Group Ltd Board in December 2024.

APPENDIX B RELEVANT REQUIREMENTS

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Commonwealth legislation	Summary	Relevance to the activity
Aboriginal and Torres Strait Islander Heritage Protection Act 1984 (ATSIHP Act)	This Act seeks "to preserve and protect places, areas and objects of particular significance" to Aboriginal people. Under the Section 9 and 10 provisions of the Act, the Minister for the Environment may declare significant Aboriginal areas temporarily or permanently protected if they are considered under threat. Similar declarations regarding Aboriginal objects can be made under Section 12. Under Section 22 of the Act, the contravention of any of these declarations is an offence. Additionally, the discovery of any Aboriginal remains must be reported to the Minister under Section 20.	There are no known sites of Aboriginal Heritage Significance within the Operational Area or EMBA.
Australian Maritime Safety Authority Act 1990	This Act establishes a legal framework for AMSA, which represents the Australian Government and international forums in the development, implementation and enforcement of international standards, including those governing ship safety and marine environment protection. AMSA is responsible for administering the Marine Orders in Commonwealth waters. AMSA is the lead agency for responding to oil spills in the marine environment and is responsible for the Australian National Plan for Maritime Environmental Emergencies.	The Act applies to maritime safety and vessel activities associated with the Petroleum Activity. It is relevant to promote maritime safety and the protection of the marine environment from vessel pollution. AMSA Response Centre will be notified of activities and movements 24 to 48 hours before the scheduled activity start date and in the event of incidents during the Petroleum Activity (including oil pollution incidents in Commonwealth waters).

Commonwealth legislation	Summary	Relevance to the activity
Biosecurity Act 2015 Australian Ballast Water Management Requirements Australian Biofouling Management Requirements – Version 4 2023	This Act provides the Commonwealth with powers to take quarantine measures, and implement necessary related programs, to prevent introducing any plant, animal, organism or matter that could contain anything that could threaten Australia's native flora and fauna or natural environment. The Commonwealth's powers include entry, seizure, detention and disposal. This Act includes mandatory controls on using seawater as ballast in ships and declaring sea vessels voyaging out of and into Commonwealth waters. The Regulations stipulate that all information regarding the voyage of the vessel and the ballast water is declared correctly to the quarantine officers. The Ballast Water Management Requirements outline the mandatory ballast water management requirements to reduce the risk of introducing harmful aquatic organisms into Australia's marine environment through ballast water from international vessels. These requirements are enforceable under the *Biosecurity Act 2015.* The *Australian biofouling management requirements, Version 2* set out vessel obligations and best practice for the management of biofouling when operating vessels under biosecurity control within Australian territorial seas.	The Act and associated Regulations and Requirements apply to the use of all internationally sourced Petroleum Activity vessels operating in Australian Waters. Controls must be applied to manage the potential for introduction of IMS.
Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) Environment Protection and Biodiversity Conservation Regulations 2025	This Act includes the objective to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places in Australia. These are defined under Part 3 of the Act as 'matters of national environmental significance' (MNES). The Act sets a regime that aims to ensure actions taken on (or impacting upon) Commonwealth land or waters are consistent with the principles of ESD (ecologically sustainable development). The Act aims to protect MNES by setting out a regime for environmental assessment and approvals processes for proposed actions, through which the Commonwealth seeks to protect Australian biodiversity and integrates management of important natural and culturally significant places. Where activities have existing approvals under the Act, these will continue to apply.	This Act applies to all aspects of the Petroleum Activity that have the potential to impact MNES. Where there is the potential for MNES to be impacted, an assessment of impacts must be presented in the EP. Authorisation to undertake the Petroleum Activity will be met through NOPSEMA's decision making processes which includes an assessment of the Petroleum Activities compliance with the relevant regulations and plans under the Act, which are presented throughout this EP.

Commonwealth legislation	Summary	Relevance to the activity
Environment Protection (Sea Dumping) Act 1981 Environment Protection (Sea Dumping) Regulations 1983	This Act provides for protecting the environment by regulating dumping of matter into the sea, incineration of waste at sea, and placement of artificial reefs.	The Petroleum Activity does not include sea dumping activities.
Industrial Chemicals Environmental Management (Register) Act 2021 Industrial Chemicals Environmental Management (Register) Instrument 2022	The Act is the legislative framework for the Industrial Chemicals Environmental Management Standard (IChEMS), a scheme to implement a nationally consistent approach to the management of risks to the environment resulting from the use of industrial chemicals, including those by the oil and gas industry, but on its own does not impose enforceable bans on specific chemicals or obligations for proponents. The Instrument supports the Act to create consistent, national, and enforceable standards for environmental risk management of industrial chemicals. Importantly, the Act anticipates that States and Territories (or other Commonwealth laws) must adopt and enforce these standards. Until such additional legislation is passed in relevant jurisdictions, the Instrument's listings (e.g. AFFF bans) have no direct legal effect. Note, Section 4 of the Act states: "Another law of the Commonwealth, or a law of a State, may apply or adopt the [Instrument] (with or without modification) and may make provision for, or in relation to, the implementation and enforcement of the [Instrument], as so applied or adopted."	Whilst no chemical discharges are planned as part of this Petroleum Activity. AFFF may be discharged in the event of an emergency. Woodside's Environment Chemical Selection and Assessment Guideline has regard for the intent of and the proposed requirements set out in the Act, Instrument and IChEMS.
Native Title Act 1993 Native Title (Indigenous Land Use Agreements) Regulations 2024	This Act recognises and protects the traditional rights and interests of First Nation groups in land and waters through native title. Prescribed Bodies Corporate (PBC) manage and protect their native title rights and interests by establishing ways in which future dealings affecting native title may proceed and to set standards for those dealings. Indigenous Land Use Agreements (ILUAs) are voluntary, legally binding agreements established under the Act between native title parties and others regarding land/water use.	Yes – Whilst no planned activities occur within a native title claim or determination, Woodside considers native title claims, determinations and ILUAs coastally adjacent to the EMBA to be an instructive means of identifying potentially relevant First Nations groups to consult. There is one native title claim or determination overlapping the EMBA. There are fourteen that are coastally adjacent to the EMBA. There are no Indigenous Land Use Agreements (ILUAs) overlapping the Operational Area or EMBA and twenty six that are coastally adjacent to the EMBA.

Commonwealth legislation	Summary	Relevance to the activity
National Greenhouse and Energy Reporting Act 2007	This Act establishes the legislative framework for the National Greenhouse and Energy Reporting Scheme for reporting GHG emissions and energy consumption and production by corporations in Australia.	The vessel contractor is required to report GHG emissions under this Act.
Navigation Act 2012 *Protection of the Sea (Prevention of Pollution from Ships) Act 1983* Marine Order 12: Construction – subdivision and stability, machinery and electrical installations Marine Order 15: Construction—fire protection, fire detection and fire extinction Marine Order 21: Safety and emergency arrangements Marine Order 27: Safety of navigation and radio equipment Marine Order 30: Prevention of collisions Marine Order 47: Offshore Industry units Marine Order 57: Helicopter operations Marine Order 91: Marine pollution prevention – oil Marine Order 93: Marine pollution prevention – noxious liquid substances Marine Order 94: Marine pollution prevention – packaged harmful substances Marine Order 95: Marine pollution prevention – garbage Marine Order 96: Marine pollution prevention – sewage Marine Order 97: Marine pollution prevention – air pollution	This Act regulates navigation and shipping, including SOLAS. This Act is the primary legislation that regulates ship and seafarer safety and shipboard aspects of marine environment protection and pollution prevention. Marine Orders are subordinate rules made pursuant to the Navigation Act 2012 and Protection of the Sea (Prevention of Pollution from Ships) Act 1983 affecting the maritime industry. They are a means of implementing Australia's international maritime obligations by giving effect to international conventions in Australian law. Marine Orders apply to vessel movements, safety, discharges and emissions.	The Act and Marine Orders apply to vessel activities associated with the Petroleum Activity.

Commonwealth legislation	Summary	Relevance to the activity
Offshore Petroleum and Greenhouse Gas Storage Act 2006 (OPGGS Act) Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023 Offshore Petroleum and Greenhouse Gas Storage (Resource Management and Administration) Regulations 2025 Offshore Petroleum and Greenhouse Gas Storage (Safety) Regulations 2024	This Act is the principal Act governing offshore petroleum exploration and production in Commonwealth waters. Specific environmental, resource management and safety obligations are set out in the listed Regulations.	The Petroleum Activity must be undertaken in accordance with the requirements of this Act. This EP has been prepared in accordance with the relevant requirements of the OPGGS Act and the Environment Regulations.
Ozone Protection and Synthetic Greenhouse Gas Management Act 1989 Ozone Protection and Synthetic Greenhouse Gas Management Regulations 1995	This Act provides for protecting ozone in the atmosphere by controlling and ultimately reducing the manufacture, import and export of ozone-depleting substances and synthetic GHGs, and replacing them with suitable alternatives. The Act will only apply to Woodside if it manufactures, imports or exports ozone-depleting substances.	This Act applies where ozone-depleting substances is found on vessel refrigeration systems, however, this is a rare occurrence and not anticipated. The Petroleum Activity does not include import, export or manufacture activities of ozone-depleting substances.
Protection of the Sea (Powers of Intervention) Act 1981 Protection of the Sea (Powers of Intervention) Regulations 1983	This Act authorises the Commonwealth to take measures to protect the sea from pollution by oil and other noxious substances discharged from ships. It provides legal immunity for persons acting under an AMSA direction.	The Act may apply in the event of an unplanned hydrocarbon release from a vessel collision.
Protection of the Sea (Prevention of Pollution from Ships) Act 1983 Protection of the Sea (Prevention of Pollution from Ships) (Orders) Regulations 1994 Marine Order 91: Marine pollution prevention – oil Marine Order 93: Marine pollution prevention – noxious liquid substances Marine Order 94: Marine pollution prevention – packaged harmful substances Marine Order 95: Marine pollution prevention – garbage Marine Order 96: Marine pollution prevention – sewage Maritime Legislation Amendment (Prevention of Air Pollution from Ships) Act 2007 International Convention for the Prevention of Pollution from Ships (MARPOL Convention)	This Act relates to protecting the sea from pollution by oil and other harmful substances discharged from ships. Under this Act, discharge of oil or other harmful substances from ships into the sea is an offence. There is also a requirement to keep records of the ships dealing with such substances. The Act applies to all Australian ships, regardless of their location. It applies to foreign ships operating between 3 NM off the coast out to the end of the Australian Exclusive Economic Zone (200 NM). It also applies within the 3 NM of the coast where the State/Northern Territory does not have complementary legislation. All the Marine Orders listed, except for Marine Order 95, are enacted under both the *Navigation Act* and the *Protection of the Sea (Prevention of Pollution from Ships) Act*. The *Maritime Legislation Amendment (Prevention of Air Pollution from Ships) Act 2007* is an amendment to the *Protection of the Sea (Prevention of Pollution from Ships) Act 1983*. This amended Act provides for protecting the sea from pollution by oil and other harmful substances discharged from ships.	The Act and Marine Orders apply to vessel activities associated with the Petroleum Activity.

Commonwealth legislation	Summary	Relevance to the activity
Protection of the Sea (Harmful Antifouling Systems) Act 2006 Marine Order 98: Marine pollution – anti-fouling systems	This Act relates to Australia's obligations under the international Antifouling System Convention, prohibiting harmful organotin compounds (like TBT) on ship hulls to protect the marine environment. It prohibits the application of such systems on Australian ships and restricts non-complying ships from entering Australian ports.	The Act applies to vessels operating in Australian waters, including for the Petroleum Activity.
Underwater Cultural Heritage Act 2018 (UCH Act) Underwater Cultural Heritage Guidance for Offshore Developments Guidelines on the application of the *Underwater Cultural Heritage Act 2018*	The Act prescribes penalties for damaging protected Underwater Cultural Heritage without a permit under Section 30 or in contravention of a permit under Section 28. Protected Underwater Cultural Heritage is prescribed in Section 16 to automatically include the remains and associated artefacts of any vessel or aircraft that has been in Australian waters for 75 years, whether known or unknown. This protection is also extended to Underwater Cultural Heritage in Commonwealth waters specified by the Environment Minister under Section 17. Without a declaration under this section, Aboriginal Underwater Cultural Heritage is not protected under the *Underwater Cultural Heritage Act*.	Underwater heritage sites within closest proximity to the Operational Areas and EMBA are listed in the EP.

APPENDIX C EPBC ACT PROTECTED MATTERS SEARCH TOOL RESULTS

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Operational Area

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 06-Jul-2026

Summary
Details
- Matters of NES
- Other Matters Protected by the EPBC Act
- Extra Information

Caveat
Acknowledgements

Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	1
Listed Threatened Ecological Communities:	None
Listed Threatened Species:	23
Listed Migratory Species:	39

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at https://www.dcceew.gov.au/parks-heritage/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	62
Whales and Other Cetaceans:	24
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	1

Extra Information

This part of the report provides information that may also be relevant to the area you have

State and Territory Reserves:	None
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	23
Key Ecological Features (Marine):	2
Biologically Important Areas:	4
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

Commonwealth Marine Area [Resource Information]

Approval is required for a proposed activity that is located within the Commonwealth Marine Area which has, will have, or is likely to have a significant impact on the environment. Approval may be required for a proposed action taken outside a Commonwealth Marine Area but which has, may have or is likely to have a significant impact on the environment in the Commonwealth Marine Area.

Feature Name
Commonwealth Marine Areas (EPBC Act)

Listed Threatened Species [Resource Information]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.
Number is the current name ID.

Scientific Name	Threatened Category	Presence Text
BIRD		
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Phaethon lepturus fulvus Christmas Island White-tailed Tropicbird, Golden Bosunbird [26021]	Endangered	Species or species habitat may occur within area
Phaethon rubricauda westralis Red-tailed Tropicbird (Indian Ocean), Indian Ocean Red-tailed Tropicbird [91824]	Endangered	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
[Sternula nereis nereis](#)		
Australian Fairy Tern [82950]	Vulnerable	Species or species habitat may occur within area
MAMMAL		
[Balaenoptera borealis](#)		
Sei Whale [34]	Vulnerable	Species or species habitat likely to occur within area
[Balaenoptera musculus](#)		
Blue Whale [36]	Endangered	Species or species habitat likely to occur within area
[Balaenoptera physalus](#)		
Fin Whale [37]	Vulnerable	Species or species habitat likely to occur within area
REPTILE		
[Aipysurus apraefrontalis](#)		
Short-nosed Sea Snake, Short-nosed Seasnake [1115]	Critically Endangered	Species or species habitat likely to occur within area
[Aipysurus foliosquama](#)		
Leaf-scaled Sea Snake, Leaf-scaled Seasnake [1118]	Critically Endangered	Species or species habitat likely to occur within area
[Caretta caretta](#)		
Loggerhead Turtle [1763]	Endangered	Species or species habitat likely to occur within area
[Chelonia mydas](#)		
Green Turtle [1765]	Vulnerable	Species or species habitat likely to occur within area
[Dermochelys coriacea](#)		
Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat likely to occur within area
[Eretmochelys imbricata](#)		
Hawksbill Turtle [1766]	Vulnerable	Species or species habitat likely to occur within area
[Natator depressus](#)		
Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area
SHARK		

Scientific Name	Threatened Category	Presence Text
Carcharias taurus (west coast population)		
Grey Nurse Shark (west coast population) [68752]	Vulnerable	Species or species habitat likely to occur within area
Carcharodon carcharias		
White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat may occur within area
Pristis pristis		
Largetooth Sawfish, Freshwater Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Endangered	Species or species habitat may occur within area
Pristis zijsron		
Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Species or species habitat likely to occur within area
Rhincodon typus		
Whale Shark [66680]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Sphyrna lewini		
Scalloped Hammerhead [85267]	Conservation Dependent	Species or species habitat likely to occur within area

Listed Migratory Species		[Resource Information]
Scientific Name	Threatened Category	Presence Text
null		
Balaenoptera omurai		
Omura's Whale [87136]		Species or species habitat likely to occur within area

Migratory Marine Birds		
Anous stolidus		
Common Noddy [825]		Species or species habitat may occur within area
Calonectris leucomelas		
Streaked Shearwater [1077]		Species or species habitat likely to occur within area
Fregata ariel		
Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
[Fregata minor](#) Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat may occur within area
[Phaethon lepturus](#) White-tailed Tropicbird [1014]		Species or species habitat likely to occur within area
[Phaethon rubricauda](#) Red-tailed Tropicbird [994]		Species or species habitat likely to occur within area
Migratory Marine Species		
[Anoxypristis cuspidata](#) Narrow Sawfish, Knifetooth Sawfish [68448]		Species or species habitat likely to occur within area
[Balaenoptera borealis](#) Sei Whale [34]	Vulnerable	Species or species habitat likely to occur within area
[Balaenoptera edeni](#) Bryde's Whale [35]		Species or species habitat likely to occur within area
[Balaenoptera musculus](#) Blue Whale [36]	Endangered	Species or species habitat likely to occur within area
[Balaenoptera physalus](#) Fin Whale [37]	Vulnerable	Species or species habitat likely to occur within area
[Carcharhinus longimanus](#) Oceanic Whitetip Shark [84108]		Species or species habitat likely to occur within area
[Carcharias taurus](#) Grey Nurse Shark [64469]		Species or species habitat likely to occur within area
[Carcharodon carcharias](#) White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat likely to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Species or species habitat likely to occur within area
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat may occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat likely to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Species or species habitat likely to occur within area
Isurus oxyrinchus Shortfin Mako, Mako Shark [79073]		Species or species habitat likely to occur within area
Isurus paucus Longfin Mako [82947]		Species or species habitat likely to occur within area
Megaptera novaeangliae Humpback Whale [38]		Breeding known to occur within area
Mobula alfredi as Manta alfredi Reef Manta Ray, Coastal Manta Ray [90033]		Species or species habitat likely to occur within area
Mobula birostris as Manta birostris Giant Manta Ray [90034]		Species or species habitat likely to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Physeter macrocephalus Sperm Whale [59]		Species or species habitat may occur within area
Pristis pristis Largetooth Sawfish, Freshwater Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Endangered	Species or species habitat may occur within area
Pristis zijsron Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Species or species habitat likely to occur within area
Rhincodon typus Whale Shark [66680]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Tursiops aduncus (Arafura/Timor Sea populations) Spotted Bottlenose Dolphin (Arafura/Timor Sea populations) [78900]		Species or species habitat may occur within area
Migratory Wetlands Species		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Pandion haliaetus		
Osprey [952]		Species or species habitat may occur within area

Other Matters Protected by the EPBC Act

Listed Marine Species		[Resource Information]
Scientific Name	Threatened Category	Presence Text
Bird		
Actitis hypoleucos		
Common Sandpiper [59309]		Species or species habitat may occur within area
Anous stolidus		
Common Noddy [825]		Species or species habitat may occur within area
Calidris acuminata		
Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area
Calidris canutus		
Red Knot, Knot [855]	Vulnerable	Species or species habitat may occur within area overfly marine area
Calidris ferruginea		
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area overfly marine area
Calidris melanotos		
Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area
Calonectris leucomelas		
Streaked Shearwater [1077]		Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pandion haliaetus Osprey [952]		Species or species habitat may occur within area
Phaethon lepturus White-tailed Tropicbird [1014]		Species or species habitat likely to occur within area
Phaethon lepturus fulvus Christmas Island White-tailed Tropicbird, Golden Bosunbird [26021]	Endangered	Species or species habitat may occur within area
Phaethon rubricauda Red-tailed Tropicbird [994]		Species or species habitat likely to occur within area
Fish		
Campichthys tricarinatus Three-keel Pipefish [66192]		Species or species habitat may occur within area
Choeroichthys brachysoma Pacific Short-bodied Pipefish, Short-bodied Pipefish [66194]		Species or species habitat may occur within area
Choeroichthys suillus Pig-snouted Pipefish [66198]		Species or species habitat may occur within area
Corythoichthys flavofasciatus Yellow-banded Pipefish [66200]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Cosmocampus banneri Roughridge Pipefish [66206]		Species or species habitat may occur within area
Doryrhamphus dactyliophorus Banded Pipefish, Ringed Pipefish [66210]		Species or species habitat may occur within area
Doryrhamphus excisus Bluestripe Pipefish, Indian Blue-stripe Pipefish, Pacific Blue-stripe Pipefish [66211]		Species or species habitat may occur within area
Doryrhamphus janssi Cleaner Pipefish, Janss' Pipefish [66212]		Species or species habitat may occur within area
Filicampus tigris Tiger Pipefish [66217]		Species or species habitat may occur within area
Halicampus brocki Brock's Pipefish [66219]		Species or species habitat may occur within area
Halicampus grayi Mud Pipefish, Gray's Pipefish [66221]		Species or species habitat may occur within area
Halicampus spinirostris Spiny-snout Pipefish [66225]		Species or species habitat may occur within area
Haliichthys taeniophora as Haliichthys taeniophorus Ribboned Pipehorse, Ribboned Pipefish, Ribboned Seadragon [94706]		Species or species habitat may occur within area
Hippichthys penicillus Beady Pipefish, Steep-nosed Pipefish [66231]		Species or species habitat may occur within area
Hippocampus angustus Western Spiny Seahorse, Narrow-bellied Seahorse [66234]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Hippocampus histrix Spiny Seahorse, Thorny Seahorse [66236]		Species or species habitat may occur within area
Hippocampus kuda Spotted Seahorse, Yellow Seahorse [66237]		Species or species habitat may occur within area
Hippocampus planifrons Flat-face Seahorse [66238]		Species or species habitat may occur within area
Hippocampus spinosissimus Hedgehog Seahorse [66239]		Species or species habitat may occur within area
Micrognathus micronotopterus Tidepool Pipefish [66255]		Species or species habitat may occur within area
Solegnathus hardwickii Pallid Pipehorse, Hardwick's Pipehorse [66272]		Species or species habitat may occur within area
Solegnathus lettiensis Gunther's Pipehorse, Indonesian Pipefish [66273]		Species or species habitat may occur within area
Solenostomus cyanopterus Robust Ghostpipefish, Blue-finned Ghost Pipefish, [66183]		Species or species habitat may occur within area
Syngnathoides biaculeatus Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279]		Species or species habitat may occur within area
Trachyrhamphus bicoarctatus Bentstick Pipefish, Bend Stick Pipefish, Short-tailed Pipefish [66280]		Species or species habitat may occur within area
Trachyrhamphus longirostris Straightstick Pipefish, Long-nosed Pipefish, Straight Stick Pipefish [66281]		Species or species habitat may occur within area
Reptile		

Scientific Name	Threatened Category	Presence Text
Aipysurus apraefrontalis Short-nosed Sea Snake, Short-nosed Seasnake [1115]	Critically Endangered	Species or species habitat likely to occur within area
Aipysurus duboisii Dubois' Sea Snake, Dubois' Seasnake, Reef Shallows Sea Snake [1116]		Species or species habitat may occur within area
Aipysurus foliosquama Leaf-scaled Sea Snake, Leaf-scaled Seasnake [1118]	Critically Endangered	Species or species habitat likely to occur within area
Aipysurus laevis Olive Sea Snake, Olive-brown Sea Snake [1120]		Species or species habitat may occur within area
Aipysurus mosaicus as Aipysurus eydouxii Mosaic Sea Snake [87261]		Species or species habitat may occur within area
Aipysurus tenuis Brown-lined Sea Snake, Mjoberg's Sea Snake [1121]		Species or species habitat may occur within area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat likely to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Species or species habitat likely to occur within area
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat may occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat likely to occur within area
Ephalophis greyae as Ephalophis greyi Mangrove Sea Snake [93738]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Species or species habitat likely to occur within area
Hydrophis czeblukovi Fine-spined Sea Snake [59233]		Species or species habitat may occur within area
Hydrophis elegans Elegant Sea Snake, Bar-bellied Sea Snake [1104]		Species or species habitat may occur within area
Hydrophis kingii as Disteira kingii Spectacled Sea Snake [93511]		Species or species habitat may occur within area
Hydrophis macdowelli as Hydrophis mcdowelli MacDowell's Sea Snake, Small-headed Sea Snake, [75601]		Species or species habitat may occur within area
Hydrophis major as Disteira major Olive-headed Sea Snake [93512]		Species or species habitat may occur within area
Hydrophis ornatus Spotted Sea Snake, Ornate Reef Sea Snake [1111]		Species or species habitat may occur within area
Hydrophis peronii as Acalyptophis peronii Horned Sea Snake [93509]		Species or species habitat may occur within area
Hydrophis platura as Pelamis platurus Yellow-bellied Sea Snake [93746]		Species or species habitat may occur within area
Hydrophis stokesii as Astrotia stokesii Stokes' Sea Snake [93510]		Species or species habitat may occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area

Whales and Other Cetaceans		[Resource Information]
Current Scientific Name	Status	Type of Presence
Mammal		

Current Scientific Name	Status	Type of Presence
[Balaenoptera borealis](#) Sei Whale [34]	Vulnerable	Species or species habitat likely to occur within area
[Balaenoptera edeni](#) Bryde's Whale [35]		Species or species habitat likely to occur within area
[Balaenoptera musculus](#) Blue Whale [36]	Endangered	Species or species habitat likely to occur within area
[Balaenoptera omurai](#) Omura's Whale [87136]		Species or species habitat likely to occur within area
[Balaenoptera physalus](#) Fin Whale [37]	Vulnerable	Species or species habitat likely to occur within area
[Delphinus delphis](#) Common Dolphin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area
[Feresa attenuata](#) Pygmy Killer Whale [61]		Species or species habitat may occur within area
[Globicephala macrorhynchus](#) Short-finned Pilot Whale [62]		Species or species habitat may occur within area
[Grampus griseus](#) Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area
[Kogia breviceps](#) Pygmy Sperm Whale [57]		Species or species habitat may occur within area
[Kogia sima](#) Dwarf Sperm Whale [85043]		Species or species habitat may occur within area

Current Scientific Name	Status	Type of Presence
[Megaptera novaeangliae](#) Humpback Whale [38]		Breeding known to occur within area
[Orcinus orca](#) Killer Whale, Orca [46]		Species or species habitat may occur within area
[Peponocephala electra](#) Melon-headed Whale [47]		Species or species habitat may occur within area
[Physeter macrocephalus](#) Sperm Whale [59]		Species or species habitat may occur within area
[Pseudorca crassidens](#) False Killer Whale [48]		Species or species habitat likely to occur within area
[Stenella attenuata](#) Spotted Dolphin, Pantropical Spotted Dolphin [51]		Species or species habitat may occur within area
[Stenella coeruleoalba](#) Striped Dolphin, Euphrosyne Dolphin [52]		Species or species habitat may occur within area
[Stenella longirostris](#) Long-snouted Spinner Dolphin [29]		Species or species habitat may occur within area
[Steno bredanensis](#) Rough-toothed Dolphin [30]		Species or species habitat may occur within area
[Tursiops aduncus](#) Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat may occur within area
[Tursiops aduncus (Arafura/Timor Sea populations)](#) Spotted Bottlenose Dolphin (Arafura/Timor Sea populations) [78900]		Species or species habitat may occur within area

Current Scientific Name	Status	Type of Presence
Tursiops truncatus s. str. Bottlenose Dolphin [68417]		Species or species habitat may occur within area
Ziphius cavirostris Cuvier's Beaked Whale, Goose-beaked Whale [56]		Species or species habitat may occur within area

Habitat Critical to the Survival of Marine Turtles		[Resource Information]
Scientific Name	Behaviour	Presence
All year (Jun - Aug)		
Natator depressus Flatback Turtle [59257]	Nesting	Known to occur

Extra Information

EPBC Act Referrals			[Resource Information]
Title of referral	Reference	Referral Outcome	Assessment Status
Browse to North West Shelf Development, Indian Ocean, WA	2018/8319		Approval
DAVROS MC 3D marine seismic survey northwaet of Dampier, WA	2013/7092		Completed
Deep Water Northwest Shelf 2D Seismic Survey	2007/3260		Completed
Development of Mutineer and Exeter petroleum fields for oil production, Permit	2003/1033		Completed
Project Highclere Cable Lay and Operation	2022/09203		Completed
Controlled action			
Development of Angel gas and condensate field, North West Shelf	2004/1805	Controlled Action	Post-Approval
Development of Browse Basin Gas Fields (Upstream)	2008/4111	Controlled Action	Completed
Not controlled action			
Maia-Gaea Exploration wells	2000/17	Not Controlled Action	Completed
North Rankin B gas compression facility	2005/2500	Not Controlled Action	Completed

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action			
Project Highclere Geophysical Survey	2021/9023	Not Controlled Action	Completed
Telstra North Rankin Spur Fibre Optic Cable	2016/7836	Not Controlled Action	Completed
Not controlled action (particular manner)			
'Tourmaline' 2D marine seismic survey, permit areas WA-323-P, WA-330-P and WA-32	2005/2282	Not Controlled Action (Particular Manner)	Post-Approval
3D Marine Seismic Survey in WA 457-P & WA 458-P, North West Shelf, offshore WA	2013/6862	Not Controlled Action (Particular Manner)	Post-Approval
3D sesmic survey	2006/2781	Not Controlled Action (Particular Manner)	Post-Approval
Cue Seismic Survey within WA-359-P, WA-361-P and WA-360-P	2007/3647	Not Controlled Action (Particular Manner)	Post-Approval
Decommissioning of the Legendre facilities	2010/5681	Not Controlled Action (Particular Manner)	Post-Approval
Demeter 3D Seismic Survey, off Dampier, WA	2002/900	Not Controlled Action (Particular Manner)	Post-Approval
Fletcher-Finucane Development, WA26-L and WA191-P	2011/6123	Not Controlled Action (Particular Manner)	Post-Approval
Judo Marine 3D Seismic Survey within and adjacent to WA-412-P	2009/4801	Not Controlled Action (Particular Manner)	Post-Approval
Judo Marine 3D Seismic Survey within and adjacent to WA-412-P	2008/4630	Not Controlled Action (Particular Manner)	Post-Approval
Offshore Drilling Campaign	2011/5830	Not Controlled Action (Particular Manner)	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
West Panaeus 3D seismic survey	2006/3141	Not Controlled Action (Particular Manner)	Post-Approval
Westralia SPAN Marine Seismic Survey, WA & NT	2012/6463	Not Controlled Action (Particular Manner)	Post-Approval

Key Ecological Features [Resource Information]

Key Ecological Features are the parts of the marine ecosystem that are considered to be important for the biodiversity or ecosystem functioning and integrity of the Commonwealth Marine Area.

Name	Region
Ancient coastline at 125 m depth contour	North-west
Glomar Shoals	North-west

Biologically Important Areas [Resource Information]

Scientific Name	Behaviour	Presence
Marine Turtles		
Natator depressus		
Flatback Turtle [59257]	Reproduction	Known to occur
Seabirds		
Ardenna pacifica		
Wedge-tailed Shearwater [84292]	Reproduction	Known to occur
Sharks		
Rhincodon typus		
Whale Shark [66680]	Foraging	Known to occur
Whales		
Megaptera novaeangliae		
Humpback Whale [38]	Migration	Known to occur

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data is available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance on the contents of this report.

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions when time permits.

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded breeding sites; and
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management, Northern Territory
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
Forestry Corporation, NSW
-Geoscience Australia
-CSIRO
-Australian Tropical Herbarium, Cairns
-eBird Australia
-Australian Government – Australian Antarctic Data Centre
-Museum and Art Gallery of the Northern Territory
-Australian Government National Environmental Science Program
-Australian Institute of Marine Science
-Reef Life Survey Australia
-American Museum of Natural History
-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
-Tasmanian Museum and Art Gallery, Hobart, Tasmania
-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact us page.

© Commonwealth of Australia
Department of Climate Change, Energy, the Environment and Water
GPO Box 3090
Canberra ACT 2601 Australia
+61 2 6274 1111

EMBA

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 24-Mar-2026

Summary
Details
- Matters of NES
- Other Matters Protected by the EPBC Act
- Extra Information

Caveat
Acknowledgements

Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	1
National Heritage Places:	1
Wetlands of International Importance (Ramsar	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	4
Listed Threatened Ecological Communities:	None
Listed Threatened Species:	44
Listed Migratory Species:	64

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at https://www.dcceew.gov.au/parks-heritage/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	6
Commonwealth Heritage Places:	2
Listed Marine Species:	108
Whales and Other Cetaceans:	33
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	10
Habitat Critical to the Survival of Marine Turtles:	4

Extra Information

This part of the report provides information that may also be relevant to the area you have

State and Territory Reserves:	16
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	191
Key Ecological Features (Marine):	7
Biologically Important Areas:	30
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

World Heritage Properties [Resource Information]

Name	State	Legal Status
Ningaloo Coast	WA	Declared property

National Heritage Places [Resource Information]

Name	State	Legal Status
Natural		
The Ningaloo Coast	WA	Listed place

Commonwealth Marine Area [Resource Information]

Approval is required for a proposed activity that is located within the Commonwealth Marine Area which has, will have, or is likely to have a significant impact on the environment. Approval may be required for a proposed action taken outside a Commonwealth Marine Area but which has, may have or is likely to have a significant impact on the environment in the Commonwealth Marine Area.

Feature Name
Commonwealth Marine Areas (EPBC Act)
Commonwealth Marine Areas (EPBC Act)
Commonwealth Marine Areas (EPBC Act)
Commonwealth Marine Areas (EPBC Act)

Listed Threatened Species [Resource Information]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.
Number is the current name ID.

Scientific Name	Threatened Category	Presence Text
BIRD		
Calidris acuminata		
Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat known to occur within area
Calidris canutus		
Red Knot, Knot [855]	Vulnerable	Species or species habitat may occur within area
Calidris ferruginea		
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area

Scientific Name	Threatened Category	Presence Text
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat known to occur within area
Erythrotriorchis radiatus Red Goshawk [942]	Endangered	Species or species habitat may occur within area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area
Limosa lapponica menzbieri Northern Siberian Bar-tailed Godwit, Russkoye Bar-tailed Godwit [86432]	Endangered	Species or species habitat known to occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area
Papasula abbotti Abbott's Booby [59297]	Endangered	Species or species habitat may occur within area
Pezoporus occidentalis Night Parrot [59350]	Critically Endangered	Species or species habitat may occur within area
Phaethon lepturus fulvus Christmas Island White-tailed Tropicbird, Golden Bosunbird [26021]	Endangered	Species or species habitat may occur within area
Phaethon rubricauda westralis Red-tailed Tropicbird (Indian Ocean), Indian Ocean Red-tailed Tropicbird [91824]	Endangered	Breeding known to occur within area
Pterodroma mollis Soft-plumaged Petrel [1036]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area

Scientific Name	Threatened Category	Presence Text
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
Sternula albifrons Little Tern [82849]	Vulnerable	Breeding known to occur within area
Sternula nereis nereis Australian Fairy Tern [82950]	Vulnerable	Breeding known to occur within area
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat may occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
FISH		
Milyeringa veritas Cape Range Cave Gudgeon, Blind Gudgeon [66676]	Vulnerable	Species or species habitat known to occur within area
Ophisternon candidum Blind Cave Eel [66678]	Vulnerable	Species or species habitat known to occur within area
MAMMAL		
Balaenoptera borealis Sei Whale [34]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Migration route known to occur within area
Balaenoptera physalus Fin Whale [37]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Dasyurus hallucatus Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu] [331]	Endangered	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Eubalaena australis		
Southern Right Whale [40]	Endangered	Species or species habitat likely to occur within area
Orcaella heinsohni		
Australian Snubfin Dolphin [81322]	Vulnerable	Species or species habitat known to occur within area
Petrogale lateralis lateralis		
Black-flanked Rock-wallaby, Moororong, Black-footed Rock Wallaby [66647]	Endangered	Species or species habitat known to occur within area
Rhinonicteris aurantia (Pilbara form)		
Pilbara Leaf-nosed Bat [82790]	Vulnerable	Species or species habitat may occur within area
Sousa sahulensis		
Australian Humpback Dolphin [87942]	Vulnerable	Species or species habitat known to occur within area
REPTILE		
Aipysurus apraefrontalis		
Short-nosed Sea Snake, Short-nosed Seasnake [1115]	Critically Endangered	Species or species habitat known to occur within area
Aipysurus foliosquama		
Leaf-scaled Sea Snake, Leaf-scaled Seasnake [1118]	Critically Endangered	Species or species habitat known to occur within area
Caretta caretta		
Loggerhead Turtle [1763]	Endangered	Breeding known to occur within area
Chelonia mydas		
Green Turtle [1765]	Vulnerable	Breeding known to occur within area
Dermochelys coriacea		
Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area
Eretmochelys imbricata		
Hawksbill Turtle [1766]	Vulnerable	Breeding known to occur within area
Natator depressus		
Flatback Turtle [59257]	Vulnerable	Breeding known to occur within area
SHARK		

Scientific Name	Threatened Category	Presence Text
Carcharias taurus (west coast population)		
Grey Nurse Shark (west coast population) [68752]	Vulnerable	Congregation or aggregation known to occur within area
Carcharodon carcharias		
White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat known to occur within area
Pristis clavata		
Dwarf Sawfish, Queensland Sawfish [68447]	Vulnerable	Species or species habitat known to occur within area
Pristis pristis		
Largetooth Sawfish, Freshwater Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Endangered	Species or species habitat likely to occur within area
Pristis zijsron		
Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Species or species habitat known to occur within area
Rhincodon typus		
Whale Shark [66680]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Sphyrna lewini		
Scalloped Hammerhead [85267]	Conservation Dependent	Species or species habitat known to occur within area

Listed Migratory Species		[Resource Information]
Scientific Name	Threatened Category	Presence Text
null		
Balaenoptera omurai		
Omura's Whale [87136]		Species or species habitat likely to occur within area
Migratory Marine Birds		
Anous stolidus		
Common Noddy [825]		Species or species habitat likely to occur within area
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Ardenna carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [82404]		Species or species habitat likely to occur within area
Ardenna pacifica Wedge-tailed Shearwater [84292]		Breeding known to occur within area
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat likely to occur within area
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat may occur within area
Hydroprogne caspia Caspian Tern [808]		Breeding known to occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Onychoprion anaethetus Bridled Tern [82845]		Breeding known to occur within area
Phaethon lepturus White-tailed Tropicbird [1014]		Breeding known to occur within area
Phaethon rubricauda Red-tailed Tropicbird [994]		Breeding known to occur within area
Sterna dougallii Roseate Tern [817]		Breeding likely to occur within area
Sternula albifrons Little Tern [82849]	Vulnerable	Breeding known to occur within area
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Thalassarche impavida		
Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
Migratory Marine Species		
Anoxypristis cuspidata		
Narrow Sawfish, Knifetooth Sawfish [68448]		Species or species habitat known to occur within area
Balaenoptera bonaerensis		
Antarctic Minke Whale, Dark-shoulder Minke Whale [67812]		Species or species habitat likely to occur within area
Balaenoptera borealis		
Sei Whale [34]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Balaenoptera edeni		
Bryde's Whale [35]		Species or species habitat likely to occur within area
Balaenoptera musculus		
Blue Whale [36]	Endangered	Migration route known to occur within area
Balaenoptera physalus		
Fin Whale [37]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Carcharhinus longimanus		
Oceanic Whitetip Shark [84108]		Species or species habitat likely to occur within area
Carcharias taurus		
Grey Nurse Shark [64469]		Congregation or aggregation known to occur within area
Carcharodon carcharias		
White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat known to occur within area
Caretta caretta		
Loggerhead Turtle [1763]	Endangered	Breeding known to occur within area

Scientific Name	Threatened Category	Presence Text
Chelonia mydas Green Turtle [1765]	Vulnerable	Breeding known to occur within area
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat may occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area
Dugong dugon Dugong [28]		Breeding known to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Breeding known to occur within area
Eubalaena australis as Balaena glacialis australis Southern Right Whale [40]	Endangered	Species or species habitat likely to occur within area
Isurus oxyrinchus Shortfin Mako, Mako Shark [79073]		Species or species habitat likely to occur within area
Isurus paucus Longfin Mako [82947]		Species or species habitat likely to occur within area
Lamna nasus Porbeagle, Mackerel Shark [83288]		Species or species habitat may occur within area
Megaptera novaeangliae Humpback Whale [38]		Breeding known to occur within area
Mobula alfredi as Manta alfredi Reef Manta Ray, Coastal Manta Ray [90033]		Species or species habitat known to occur within area
Mobula birostris as Manta birostris Giant Manta Ray [90034]		Species or species habitat known to occur within area

Scientific Name	Threatened Category	Presence Text
Natator depressus Flatback Turtle [59257]	Vulnerable	Breeding known to occur within area
Orcaella heinsohni Australian Snubfin Dolphin [81322]	Vulnerable	Species or species habitat known to occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Physeter macrocephalus Sperm Whale [59]		Species or species habitat may occur within area
Pristis clavata Dwarf Sawfish, Queensland Sawfish [68447]	Vulnerable	Species or species habitat known to occur within area
Pristis pristis Largetooth Sawfish, Freshwater Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Endangered	Species or species habitat likely to occur within area
Pristis zijsron Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Species or species habitat known to occur within area
Rhincodon typus Whale Shark [66680]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Sousa sahulensis as Sousa chinensis Australian Humpback Dolphin [87942]	Vulnerable	Species or species habitat known to occur within area
Tursiops aduncus (Arafura/Timor Sea populations) Spotted Bottlenose Dolphin (Arafura/Timor Sea populations) [78900]		Species or species habitat known to occur within area
Migratory Terrestrial Species		
Hirundo rustica Barn Swallow [662]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area
Migratory Wetlands Species		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat known to occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat known to occur within area
Charadrius veredus Oriental Plover, Oriental Dotterel [882]		Species or species habitat may occur within area
Glareola maldivarum Oriental Pratincole [840]		Species or species habitat may occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area

Scientific Name	Threatened Category	Presence Text
Numenius madagascariensis		
Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area
Pandion haliaetus		
Osprey [952]		Breeding known to occur within area
Thalasseus bergii		
Greater Crested Tern [83000]		Breeding known to occur within area

Other Matters Protected by the EPBC Act

Commonwealth Lands [Resource Information]

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Commonwealth Land Name	State
Department of Climate Change, Energy, the Environment and Water	
Mermaid Reef - Rowley Shoals [CHL_105255]	WA
Ningaloo Marine Area - Commonwealth Waters [CHL_105548]	WA
Department of Defence	
Exmouth Area A VLF Transmitter Station [DD_0083]	WA
Exmouth RAAF Radar Site - Vlaming Head [DD_0974]	WA
Learmonth RAAF base [AGPR4418]	WA
Learmonth RAAF base [AGPR4466]	WA

Commonwealth Heritage Places [Resource Information]

Name	State	Status
Natural		
Mermaid Reef - Rowley Shoals	WA	Listed place
Ningaloo Marine Area - Commonwealth Waters	WA	Listed place

Listed Marine Species [Resource Information]

Scientific Name	Threatened Category	Presence Text
Bird		
Actitis hypoleucos		
Common Sandpiper [59309]		Species or species habitat known to occur within area

Scientific Name	Threatened Category	Presence Text
Anous stolidus Common Noddy [825]		Species or species habitat likely to occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area
Ardenna carneipes as Puffinus carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [82404]		Species or species habitat likely to occur within area
Ardenna pacifica as Puffinus pacificus Wedge-tailed Shearwater [84292]		Breeding known to occur within area
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat known to occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat may occur within area overfly marine area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area overfly marine area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Chalcites osculans as Chrysococcyx osculans		
Black-eared Cuckoo [83425]		Species or species habitat known to occur within area overfly marine area
Charadrius leschenaultii		
Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat known to occur within area
Charadrius veredus		
Oriental Plover, Oriental Dotterel [882]		Species or species habitat may occur within area overfly marine area
Chroicocephalus novaehollandiae as Larus novaehollandiae		
Silver Gull [82326]		Breeding known to occur within area
Fregata ariel		
Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area
Fregata minor		
Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat may occur within area
Glareola maldivarum		
Oriental Pratincole [840]		Species or species habitat may occur within area overfly marine area
Haliaeetus leucogaster		
White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area
Hirundo rustica		
Barn Swallow [662]		Species or species habitat may occur within area overfly marine area
Hydroprogne caspia as Sterna caspia		
Caspian Tern [808]		Breeding known to occur within area
Limosa lapponica		
Bar-tailed Godwit [844]		Species or species habitat known to occur within area

Scientific Name	Threatened Category	Presence Text
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area overfly marine area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area overfly marine area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area
Onychoprion anaethetus as Sterna anaethetus Bridled Tern [82845]		Breeding known to occur within area
Onychoprion fuscatus as Sterna fuscata Sooty Tern [90682]		Breeding known to occur within area
Pandion haliaetus Osprey [952]		Breeding known to occur within area
Papasula abbotti Abbott's Booby [59297]	Endangered	Species or species habitat may occur within area
Phaethon lepturus White-tailed Tropicbird [1014]		Breeding known to occur within area
Phaethon lepturus fulvus Christmas Island White-tailed Tropicbird, Golden Bosunbird [26021]	Endangered	Species or species habitat may occur within area
Phaethon rubricauda Red-tailed Tropicbird [994]		Breeding known to occur within area

Scientific Name	Threatened Category	Presence Text
Pterodroma mollis Soft-plumaged Petrel [1036]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area
Sterna dougallii Roseate Tern [817]		Breeding likely to occur within area
Sternula albifrons as Sterna albifrons Little Tern [82849]	Vulnerable	Breeding known to occur within area
Sternula nereis as Sterna nereis Fairy Tern [82949]		Breeding known to occur within area
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat may occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
Thalasseus bengalensis as Sterna bengalensis Lesser Crested Tern [66546]		Breeding known to occur within area
Thalasseus bergii as Sterna bergii Greater Crested Tern [83000]		Breeding known to occur within area
Fish		
Acentronura larsonae Helen's Pygmy Pipehorse [66186]		Species or species habitat may occur within area
Bhanotia fasciolata Corrugated Pipefish, Barbed Pipefish [66188]		Species or species habitat may occur within area
Bulbonaricus brauni Braun's Pughead Pipefish, Pug-headed Pipefish [66189]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Campichthys tricarinatus Three-keel Pipefish [66192]		Species or species habitat may occur within area
Choeroichthys brachysoma Pacific Short-bodied Pipefish, Short-bodied Pipefish [66194]		Species or species habitat may occur within area
Choeroichthys latispinosus Muiron Island Pipefish [66196]		Species or species habitat may occur within area
Choeroichthys suillus Pig-snouted Pipefish [66198]		Species or species habitat may occur within area
Corythoichthys amplexus Fijian Banded Pipefish, Brown-banded Pipefish [66199]		Species or species habitat may occur within area
Corythoichthys flavofasciatus Reticulate Pipefish, Yellow-banded Pipefish, Network Pipefish [66200]		Species or species habitat may occur within area
Corythoichthys intestinalis Australian Messmate Pipefish, Banded Pipefish [66202]		Species or species habitat may occur within area
Corythoichthys schultzi Schultz's Pipefish [66205]		Species or species habitat may occur within area
Cosmocampus banneri Roughridge Pipefish [66206]		Species or species habitat may occur within area
Doryrhamphus dactyliophorus Banded Pipefish, Ringed Pipefish [66210]		Species or species habitat may occur within area
Doryrhamphus excisus Bluestripe Pipefish, Indian Blue-stripe Pipefish, Pacific Blue-stripe Pipefish [66211]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Doryrhamphus janssi Cleaner Pipefish, Janss' Pipefish [66212]		Species or species habitat may occur within area
Doryrhamphus multiannulatus Many-banded Pipefish [66717]		Species or species habitat may occur within area
Doryrhamphus negrosensis Flagtail Pipefish, Masthead Island Pipefish [66213]		Species or species habitat may occur within area
Festucalex scalaris Ladder Pipefish [66216]		Species or species habitat may occur within area
Filicampus tigris Tiger Pipefish [66217]		Species or species habitat may occur within area
Halicampus brocki Brock's Pipefish [66219]		Species or species habitat may occur within area
Halicampus dunckeri Red-hair Pipefish, Duncker's Pipefish [66220]		Species or species habitat may occur within area
Halicampus grayi Mud Pipefish, Gray's Pipefish [66221]		Species or species habitat may occur within area
Halicampus nitidus Glittering Pipefish [66224]		Species or species habitat may occur within area
Halicampus spinirostris Spiny-snout Pipefish [66225]		Species or species habitat may occur within area
Haliichthys taeniophorus Ribboned Pipehorse, Ribboned Seadragon [66226]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Hippichthys penicillus Beady Pipefish, Steep-nosed Pipefish [66231]		Species or species habitat may occur within area
Hippocampus angustus Western Spiny Seahorse, Narrow-bellied Seahorse [66234]		Species or species habitat may occur within area
Hippocampus histrix Spiny Seahorse, Thorny Seahorse [66236]		Species or species habitat may occur within area
Hippocampus kuda Spotted Seahorse, Yellow Seahorse [66237]		Species or species habitat may occur within area
Hippocampus planifrons Flat-face Seahorse [66238]		Species or species habitat may occur within area
Hippocampus spinosissimus Hedgehog Seahorse [66239]		Species or species habitat may occur within area
Hippocampus trimaculatus Three-spot Seahorse, Low-crowned Seahorse, Flat-faced Seahorse [66720]		Species or species habitat may occur within area
Micrognathus micronotopterus Tidepool Pipefish [66255]		Species or species habitat may occur within area
Phoxocampus belcheri Black Rock Pipefish [66719]		Species or species habitat may occur within area
Solegnathus hardwickii Pallid Pipehorse, Hardwick's Pipehorse [66272]		Species or species habitat may occur within area
Solegnathus lettiensis Gunther's Pipehorse, Indonesian Pipefish [66273]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Solenostomus cyanopterus Robust Ghostpipefish, Blue-finned Ghost Pipefish, [66183]		Species or species habitat may occur within area
Syngnathoides biaculeatus Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279]		Species or species habitat may occur within area
Trachyrhamphus bicoarctatus Bentstick Pipefish, Bend Stick Pipefish, Short-tailed Pipefish [66280]		Species or species habitat may occur within area
Trachyrhamphus longirostris Straightstick Pipefish, Long-nosed Pipefish, Straight Stick Pipefish [66281]		Species or species habitat may occur within area
Mammal		
Dugong dugon Dugong [28]		Breeding known to occur within area
Reptile		
Aipysurus apraefrontalis Short-nosed Sea Snake, Short-nosed Seasnake [1115]	Critically Endangered	Species or species habitat known to occur within area
Aipysurus duboisii Dubois' Sea Snake, Dubois' Seasnake, Reef Shallows Sea Snake [1116]		Species or species habitat may occur within area
Aipysurus foliosquama Leaf-scaled Sea Snake, Leaf-scaled Seasnake [1118]	Critically Endangered	Species or species habitat known to occur within area
Aipysurus laevis Olive Sea Snake, Olive-brown Sea Snake [1120]		Species or species habitat may occur within area
Aipysurus mosaicus as Aipysurus eydouxii Mosaic Sea Snake [87261]		Species or species habitat may occur within area
Aipysurus tenuis Brown-lined Sea Snake, Mjoberg's Sea Snake [1121]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Caretta caretta Loggerhead Turtle [1763]	Endangered	Breeding known to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Breeding known to occur within area
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat may occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area
Emydocephalus annulatus Eastern Turtle-headed Sea Snake [1125]		Species or species habitat may occur within area
Ephalophis greyae as Ephalophis greyi Mangrove Sea Snake [93738]		Species or species habitat may occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Breeding known to occur within area
Hydrelaps darwiniensis Port Darwin Sea Snake, Black-ringed Mangrove Sea Snake [1100]		Species or species habitat may occur within area
Hydrophis czeblukovi Fine-spined Sea Snake [59233]		Species or species habitat may occur within area
Hydrophis elegans Elegant Sea Snake, Bar-bellied Sea Snake [1104]		Species or species habitat may occur within area
Hydrophis kingii as Disteira kingii Spectacled Sea Snake [93511]		Species or species habitat may occur within area
Hydrophis macdowelli as Hydrophis mcdowelli MacDowell's Sea Snake, Small-headed Sea Snake, [75601]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Hydrophis major as Disteira major Olive-headed Sea Snake [93512]		Species or species habitat may occur within area
Hydrophis ornatus Spotted Sea Snake, Ornate Reef Sea Snake [1111]		Species or species habitat may occur within area
Hydrophis peronii as Acalyptophis peronii Horned Sea Snake [93509]		Species or species habitat may occur within area
Hydrophis platura as Pelamis platurus Yellow-bellied Sea Snake [93746]		Species or species habitat may occur within area
Hydrophis stokesii as Astrotia stokesii Stokes' Sea Snake [93510]		Species or species habitat may occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Breeding known to occur within area

Whales and Other Cetaceans [Resource Information]

Current Scientific Name	Status	Type of Presence
Mammal		
Balaenoptera acutorostrata Minke Whale [33]		Species or species habitat may occur within area
Balaenoptera bonaerensis Antarctic Minke Whale, Dark-shoulder Minke Whale [67812]		Species or species habitat likely to occur within area
Balaenoptera borealis Sei Whale [34]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat likely to occur within area

Current Scientific Name	Status	Type of Presence
[Balaenoptera musculus](#) Blue Whale [36]	Endangered	Migration route known to occur within area
[Balaenoptera omurai](#) Omura's Whale [87136]		Species or species habitat likely to occur within area
[Balaenoptera physalus](#) Fin Whale [37]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
[Delphinus delphis](#) Common Dolphin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area
[Eubalaena australis](#) Southern Right Whale [40]	Endangered	Species or species habitat likely to occur within area
[Feresa attenuata](#) Pygmy Killer Whale [61]		Species or species habitat may occur within area
[Globicephala macrorhynchus](#) Short-finned Pilot Whale [62]		Species or species habitat may occur within area
[Grampus griseus](#) Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area
[Indopacetus pacificus](#) Longman's Beaked Whale [72]		Species or species habitat may occur within area
[Kogia breviceps](#) Pygmy Sperm Whale [57]		Species or species habitat may occur within area
[Kogia sima](#) Dwarf Sperm Whale [85043]		Species or species habitat may occur within area

Current Scientific Name	Status	Type of Presence
Lagenodelphis hosei Fraser's Dolphin, Sarawak Dolphin [41]		Species or species habitat may occur within area
Megaptera novaeangliae Humpback Whale [38]		Breeding known to occur within area
Mesoplodon densirostris Blainville's Beaked Whale, Dense-beaked Whale [74]		Species or species habitat may occur within area
Mesoplodon ginkgodens Gingko-toothed Beaked Whale, Gingko-toothed Whale, Gingko Beaked Whale [59564]		Species or species habitat may occur within area
Orcaella heinsohni Australian Snubfin Dolphin [81322]	Vulnerable	Species or species habitat known to occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Peponocephala electra Melon-headed Whale [47]		Species or species habitat may occur within area
Physeter macrocephalus Sperm Whale [59]		Species or species habitat may occur within area
Pseudorca crassidens False Killer Whale [48]		Species or species habitat likely to occur within area
Sousa sahulensis Australian Humpback Dolphin [87942]	Vulnerable	Species or species habitat known to occur within area
Stenella attenuata Spotted Dolphin, Pantropical Spotted Dolphin [51]		Species or species habitat may occur within area

Current Scientific Name	Status	Type of Presence
Stenella coeruleoalba Striped Dolphin, Euphrosyne Dolphin [52]		Species or species habitat may occur within area
Stenella longirostris Long-snouted Spinner Dolphin [29]		Species or species habitat may occur within area
Steno bredanensis Rough-toothed Dolphin [30]		Species or species habitat may occur within area
Tursiops aduncus Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat likely to occur within area
Tursiops aduncus (Arafura/Timor Sea populations) Spotted Bottlenose Dolphin (Arafura/Timor Sea populations) [78900]		Species or species habitat known to occur within area
Tursiops truncatus s. str. Bottlenose Dolphin [68417]		Species or species habitat may occur within area
Ziphius cavirostris Cuvier's Beaked Whale, Goose-beaked Whale [56]		Species or species habitat may occur within area

Australian Marine Parks	[Resource Information]
Park Name	Zone & IUCN Categories
Carnarvon Canyon	Habitat Protection Zone (IUCN IV)
Gascoyne	Habitat Protection Zone (IUCN IV)
Argo-Rowley Terrace	Multiple Use Zone (IUCN VI)
Argo-Rowley Terrace	Multiple Use Zone (IUCN VI)
Gascoyne	Multiple Use Zone (IUCN VI)
Montebello	Multiple Use Zone (IUCN VI)
Gascoyne	National Park Zone (IUCN II)

Park Name	Zone & IUCN Categories
Mermaid Reef	National Park Zone (IUCN II)
Ningaloo	Recreational Use Zone (IUCN IV)
Argo-Rowley Terrace	Special Purpose Zone (Trawl) (IUCN VI)

Habitat Critical to the Survival of Marine Turtles [Resource Information]

Scientific Name	Behaviour	Presence
All year (Jun - Aug)		
Natator depressus		
Flatback Turtle [59257]	Nesting	Known to occur
Nov-Feb		
Caretta caretta		
Loggerhead Turtle [1763]	Nesting	Known to occur
Oct - Feb		
Eretmochelys imbricata		
Hawksbill Turtle [1766]	Nesting	Known to occur
Oct - Mar		
Chelonia mydas		
Green Turtle [1765]	Nesting	Known to occur

Extra Information

State and Territory Reserves [Resource Information]

Protected Area Name	Reserve Type	State
Airlie Island	Nature Reserve	WA
Barrow Island	Marine Management Area	WA
Bessieres Island	Nature Reserve	WA
Jurabi Coastal Park	5(1)(h) Reserve	WA
Locker Island	Nature Reserve	WA
Montebello Islands	Marine Park	WA
Muiron Islands	Nature Reserve	WA
Muiron Islands	Marine Management Area	WA

Protected Area Name	Reserve Type	State
Ningaloo	Marine Park	WA
Round Island	Nature Reserve	WA
Rowley Shoals	Marine Park	WA
Serrurier Island	Nature Reserve	WA
Thevenard Island	Nature Reserve	WA
Thevenard Island	Nature Reserve	WA
Unnamed WA40322	5(1)(h) Reserve	WA
Unnamed WA44665	5(1)(h) Reserve	WA

EPBC Act Referrals

[Resource Information]

Title of referral	Reference	Referral Outcome	Assessment Status
3D Seismic Survey in the Carnarvon Bsin on the North West Shelf	2002/778		Completed
Babylon 3D Marine Seismic Survey, Commonwealth Waters, nr Exmouth WA	2013/7081		Completed
Browse to North West Shelf Development, Indian Ocean, WA	2018/8319		Approval
DAVROS MC 3D marine seismic survey northwaet of Dampier, WA	2013/7092		Completed
Deep Water Northwest Shelf 2D Seismic Survey	2007/3260		Completed
Development of Mutineer and Exeter petroleum fields for oil production, Permit	2003/1033		Completed
Gorgon Gas Development	2003/1294		Post-Approval
Ningaloo Lighthouse Development, 17km north west Exmouth, Western Australia	2020/8693		Post-Approval
Project Highclere Cable Lay and Operation	2022/09203		Completed
Action clearly unacceptable			
Highlands 3D Marine Seismic Survey	2012/6680	Action Clearly Unacceptable	Completed
Controlled action			

Title of referral	Reference	Referral Outcome	Assessment Status
Controlled action			
'Van Gogh' Petroleum Field Development	2007/3213	Controlled Action	Post-Approval
Construct and operate LNG & domestic gas plant including onshore and offshore facilities - Wheatston	2008/4469	Controlled Action	Post-Approval
Construction and operation of a Solar Salt Project, SW Onslow, WA	2016/7793	Controlled Action	Assessment Approach
Develop Jansz-Io deepwater gas field in Permit Areas WA-18-R, WA-25-R and WA-26-	2005/2184	Controlled Action	Post-Approval
Development of Angel gas and condensate field, North West Shelf	2004/1805	Controlled Action	Post-Approval
Development of Browse Basin Gas Fields (Upstream)	2008/4111	Controlled Action	Completed
Development of Coniston/Novara fields within the Exmouth Sub-basin	2011/5995	Controlled Action	Post-Approval
Development of Stybarrow petroleum field incl drilling and facility installation	2004/1469	Controlled Action	Post-Approval
Echo-Yodel Production Wells	2000/11	Controlled Action	Post-Approval
Enfield full field development	2001/257	Controlled Action	Post-Approval
Equus Gas Fields Development Project, Carnarvon Basin	2012/6301	Controlled Action	Completed
Gorgon Gas Development 4th Train Proposal	2011/5942	Controlled Action	Post-Approval
Greater Enfield (Vincent) Development	2005/2110	Controlled Action	Post-Approval
Greater Gorgon Development - Optical Fibre Cable, Mainland to Barrow Island	2005/2141	Controlled Action	Completed
Light Crude Oil Production	2001/365	Controlled Action	Post-Approval
Pluto Gas Project	2005/2258	Controlled Action	Completed
Pluto Gas Project Including Site B	2006/2968	Controlled Action	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Controlled action			
Pyrenees Oil Fields Development	2005/2034	Controlled Action	Post-Approval
The Scarborough Project - FLNG & assoc subsea infrastructure, Carnarvon Basin	2013/6811	Controlled Action	Post-Approval
Vincent Appraisal Well	2000/22	Controlled Action	Post-Approval
Yardie Creek Road Realignment Project	2021/8967	Controlled Action	Assessment Approach
Not controlled action			
'Goodwyn A' Low Pressure Train Project	2003/914	Not Controlled Action	Completed
'Van Gogh' Oil Appraisal Drilling Program, Exploration Permit Area WA-155-P(1)	2006/3148	Not Controlled Action	Completed
Airlie Island soil and groundwater investigations, Exmouth Gulf, offshore Pilbara coast	2014/7250	Not Controlled Action	Completed
Bollinger 2D Seismic Survey 200km North of North West Cape WA	2004/1868	Not Controlled Action	Completed
Bultaco-2, Laverda-2, Laverda-3 and Montesa-2 Appraisal Wells	2000/103	Not Controlled Action	Completed
Carnarvon 3D Marine Seismic Survey	2004/1890	Not Controlled Action	Completed
Cazadores 2D seismic survey	2004/1720	Not Controlled Action	Completed
Construction and operation of an unmanned sea platform and connecting pipeline to Varanus Island for	2004/1703	Not Controlled Action	Completed
Controlled Source Electromagnetic Survey	2007/3262	Not Controlled Action	Completed
Development of Halyard Field off the west coast of WA	2010/5611	Not Controlled Action	Completed
Drilling of an exploration well Gats-1 in Permit Area WA-261-P	2004/1701	Not Controlled Action	Completed
Eagle-1 Exploration Drilling, North West Shelf, WA	2019/8578	Not Controlled Action	Completed
Echo A Development WA-23-L, WA-24-L	2005/2042	Not Controlled Action	Completed

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action			
Exploration drilling well WA-155-P(1)	2003/971	Not Controlled Action	Completed
Exploration of appraisal wells	2006/3065	Not Controlled Action	Completed
Exploration Well (Taunton-2)	2002/731	Not Controlled Action	Completed
Exploration Well in Permit Area WA-155-P(1)	2002/759	Not Controlled Action	Completed
Exploratory drilling in permit area WA-225-P	2001/490	Not Controlled Action	Completed
HCA05X Macedon Experimental Survey	2004/1926	Not Controlled Action	Completed
Hess Exploration Drilling Programme	2007/3566	Not Controlled Action	Completed
Huascaran-1 exploration well (WA-292-P)	2001/539	Not Controlled Action	Completed
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed
Infill Production Well (Griffin-9)	2001/417	Not Controlled Action	Completed
Jansz-2 and 3 Appraisal Wells	2002/754	Not Controlled Action	Completed
Klammer 2D Seismic Survey	2002/868	Not Controlled Action	Completed
Maia-Gaea Exploration wells	2000/17	Not Controlled Action	Completed
Manaslu - 1 and Huascaran - 1 Offshore Exploration Wells	2001/235	Not Controlled Action	Completed
Montesa-1 and Bultaco-1 Exploration Wells	2000/102	Not Controlled Action	Completed
North Rankin B gas compression facility	2005/2500	Not Controlled Action	Completed
Pipeline System Modifications Project	2000/3	Not Controlled Action	Completed
Project Highclere Geophysical Survey	2021/9023	Not Controlled Action	Completed
Searipple gas and condensate field development	2000/89	Not Controlled Action	Completed

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action			
Spool Base Facility	2001/263	Not Controlled Action	Completed
Subsea Gas Pipeline From Stybarrow Field to Griffin Venture Gas Export Pipeline	2005/2033	Not Controlled Action	Completed
sub-sea tieback of Perseus field wells	2004/1326	Not Controlled Action	Completed
Telstra North Rankin Spur Fibre Optic Cable	2016/7836	Not Controlled Action	Completed
Thevenard Island Retirement Project	2015/7423	Not Controlled Action	Completed
To construct and operate an offshore submarine fibre optic cable, WA	2014/7373	Not Controlled Action	Completed
WA-295-P Kerr-McGee Exploration Wells	2001/152	Not Controlled Action	Completed
Wanda Offshore Research Project, 80 km north-east of Exmouth, WA	2018/8293	Not Controlled Action	Completed
Western Flank Gas Development	2005/2464	Not Controlled Action	Completed
Wheatstone 3D seismic survey, 70km north of Barrow Island	2004/1761	Not Controlled Action	Completed
Not controlled action (particular manner)			
'Kate' 3D marine seismic survey, exploration permits WA-320-P and WA-345-P, 60km	2005/2037	Not Controlled Action (Particular Manner)	Post-Approval
'Tourmaline' 2D marine seismic survey, permit areas WA-323-P, WA-330-P and WA-32	2005/2282	Not Controlled Action (Particular Manner)	Post-Approval
"Leanne" offshore 3D seismic exploration, WA-356-P	2005/1938	Not Controlled Action (Particular Manner)	Post-Approval
2D and 3D seismic surveys	2005/2151	Not Controlled Action (Particular Manner)	Post-Approval
2D marine seismic survey	2012/6296	Not Controlled Action (Particular Manner)	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
2D seismic survey	2008/4493	Not Controlled Action (Particular Manner)	Post-Approval
2D Seismic Survey	2005/2146	Not Controlled Action (Particular Manner)	Post-Approval
2D Seismic Survey Permit Area WA-352-P	2008/4628	Not Controlled Action (Particular Manner)	Post-Approval
2D seismic survey within permit WA-291	2007/3265	Not Controlled Action (Particular Manner)	Post-Approval
3D marine seismic survey	2008/4281	Not Controlled Action (Particular Manner)	Post-Approval
3D Marine Seismic Survey (WA-482-P, WA-363-P), WA	2013/6761	Not Controlled Action (Particular Manner)	Post-Approval
3D Marine Seismic Survey in Permit Areas WA-15-R, WA-18-R, WA-205-P, WA-253-P, WA-267-P and WA-268-P	2003/1271	Not Controlled Action (Particular Manner)	Post-Approval
3D Marine Seismic Survey in WA 457-P & WA 458-P, North West Shelf, offshore WA	2013/6862	Not Controlled Action (Particular Manner)	Post-Approval
3D marine seismic survey over petroleum title WA-268-P	2007/3458	Not Controlled Action (Particular Manner)	Post-Approval
3D Marine Seismic Surveys - Contos CT-13 & Supertubes CT-13, offshore WA	2013/6901	Not Controlled Action (Particular Manner)	Post-Approval
3D seismic survey	2006/2715	Not Controlled Action (Particular Manner)	Post-Approval
3D Seismic Survey, WA	2008/4428	Not Controlled Action (Particular	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
		Manner)	
3D sesmic survey	2006/2781	Not Controlled Action (Particular Manner)	Post-Approval
Acheron Non-Exclusive 2D Seismic Survey	2009/4968	Not Controlled Action (Particular Manner)	Post-Approval
Acheron Non-Exclusive 2D Seismic Survey	2008/4565	Not Controlled Action (Particular Manner)	Post-Approval
Apache Northwest Shelf Van Gogh Field Appraisal Drilling Program	2007/3495	Not Controlled Action (Particular Manner)	Post-Approval
Aperio 3D Marine Seismic Survey, WA	2012/6648	Not Controlled Action (Particular Manner)	Post-Approval
Artemis-1 Drilling Program (WA-360-P)	2010/5432	Not Controlled Action (Particular Manner)	Post-Approval
Australia to Singapore Fibre Optic Submarine Cable System	2011/6127	Not Controlled Action (Particular Manner)	Post-Approval
Balnaves Condensate Field Development	2011/6188	Not Controlled Action (Particular Manner)	Post-Approval
Bonaventure 3D seismic survey	2006/2514	Not Controlled Action (Particular Manner)	Post-Approval
Cable Seismic Exploration Permit areas WA-323-P and WA-330-P	2008/4227	Not Controlled Action (Particular Manner)	Post-Approval
CGGVERITAS 2010 2D Seismic Survey	2010/5714	Not Controlled Action (Particular Manner)	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
Charon 3D Marine Seismic Survey	2007/3477	Not Controlled Action (Particular Manner)	Post-Approval
Coverack Marine Seismic Survey	2001/399	Not Controlled Action (Particular Manner)	Post-Approval
Cue Seismic Survey within WA-359-P, WA-361-P and WA-360-P	2007/3647	Not Controlled Action (Particular Manner)	Post-Approval
CVG 3D Marine Seismic Survey	2012/6654	Not Controlled Action (Particular Manner)	Post-Approval
Decommissioning of the Legendre facilities	2010/5681	Not Controlled Action (Particular Manner)	Post-Approval
Deep Water Drilling Program	2010/5532	Not Controlled Action (Particular Manner)	Post-Approval
Demeter 3D Seismic Survey, off Dampier, WA	2002/900	Not Controlled Action (Particular Manner)	Post-Approval
Draeck 3D Marine Seismic Survey, WA-205-P	2006/3067	Not Controlled Action (Particular Manner)	Post-Approval
Drilling 35-40 offshore exploration wells in deep water	2008/4461	Not Controlled Action (Particular Manner)	Post-Approval
Eendracht Multi-Client 3D Marine Seismic Survey	2009/4749	Not Controlled Action (Particular Manner)	Post-Approval
Enfield M3 & Vincent 4D Marine Seismic Surveys	2008/3981	Not Controlled Action (Particular Manner)	Completed
Enfield M3 4D, Vincent 4D & 4D Line Test Marine Seismic Surveys	2008/4122	Not Controlled Action (Particular	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
		Manner)	
Enfield M4 4D Marine Seismic Survey	2008/4558	Not Controlled Action (Particular Manner)	Post-Approval
Enfield oilfield 3D Seismic Survey	2006/3132	Not Controlled Action (Particular Manner)	Post-Approval
Exmouth West 2D Marine Seismic Survey	2008/4132	Not Controlled Action (Particular Manner)	Post-Approval
Exploration drilling of Zeus-1 well	2008/4351	Not Controlled Action (Particular Manner)	Post-Approval
Fletcher-Finucane Development, WA26-L and WA191-P	2011/6123	Not Controlled Action (Particular Manner)	Post-Approval
Foxhound 3D Non-Exclusive Marine Seismic Survey	2009/4703	Not Controlled Action (Particular Manner)	Post-Approval
Gazelle 3D Marine Seismic Survey in WA-399-P and WA-42-L	2010/5570	Not Controlled Action (Particular Manner)	Post-Approval
Geco Eagle 3D Marine Seismic Survey	2008/3958	Not Controlled Action (Particular Manner)	Post-Approval
Glencoe 3D Marine Seismic Survey WA-390-P	2007/3684	Not Controlled Action (Particular Manner)	Post-Approval
Greater Western Flank Phase 1 gas Development	2011/5980	Not Controlled Action (Particular Manner)	Post-Approval
Grimalkin 3D Seismic Survey	2008/4523	Not Controlled Action (Particular Manner)	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
Guacamole 2D Marine Seismic Survey	2008/4381	Not Controlled Action (Particular Manner)	Post-Approval
Harmony 3D Marine Seismic Survey	2012/6699	Not Controlled Action (Particular Manner)	Post-Approval
Harpy 1 exploration well	2001/183	Not Controlled Action (Particular Manner)	Post-Approval
Honeycombs MC3D Marine Seismic Survey	2012/6368	Not Controlled Action (Particular Manner)	Post-Approval
Huzzas MC3D Marine Seismic Survey (HZ-13) Carnarvon Basin, offshore WA	2013/7003	Not Controlled Action (Particular Manner)	Post-Approval
Huzzas phase 2 marine seismic survey, Exmouth Plateau, Northern Carnarvon Basin, WA	2013/7093	Not Controlled Action (Particular Manner)	Post-Approval
INDIGO Marine Cable Route Survey (INDIGO)	2017/7996	Not Controlled Action (Particular Manner)	Post-Approval
John Ross & Rosella Off Bottom Cable Seismic Exploration Program	2008/3966	Not Controlled Action (Particular Manner)	Post-Approval
Judo Marine 3D Seismic Survey within and adjacent to WA-412-P	2009/4801	Not Controlled Action (Particular Manner)	Post-Approval
Judo Marine 3D Seismic Survey within and adjacent to WA-412-P	2008/4630	Not Controlled Action (Particular Manner)	Post-Approval
Julimar Brunello Gas Development Project	2011/5936	Not Controlled Action (Particular Manner)	Post-Approval
Klimt 2D Marine Seismic Survey	2007/3856	Not Controlled Action (Particular	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
		Manner)	
Laverda 3D Marine Seismic Survey and Vincent M1 4D Marine Seismic Survey	2010/5415	Not Controlled Action (Particular Manner)	Post-Approval
Leopard 2D marine seismic survey	2005/2290	Not Controlled Action (Particular Manner)	Post-Approval
Lion 2D Marine Seismic Survey	2007/3777	Not Controlled Action (Particular Manner)	Post-Approval
Macedon Gas Field Development	2008/4605	Not Controlled Action (Particular Manner)	Post-Approval
Marine reconnaissance survey	2008/4466	Not Controlled Action (Particular Manner)	Post-Approval
Moosehead 2D seismic survey within permit WA-192-P	2005/2167	Not Controlled Action (Particular Manner)	Post-Approval
Munmorah 2D seismic survey within permits WA-308/9-P	2003/970	Not Controlled Action (Particular Manner)	Post-Approval
Ocean Bottom Cable Seismic Program, WA-264-P	2007/3844	Not Controlled Action (Particular Manner)	Post-Approval
Ocean Bottom Cable Seismic Survey	2005/2017	Not Controlled Action (Particular Manner)	Post-Approval
Offshore Canning Multi Client 2D Marine Seismic Survey	2010/5393	Not Controlled Action (Particular Manner)	Post-Approval
Offshore Drilling Campaign	2011/5830	Not Controlled Action (Particular Manner)	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
Offshore Fibre Optic Cable Network Construction & Operation, Port Hedland WA to Darwin NT	2014/7223	Not Controlled Action (Particular Manner)	Post-Approval
Orcus 3D Marine Seismic Survey in WA-450-P	2010/5723	Not Controlled Action (Particular Manner)	Post-Approval
Osprey and Dionysus Marine Seismic Survey	2011/6215	Not Controlled Action (Particular Manner)	Post-Approval
Outer Canning exploration drilling program off NW coast of WA	2012/6618	Not Controlled Action (Particular Manner)	Post-Approval
Palta-1 exploration well in Petroleum Permit Area WA-384-P	2011/5871	Not Controlled Action (Particular Manner)	Post-Approval
Phoenix 3D Seismic Survey, Bedout Sub-Basin	2010/5360	Not Controlled Action (Particular Manner)	Post-Approval
Pomodoro 3D Marine Seismic Survey in WA-426-P and WA-427-P	2010/5472	Not Controlled Action (Particular Manner)	Post-Approval
Pyrenees 4D Marine Seismic Monitor Survey, HCA12A	2012/6579	Not Controlled Action (Particular Manner)	Post-Approval
Pyrenees-Macedon 3D marine seismic survey	2005/2325	Not Controlled Action (Particular Manner)	Post-Approval
Quiberon 2D Seismic Survey, permit area WA-385P, offshore of Carnarvon	2009/5077	Not Controlled Action (Particular Manner)	Post-Approval
Reindeer gas reservior development, Devil Creek, Carnarvon Basin - WA	2007/3917	Not Controlled Action (Particular Manner)	Post-Approval
Repsol 3d & 2D Marine Seismic Survey	2012/6658	Not Controlled Action (Particular	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
		Manner)	
Rose 3D Seismic Program	2008/4239	Not Controlled Action (Particular Manner)	Post-Approval
Rydal-1 Petroleum Exploration Well, WA	2012/6522	Not Controlled Action (Particular Manner)	Post-Approval
Salsa 3D Marine Seismic Survey	2010/5629	Not Controlled Action (Particular Manner)	Post-Approval
Santos Winchester three dimensional seismic survey - WA-323-P & WA-330-P	2011/6107	Not Controlled Action (Particular Manner)	Post-Approval
Skorpion Marine Seismic Survey WA	2001/416	Not Controlled Action (Particular Manner)	Post-Approval
Sovereign 3D Marine Seismic Survey	2011/5861	Not Controlled Action (Particular Manner)	Post-Approval
Stag 4D & Reindeer MAZ Marine Seismic Surveys, WA	2013/7080	Not Controlled Action (Particular Manner)	Post-Approval
Stag Off-bottom Cable Seismic Survey	2007/3696	Not Controlled Action (Particular Manner)	Post-Approval
Stybarrow 4D Marine Seismic Survey	2011/5810	Not Controlled Action (Particular Manner)	Post-Approval
Stybarrow Baseline 4D marine seismic survey	2008/4530	Not Controlled Action (Particular Manner)	Post-Approval
Tantabiddi Boat Ramp Sand Bypassing	2015/7411	Not Controlled Action (Particular Manner)	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
Tidepole Maz 3D Seismic Survey Campaign	2007/3706	Not Controlled Action (Particular Manner)	Post-Approval
Tortilla 2D Seismic Survey, WA	2011/6110	Not Controlled Action (Particular Manner)	Post-Approval
Triton 3D Marine Seismic Survey, WA-2-R and WA-3-R	2006/2609	Not Controlled Action (Particular Manner)	Post-Approval
Undertake a 3D marine seismic survey	2010/5695	Not Controlled Action (Particular Manner)	Post-Approval
Undertake a three dimensional marine seismic survey	2010/5679	Not Controlled Action (Particular Manner)	Post-Approval
Vincent M1 and Enfield M5 4D Marine Seismic Survey	2010/5720	Not Controlled Action (Particular Manner)	Post-Approval
Warramunga Non-Inclusive 3D Seismic Survey	2008/4553	Not Controlled Action (Particular Manner)	Post-Approval
West Anchor 3D Marine Seismic Survey	2008/4507	Not Controlled Action (Particular Manner)	Post-Approval
West Panaeus 3D seismic survey	2006/3141	Not Controlled Action (Particular Manner)	Post-Approval
Westralia SPAN Marine Seismic Survey, WA & NT	2012/6463	Not Controlled Action (Particular Manner)	Post-Approval
Wheatstone 3D MAZ Marine Seismic Survey	2011/6058	Not Controlled Action (Particular Manner)	Post-Approval
Wheatstone Iago Appraisal Well Drilling	2007/3941	Not Controlled Action (Particular	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
		Manner)	
Wheatstone Iago Appraisal Well Drilling	2008/4134	Not Controlled Action (Particular Manner)	Post-Approval
Referral decision			
3D Marine Seismic Survey in the offshore northwest Carnarvon Basin	2011/6175	Referral Decision	Completed
3D Seismic Survey	2008/4219	Referral Decision	Completed
Bianchi 3D Marine Seismic Survey, Carnavon Basin, WA	2013/7078	Referral Decision	Completed
CVG 3D Marine Seismic Survey	2012/6270	Referral Decision	Completed
Enfield 4D Marine Seismic Surveys, Production Permit WA-28-L	2005/2370	Referral Decision	Completed
Rose 3D Seismic acquisition survey	2008/4220	Referral Decision	Completed
Stybarrow Baseline 4D Marine Seismic Survey (Permit Areas WA-255-P, WA-32-L, WA-	2008/4165	Referral Decision	Completed
Two Dimensional Transition Zone Seismic Survey - TP/7 (R1)	2010/5507	Referral Decision	Completed

Key Ecological Features [Resource Information]

Key Ecological Features are the parts of the marine ecosystem that are considered to be important for the biodiversity or ecosystem functioning and integrity of the Commonwealth Marine Area.

Name	Region
Ancient coastline at 125 m depth contour	North-west
Canyons linking the Cuvier Abyssal Plain and the Cape Range Peninsula	North-west
Commonwealth waters adjacent to Ningaloo Reef	North-west
Continental Slope Demersal Fish Communities	North-west
Exmouth Plateau	North-west
Glomar Shoals	North-west
Mermaid Reef and Commonwealth waters surrounding Rowley Shoals	North-west

Name	Region	
Biologically Important Areas		[Resource Information]
Scientific Name	Behaviour	Presence
Dugong		
Dugong dugon Dugong [28]	Breeding	Known to occur
Dugong dugon Dugong [28]	Calving	Known to occur
Dugong dugon Dugong [28]	Foraging (high density seagrass beds)	Known to occur
Dugong dugon Dugong [28]	Nursing	Known to occur
Marine Turtles		
Caretta caretta Loggerhead Turtle [1763]	Internesting buffer	Known to occur
Caretta caretta Loggerhead Turtle [1763]	Nesting	Known to occur
Chelonia mydas Green Turtle [1765]	Foraging	Known to occur
Chelonia mydas Green Turtle [1765]	Internesting	Known to occur
Chelonia mydas Green Turtle [1765]	Internesting buffer	Known to occur
Chelonia mydas Green Turtle [1765]	Mating	Known to occur
Chelonia mydas Green Turtle [1765]	Nesting	Known to occur
Eretmochelys imbricata Hawksbill Turtle [1766]	Internesting buffer	Known to occur

Scientific Name	Behaviour	Presence
Eretmochelys imbricata Hawksbill Turtle [1766]	Nesting	Known to occur
Natator depressus Flatback Turtle [59257]	Internesting buffer	Known to occur
Natator depressus Flatback Turtle [59257]	Nesting	Known to occur
Seabirds		
Ardenna pacifica Wedge-tailed Shearwater [84292]	Breeding	Known to occur
Fregata ariel Lesser Frigatebird [1012]	Breeding	Known to occur
Phaethon lepturus White-tailed Tropicbird [1014]	Breeding	Known to occur
Sterna dougallii Roseate Tern [817]	Breeding	Known to occur
Sternula albifrons sinensis Little Tern [82850]	Resting	Known to occur
Sternula nereis Fairy Tern [82949]	Breeding	Known to occur
Thalasseus bengalensis Lesser Crested Tern [66546]	Breeding	Known to occur
Sharks		
Rhincodon typus Whale Shark [66680]	Foraging	Known to occur
Rhincodon typus Whale Shark [66680]	Foraging (high density prey)	Known to occur
Whales		
Balaenoptera musculus brevicauda Pygmy Blue Whale [81317]	Foraging	Known to occur

Scientific Name	Behaviour	Presence
Balaenoptera musculus brevicauda Pygmy Blue Whale [81317]	Migration	Known to occur
Eubalaena australis Southern Right Whale [40]	Migration	
Eubalaena australis Southern Right Whale [40]	Reproduction	
Megaptera novaeangliae Humpback Whale [38]	Migration (north and south)	Known to occur
Megaptera novaeangliae Humpback Whale [38]	Resting	Known to occur

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data is available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance on the contents of this report.

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions when time permits.

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded breeding sites; and
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management, Northern Territory
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
Forestry Corporation, NSW
-Geoscience Australia
-CSIRO
-Australian Tropical Herbarium, Cairns
-eBird Australia
-Australian Government – Australian Antarctic Data Centre
-Museum and Art Gallery of the Northern Territory
-Australian Government National Environmental Science Program
-Australian Institute of Marine Science
-Reef Life Survey Australia
-American Museum of Natural History
-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
-Tasmanian Museum and Art Gallery, Hobart, Tasmania
-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact us page.

© Commonwealth of Australia
Department of Climate Change, Energy, the Environment and Water
GPO Box 3090
Canberra ACT 2601 Australia
+61 2 6274 1111

APPENDIX D NOPSEMA REPORT FORMS

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

NOPSEMA
Australia's offshore energy regulator

FORM

Report of an Accident Dangerous Occurrence Well Integrity or Environmental Incident

Document No: N-03300-FM0831 A159980
Date: 2/12/2025

Accidents, dangerous occurrences, well and environmental reportable incidents can all be reported using this form.

Where an incident occurs, and the titleholder and operator are not the same organisation and have different reporting requirements under the OPGGS Act and regulations, each organisation must submit a separate report.

This form should be used in conjunction with NOPSEMA Guidance Note N-03300-GN2303 - Notification Reporting and Reporting Requirements for Incidents available on the NOPSEMA website.

Part 1 is required within 3 days of a notified incident.

Part 2 is required within 30 days of a notified accident or dangerous occurrence incident.

This form and any attachments are to be submitted by either:

Email: **submissions@nopsema.gov.au** for documents less than 10 MB; or

Secure file transfer: https://securefile.nopsema.gov.au/filedrop/submissions.

NOPSEMA considers that a full report will contain copies of documentary material referenced and/or relied on in the course of completing this form, which may include (but not be limited to) as appropriate: witness statements, management system documents, drawings, diagrams and photographs, third party reports (audit, inspection, material analysis etc.), internal records and correspondence.

Date and time of the initial verbal incident notification to NOPSEMA			
Date		**Time**	

Was NOPSEMA notified through the dedicated notification phone line?			
Yes/No		**If no, who was contacted at NOPSEMA**	

Notification Number provided by NOPSEMA for this incident	
Reference	

Date and time of this written incident report			
Date		**Time**	

Is this the initial incident report?	
Yes/No	

What type of incident is being reported?		***Tick all appropriate incident types***
Accident or dangerous occurrence		Complete parts 1A, 1B, 1E, 1F & 2
Well incident		Complete parts 1A, 1C, 1E, 1F
Environmental incident		Complete parts 1A, 1D, 1E, 1F

What category of incident is being reported?		***Tick all appropriate category types***
To use electronically: MS Word 2007-10 – click in check box		
Accidents	Death Serious Injury Lost time injury ≥3 days	☐ ☐ ☐
Dangerous occurrences	Could have caused death, serious injury or Lost time injury ≥3 days Fire or explosion Collision marine vessel and facility Uncontrolled hydrocarbon release >1 kg or ≥80 L (gas or liquid) Well kick >8 m^3 or 50 barrels Damage, loss or removal of a technical or other control measure critical to safety Pipeline incident Unplanned event – implement ERP Other _____	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
Wells	Loss of integrity release >1 kg (gas) Loss of integrity >80 L (liquid) A build-up of pressure or a positive flow check and operation of the BOP Flow from a well has been diverted Failure of well-related equipment Damage to well-related equipment Other unplanned occurrence requiring measures to regain control of the well	☐ ☐ ☐ ☐ ☐ ☐ ☐
Environmental	Hydrocarbon release Chemical release Drilling fluid/mud release Other substance release Loss of waste/materials/equipment EPBC list species death or injury/near miss Detection of marine pest/invasive marine species Displacement of other marine user Underwater cultural heritage, including First Nations underwater cultural heritage Other _____	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Part 1A – Information Required within 3 Days of a Reportable Incident

1. Where did the incident occur? *Fill in all information applicable to the incident location. Multiple facilities/wells may be included if appropriate.*	
Did the incident occur on a facility or Associated Offshore Place (AOP)?	
If yes what type of facility?	Facility or AOP name:
FPSO ☐	
MODU ☐	
Platform – manned ☐	
Platform – not normally manned ☐	
Vessel ☐	
Did the incident occur on a pipeline?	If yes pipeline name:
Did the incident involve a well or wells?	If yes well(s) name and title(s):
Incident location (Provide datum used i.e. GDA2020)	Latitude: Longitude:
Name of petroleum activity being undertaken?	
2. Who is the registered operator/titleholder or person that controls the works site or activity?	
Name	
Position	
Business address	
Business phone no.	
3. When did the incident occur?	
Date	
Time and time zone	
4. Details of person submitting this form.	
Name	
Position	
Email	
Telephone no.	

5. Details of any witnesses. *If more witnesses, copy and insert this section.*	
Full name	
Phone no. (Business hours)	
Phone no. (Home) (Mobile)	
Email (Business) (Private)	
Postal address	

6. Brief description of incident.

7. Work or activity being undertaken at time of incident.

8. What are the internal investigation arrangements?

9. Was there any loss of containment?		
Yes or No *If yes, provide details below*		
Type of loss	Hydrocarbon fluid Hydrocarbon gas Hydrocarbon gas and fluid Non-hydrocarbon gas Chemical Drilling fluid/mud Formation/Produced formation water Hydraulic oil Diesel/Fuel oil Waste Other	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
Estimated quantity *Liquid (L), Gas (kg)*		
Estimation Type *Calculation or measurement*		

Composition *Percentage and description*				
Known toxicity to people and/or environment	Yes ☐ No ☐ If yes, provide Safety Data Sheet and ecotox, bioaccumulation and persistence data (if available).			
What equipment was involved in the release?				
Is the equipment critical to safety?				
How was the leak/spill detected?	Fire & gas detection CCTV Visual	☐ ☐ ☐	Other	☐
Did ignition occur?	No Yes	☐ ☐	Immediate Delayed	☐ ☐
If yes, what was the likely ignition source?	Hotwork Spark electrical source Spark metallic contact Hot surface	☐ ☐ ☐ ☐	Other	☐

10. Hydrocarbon release details.

System of hydrocarbon release	Process Drilling Subsea / Pipeline	☐ ☐ ☐	Utilities Well related Marine	☐ ☐ ☐
Estimated inventory in the isolatable system *Liquid (L), Gas (kg)*				
System pressure and size of piping or vessel	Pressure *(MPag)*			
	Size *Piping diameter (mm)* *Piping length (mm)* *or Vessel volume (L)*			
Estimated equivalent hole diameter *(mm)*				

11. Has the release been stopped and/or contained?

Yes or No	
Duration of the release *hh:mm:ss*	
Estimated rate of release *Liquid (L), Gas (kg) per hour*	

Part 1B - Complete for accidents or dangerous occurrences

12. Action taken to make the work-site safe.					
Was permission given by a NOPSEMA inspector to interfere with the site? OPGGS(S)R 2.49. Yes ☐ No ☐					
Action taken					
Details of any disturbance of the work site					
13. Was an emergency response initiated? Yes ☐ No ☐					
Type of response	Manual Automatic alarm	☐ ☐	Muster Evacuation	☐ ☐	
How effective was the emergency response?					
14. Was anyone killed or injured? *Provide details below* Yes ☐ No ☐					
Injured person (IP)					
If different from Part 1A. Employer name		Employer address			
Employer phone no.		Employer email			
IP full name					
IP date of birth		Gender	Male ☐	Female ☐	
			Indeterminate/Intersex/Unspecified ☐		
IP residential address					
IP phone no. (Work)		IP phone no. (Home) (Mobile)			
IP occupation/job title		Core employee or contractor			
Circumstances of injury					

Based on TOOCS (refer to References) Nature of injury	a. Intracranial injury	☐	g. Other injuries	☒
	b. Fractures	☐	h. Mental disease	☐
	c. Wounds, lacerations, amputations, internal organ damage	☐	i. Skin and subcutaneous tissue diseases	☐
			j. Respiratory system diseases	☐
	d. Burn	☐	k. Circulatory system diseases	☐
	e. Injury to nerves and spinal cord	☐	l. Other diseases	☐
	f. Traumatic joint/ligament and muscle/tendon injury	☐	Not provided	
Location (On body)	G1 - 11 Cranium	☐	G5 - 53 Knee	☐
	G1 - 12 Eye	☐	G5 - 54 Lower leg	☐
	G1 - 13 Ear	☐	G5 - 55 Ankle	☐
	G1 - 14 Mouth	☐	G5 - 56 Foot and toes	☐
	G1 - 15 Nose	☐	G5 - 58 Lower limb - multiple locations	☐
	G1 - 16 Face - not elsewhere classified	☐	G6 - 61 Neck and trunk	☐
	G1 - 18 Head - multiple locations	☐	G6 - 62 Head and neck	☐
	G2 - 21 Neck	☐	G6 - 63 Head and other	☐
	G3 - 31 Back - upper and lower	☐	G6 - 64 Trunk and limbs	☐
	G3 - 33 Chest (thorax)	☐	G6 - 65 Upper and lower limbs	☐
	G3 - 34/ 35 Abdomen and pelvic region	☐	G6 - 66 Neck and shoulder	☐
	G3 - 38 Trunk - multiple locations	☐	G6 - 68 Other specified multiple locations	☐
	G3 - 39 Trunk - unspecified locations	☐	G7 - 71 Circulatory system	☐
	G4 - 41 Shoulder	☐	G7 - 72 Respiratory system	☐
	G4 - 42 Upper arm	☐	G7 - 74 Genitourinary system	☐
	G4 - 43 Elbow	☐	G7 - 75 Nervous system	☐
	G4 - 44 Forearm	☐	G7 - 78 Other and multiple systemic conditions	☐
	G4 - 45 Wrist	☐		
	G4 - 46 Hand fingers and thumb	☐	G7 - 79 Unspecified systemic conditions	☐
	G4- 48 Upper limb - multiple locations	☐	G8 - 80 Psychological system	☐
	G5 - 51 Hip	☐	G9 - 90 Unspecified locations	☐
	G5 - 52 Upper leg	☐	Not provided	☐
Mechanism of injury	G0 - 01 Falls from a height	☐	G5 - 53 Exposure to environmental heat	☐
	G0 - 02 Falls on the same level	☐	G5 - 54 Exposure to environmental cold	☐
	G0 - 03 Stepping kneeling or sitting on objects	☐	G5 - 57 Contact with electricity	☐
	G1 - 11 Hitting stationary objects	☐	G5 - 59 Exposure to other and unspecified environmental factors	☐
	G1 - 12 Hitting moving object	☐		
	G2 - 21 Being hit by falling objects	☐	G6 - 61 Single contact with chemical or substance	☐
	G2 - 25 Being trapped by moving machinery or equipment	☐	G6 - 62 Long term contact with chemicals or substances	☐
	G2 - 26 Being trapped between stationary and moving objects	☐	G6 - 69 Other and unspecified contact with chemical or substance	☐
	G2 - 27 Exposure to mechanical vibration	☐		
	G2 - 28 Being hit by moving objects	☐	G8 - 81 Exposure to a traumatic event	☐
	G3 - 31 Exposure to single, sudden sound	☐	G8 - 82 Exposure to workplace or occupational violence	☐
	G3 - 32 Long-term exposure to sound	☐		
	G3 - 38 Explosion	☐	G8 - 84 Work pressure	☐
	G4 - 41 Muscular stress while lifting, carrying or putting down objects	☐	G8 - 85 Suicide or attempted suicide	☐
			G8 - 86 Other mental stress factors	☐
	G4 - 42 Muscular stress while handling objects other than lifting, carrying or putting down	☐	G8 - 87 Work related harassment and/or workplace bullying	☐
	G4 - 43 Muscular stress with no objects being handled	☐	G8 - 88 Other harassment	☐
			G9 - 98 Other and multiple mechanisms of incident	☐
	G4 - 44 Repetitive movement, low muscle loading	☐		
	G5 - 51 Contact with hot objects	☐	G9 - 99 Unspecified mechanisms of incident	☐
	G5 - 52 Contact with cold objects	☐	Not provided'	
Agency of injury	1. Machinery and (mainly) fixed plant	☐	6. Chemicals and chemical products	☐
	2. Mobile plant or transport	☐	7. Material and substances	☐
	3. Powered equipment, tools and appliances	☐	8. Environmental agencies	☐
	4. Non-power hand tools, appliances and equipment	☐	9. Animal, human and biological agencies	☐
	5. Chemicals and chemical products	☐	10. Other and unspecified agencies	☐
			Not provided _____	☐

Details of job being undertaken				
Day and hour of shift	Day *e.g. 5th day of 7 (5 / 7)*		Hour *e.g. 3rd hour of 12 (3 / 12)*	

NB: Copy/paste this section *for each additional injured person and insert here*

15. Was anyone incapacitated from performing work for three or more days (>3 day Loss Time Injury)
Yes ☐ No ☐

Has the worker been cleared to return to full duties?	Yes ☐ No ☐
If not yet returned to work when is the worker expected to be cleared to return to full time duties?	
Total number of workdays lost at time of this report being submitted?	
At the time of this report being submitted is the injury still classified as a LTI >3Days, and if not, what is the new injury classification?	

NB: The injury and workdays lost should be reported to NOPSEMA in the Monthly Operational Activities Report

16. Was there any serious damage? *Provide details below.* Yes ☐ No ☐

Item 1	
Equipment damaged	
Extent of damage	
Will the equipment be shut down?	Yes ☐ No ☐
If yes, for how long?	

NB: Copy/paste this section for each additional item and insert here

17. Will the facility be shut down? *Provide details below.* Yes ☐ No ☐

Facility shutdown	Date		dd/mm/yyyy
	Time		24-hour clock
	Duration		days / hours / minutes

18. What were the immediate causes of the incident?

Part 1C – Complete for Well Incidents

19. What is the WOMP relating to the well?	
WOMP Name Document number Version	
20. Well Phase or Activity	
Drilling Completions Interventions Production Other (please describe)	☐ ☐ ☐ ☐ ☐
21. Brief description of current well status and condition (e.g. Shut-in, Producing, Barrier status etc, Stabilised pressures etc)	
22. Details of all material facts and circumstances concerning the reportable incident that the titleholder knows or is able, by reasonable search or enquiry, to find out.	

23. What were the causes of the incident? *This section should include a detailed analysis of the failure mode, including demonstration that an appropriate internal investigation has been completed in line with the titleholder's management systems, and provide evidence of the internal assurance of the outcomes of the investigation.* *This section should also cover the risk of the same incident occurring in other wells operated by the titleholder (e.g. rule out a systemic issue)* *If this information is not available within the 3 days requirement contact NOPSEMA.*

Part 1D – Complete for environmental incidents

24. What is the accepted environment plan for this incident?		
Environment plan name Document number Version		
25. Has the incident resulted in an impact to the environment? *Provide details below.* Yes ☐ No ☐		
Incident details *e.g. estimated area of impact, nature/significance of impact*		
Environmental Receptors	Open ocean ☐ Shoreline ☐ Population centre ☐ Stakeholders ☐ Other sensitivity ☐ *e.g. conservation area, nesting beach*	Macroalgae ☐ Coral Reef ☐ Benthic invertebrates ☐ Seagrass ☐ Mangrove ☐

Environment Receptor	
Environmental receptor	
Location of environment receptor	
Latitude (Provide datum used i.e. GDA2020)	
Longitude (Provide datum used i.e. GDA2020)	
Date and time of impact	
Action taken to minimise exposure	
Specify each matter protected under Part 3 of the EPBC Act impacted	
NB: Copy/paste this section for each additional environmental receptor and insert here	

26. Are any environments at risk of impact, including as a result of spill response measures? *Provide details below.* **Yes ☐ No ☐**		
Details *e.g. zone of potential impact*		
Environmental Receptors	Open ocean ☐ Shoreline ☐ Population centre ☐ Stakeholders ☐ Other sensitivity ☐ *e.g. conservation area, nesting beach*	Macroalgae ☐ Coral Reef ☐ Benthic invertebrates ☐ Seagrass ☐ Mangrove ☐

Environment Receptor	
Estimated location of 'at-risk' environments	
Estimated impact date & time	
Action required to minimise exposure	

Specify each matter protected under Part 3 of the EPBC Act at risk	
NB: Copy/paste this section for each additional environmental receptor and insert here	
27. Was an oil pollution emergency plan activated? *Provide details below.* **Yes ☐ No ☐**	
If yes, what action has been implemented /planned?	
If yes, how effective is/was the spill response?	
28. Was an environmental monitoring program initiated? *Provide details below.* **Yes ☐ No ☐**	
If yes, what actions have been implemented and/or planned?	
29. Did the incident result in the death or injury of any fauna? *Provide details below.* **Yes ☐ No ☐**	

Injured fauna	**Species 1**	**Species 2**	**Species 3**
Species name (common or scientific name)			
Number of individuals killed or injured	Killed: Injured:	Killed: Injured:	Killed: Injured:
NB: Copy/paste this section for each additional species and insert here			

Part 1E – Complete for actions

30. Actions taken to avoid or mitigate any adverse environmental impacts of the incident.		
Action	**Responsible party**	**Completion date** *Actual or intended*
NB: Copy/paste this section for each additional actions and insert here		
31. Corrective actions taken, or proposed, to stop, control or remedy the incident.		
Action	**Responsible party**	**Completion date** *Actual or intended*
NB: Copy/paste this section for each additional actions and insert here		
32. Actions taken, or proposed, to prevent a similar incident occurring in the future.		
Action	**Responsible party**	**Completion date** *Actual or intended*
NB: Copy/paste this section for each additional actions and insert here		

Part 1F – Complete for attachments

33. Are you attaching any documents? *Provide details below.* **Yes ☐ No ☐**

No.	ID	Revision	Date	Title/description

NB: Copy/paste this section for each document and insert here

Part 2 – Information required within 30 days of accident or dangerous occurrence

NOPSEMA acknowledges that in many circumstances an operator may not have completed an investigation within 3 days of an accident or first detection of a dangerous occurrence and agrees that these items must be provided within 30 days unless otherwise agreed, in writing with NOPSEMA.

In circumstances where an investigation has been completed within 3 days, and these items are available (supplemented, as required by any attachments) this part should also be completed at that time.

34. Is there any change to the LTI information provided at section 15 *Provide details below.* **Yes ☐ No ☐**	
Details	
35. Has the investigation been completed? *Provide details below.* **Yes ☐ No ☐**	
Root cause 1	
Root cause 2	
Root cause 3	
Other root causes	
36. Full report. *Describe investigation in detail, including who conducted the investigation and in accordance with what standard/procedure with reference to attachments listed in the 'attachments table' as applicable*	

37. Actions to prevent recurrence of same or similar incident.		
Action	**Responsible party**	**Completion date** *Actual or intended*

NB: Copy/paste this section for each additional actions and insert here

38. Are you attaching any documents? **Yes ☐ No ☐**

If yes, add to Section 1F Complete for Attachments.

References

TOOCS – Type of Occurrence Classification System.

The *Type of Occurrence Classification System, Version 3.0* (TOOCS3.1) was developed to improve the quality and consistency of data. This system aligns with the International Classification of Diseases – Australian Modification (ICD10-AM). Type of occurrence classification system (TOOCS) 3rd Edition May 2008 | Safe Work Australia

Privacy Notice

NOPSEMA collects your personal information for the purpose of investigating accidents, dangerous occurrences and environmental incidents under the *Offshore Petroleum and Greenhouse Gas Storage Act 2006*.

NOPSEMA will not use or disclose your personal information for any other purpose without your consent, unless it is required or authorised by law, or relates to NOPSEMA's enforcement activities. Your personal information may be disclosed to the following organisations, entities or individuals:

- individuals who make a request under the *Freedom of Information Act 1982*
- the Australian National Audit Office and other privately appointed auditors
- other law enforcement bodies (for example, the police or the coroner)
- NOPSEMA's legal advisors.

NOPSEMA may occasionally be required to disclose information to overseas recipients in order to discharge its functions or exercise its powers, or to perform its necessary business activities.

Information about how you can access, or seek correction to, your personal information is contained in NOPSEMA's APP Privacy Policy at www.nopsema.gov.au/privacy. If you have an enquiry or a complaint about your privacy, please contact NOPSEMA's Privacy Contact Officer on (08) 6188 8700 or by email at: privacy@nopsema.govtocs.au.

NOPSEMA
Australia's offshore energy regulator

FORM

Monthly Environmental Incident Reports

Document No: N-03300-FM0928 A198750

Date: 12/06/2025

Report for the month is due no later than 15 days after the end of the calendar month.

Send completed form to: submissions@nopsema.gov.au or via secure file transfer at https://securefile.nopsema.gov.au/filedrop/submissions

Reference: Section 50

Final report for this activity: ☐					
Titleholder name:			**Title of environment plan for the activity**		
Activity type: (e.g. drilling, seismic, production)			**Month, Year:**		
Contact person:		**Email:**		**Phone:**	
Incident date	**All material facts and circumstances** (including release volumes to environment if applicable)	**Performance outcome(s) and/or standard(s) breached**	**Action taken to avoid or mitigate any adverse environmental impacts of the incident**	**Corrective action taken, or proposed, to stop, control or remedy this incident**	**Action taken, or proposed, to prevent a similar incident occurring in future**

Note 1: This form may be submitted in conjunction with the 'Operational Activities Monthly Report' Form available at www.nopsema.gov.au

Privacy Notice

NOPSEMA collects your personal information for the purpose of investigating accidents, environmental incidents and dangerous occurrences under the *Offshore Petroleum and Greenhouse Gas Storage Act 2006.*

NOPSEMA will not use or disclose your personal information for any other purpose without your consent, unless it is required or authorised by law, or relates to NOPSEMA's enforcement activities. Your personal information may be disclosed to the following organisations, entities or individuals:

- individuals who make a request under the *Freedom of Information Act 1982*
- the Australian National Audit Office and other privately appointed auditors
- other law enforcement bodies (for example, the police or the coroner)
- NOPSEMA's legal advisors.

NOPSEMA may occasionally be required to disclose information to overseas recipients in order to discharge its functions or exercise its powers, or to perform its necessary business activities.

Information about how you can access, or seek correction to, your personal information is contained in NOPSEMA's APP Privacy Policy at www.nopsema.gov.au/privacy. If you have an enquiry or a complaint about your privacy, please contact NOPSEMA's Privacy Contact Officer on 08 6188 8700 or by email at privacy@nopsema.gov.au

APPENDIX E DEPARTMENT OF PLANNING LAND, HERITAGE AND ABORIGINAL ENQUIRY SYSTEM RESULTS

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Aboriginal Cultural Heritage Inquiry System

List of Aboriginal Cultural Heritage (ACH) Lodged

For further important information on using this information please see the WA.gov.au website's Terms of Use at https://www.wa.gov.au/terms-of-use

Search Criteria

No Aboriginal Cultural Heritage (ACH) Lodged in Shapefile - AU_ENVT_WEL_EP_EMBA_CK4LH3_WellInterv_Cwth_2025_v4

Disclaimer

Aboriginal heritage holds significant value to Aboriginal people for their social, spiritual, historical, scientific, or aesthetic importance within Aboriginal traditions, and provides an essential link for Aboriginal people to their past, present and future. In Western Australia Aboriginal heritage is protected under the *Aboriginal Heritage Act 1972*.

All Aboriginal cultural heritage in Western Australia is protected, whether or not the ACH has been reported or exists on the Register.

The information provided is made available in good faith and is predominately based on the information provided to the Department of Planning, Lands and Heritage by third parties. The information is provided solely on the basis that readers will be responsible for making their own assessment as to the accuracy of the information. If you find any errors or omissions in our records, including our maps, it would be appreciated if you provide the details to the Department via https://achknowledge.dplh.wa.gov.au/ach-enquiry-form and we will make every effort to rectify it as soon as possible.

Copyright

Copyright in the information contained herein is and shall remain the property of the State of Western Australia. All rights reserved. This includes, but is not limited to, information from the Register established and maintained under the *Aboriginal Heritage Act 1972*.

Location information data licensed from Western Australian Land Information Authority (WALIA) trading as Landgate. Copyright in the location information data remains with WALIA. WALIA does not warrant the accuracy or completeness of the location information data or its suitability for any particular purpose.

Aboriginal Cultural Heritage Inquiry System

List of Aboriginal Cultural Heritage (ACH) Register

For further important information on using this information please see the WA.gov.au website's Terms of Use at https://www.wa.gov.au/terms-of-use

Search Criteria

1 Aboriginal Cultural Heritage (ACH) Register in Shapefile - AU_ENVT_WEL_EP_EMBA_CK4LH3_WellInterv_Cwth_2025_v4

Disclaimer

Aboriginal heritage holds significant value to Aboriginal people for their social, spiritual, historical, scientific, or aesthetic importance within Aboriginal traditions, and provides an essential link for Aboriginal people to their past, present and future. In Western Australia Aboriginal heritage is protected under the *Aboriginal Heritage Act 1972*.

All Aboriginal cultural heritage in Western Australia is protected, whether or not the ACH has been reported or exists on the Register.

The information provided is made available in good faith and is predominately based on the information provided to the Department of Planning, Lands and Heritage by third parties. The information is provided solely on the basis that readers will be responsible for making their own assessment as to the accuracy of the information. If you find any errors or omissions in our records, including our maps, it would be appreciated if you provide the details to the Department via https://achknowledge.dplh.wa.gov.au/ach-enquiry-form and we will make every effort to rectify it as soon as possible.

Copyright

Copyright in the information contained herein is and shall remain the property of the State of Western Australia. All rights reserved. This includes, but is not limited to, information from the Register established and maintained under the *Aboriginal Heritage Act 1972*.

Location information data licensed from Western Australian Land Information Authority (WALIA) trading as Landgate. Copyright in the location information data remains with WALIA. WALIA does not warrant the accuracy or completeness of the location information data or its suitability for any particular purpose.

For further important information on using this information please see the WA.gov.au website's Terms of Use at https://www.wa.gov.au/terms-of-use

Terminology

ID: ACH on the Register is assigned a unique ID by the Department of Planning, Lands and Heritage using the format: ACH-00000001. For ACH on the former Register the ID numbers remain unchanged and use the new format. For example the ACH ID of the place Swan River was previously '3536' and is now 'ACH-00003536'.

Access and Restrictions:

- **Boundary Reliable (Yes/No):** Indicates whether to the best knowledge of the Department, the location and extent of the ACH boundary is considered reliable.
- **Boundary Restricted = No:** Represents the actual location of the ACH as understood by the Department..
- **Boundary Restricted = Yes:** To preserve confidentiality the exact location and extent of the place is not displayed on the map. However, the shaded region (generally with an area of at least 4km²) provides a general indication of where the ACH is located. If you are a landowner and wish to find out more about the exact location of the place, please contact the Department of Planning, Lands and Heritage.
- **Culturally Sensitive = No:** Availability of information that the Department of Planning, Lands and Heritage holds in relation to the ACH is not restricted in any way.
- **Culturally Sensitive = Yes:** Some of the information that the Department of Planning, Lands and Heritage holds in relation to the ACH is restricted if it is considered culturally sensitive information. This information will only be made available if the Department of Planning, Lands and Heritage receives written approval from the people who provided the information. To request access please contact via https://achknowledge.dplh.wa.gov.au/ach-enquiry-form.
- **Culturally Sensitive Nature:**
  - **No Gender / Initiation Restrictions:** *Anyone* can view the information.
  - **Men only:** Only *males* can view restricted information.
  - **Women only:** Only *females* can view restricted information.

Status:

- **Register:** Aboriginal cultural heritage places that are assessed as meeting Section 5 of the *Aboriginal Heritage Act 1972*.
- **Lodged:** Information which has been received in relation to an Aboriginal cultural heritage place, but is yet to be assessed under Section 5 of the *Aboriginal Heritage Act 1972.*
- **Historic:** Aboriginal heritage places assessed as not meeting the criteria of Section 5 of the *Aboriginal Heritage Act 1972*. Includes places that no longer exist as a result of land use activities with existing approvals.

Place Type: The type of Aboriginal cultural heritage place. For example an artefact scatter place or engravings place.

Legacy ID: This is the former unique number that the former Department of Aboriginal Sites assigned to the place.

Aboriginal Cultural Heritage Inquiry System

List of Aboriginal Cultural Heritage (ACH) Register

For further important information on using this information please see the WA.gov.au website's Terms of Use at https://www.wa.gov.au/terms-of-use

ID	Name	Boundary Restricted	Boundary Reliable	Culturally Sensitive	Culturally Sensitive Nature	Status	Place Type	Knowledge Holders	Legacy ID
10381	VLAMING HEAD	Yes	No	Yes	No Gender / Initiation Restrictions	Register	Ritual / Ceremonial; Creation / Dreaming Narrative	*Registered Knowledge Holder names available from DPLH	P01799

APPENDIX F STAKEHOLDER CONSULTATION

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Woodside Energy

Appendix F: Okha Light Well Intervention Environment Plan

October 2026

Revision 0

Document No. EH0000AH1500004595

This page has been intentionally left blank

Table of contents

1. Consultation approach 10
1.1 Woodside's approach to consultation 10
1.2 Traditional Custodian consultation approach 11
1.3 NGO consultation approach 11
1.4 NGO response 11
2. Relevancy assessment 12
2.1 Assessment of relevant persons for the proposed activity 12
2.2 Table 1: Assessment of relevance 13
2.2.1 Government, fisheries, community, titleholders, NGOs, research institutes 13
2.2.2 Traditional custodians and nominated representative corporations 36
3. Consultation activities 43
3.1 Okha LWI EP consultation activities 43
3.2 Discharging Regulation 25 of the Environment Regulations 43
3.2.1 Newspaper advertising 43
3.2.2 Direct consultation 43
3.2.3 Website and social media 44
3.3 Proactive consultation 45
3.3.1 Community engagement 45
3.3.2 Community Liaison Group engagement 45
3.3.3 Newsletter 45
3.4 Consultation activity update (July/August 2026) 45
3.5 Traditional Custodian specific consultation 45
4. Table 2: Consultation report with relevant persons or organisations 48
4.1 Commonwealth and WA State Government departments or agencies – marine 48
4.1.1 Australian Border Force (ABF) 48
4.1.2 Australian Communications and Media Authority (ACMA) 50
4.1.3 Australian Fisheries Management Authority (AFMA) 52
4.1.4 Australian Hydrographic Office (AHO) 55
4.1.5 Australian Maritime Safety Authority (AMSA) – Marine Pollution 58
4.1.6 Australian Maritime Safety Authority (AMSA) – Navigation Safety 60
4.1.7 Department of Agriculture, Fisheries and Forestry (DAFF) – Fisheries 65
4.1.8 Department of Defence (DoD) 67
4.1.9 Department of Planning, Lands and Heritage (DPLH) 69
4.1.10 Department of Primary Industries and Regional Development (DPIRD) 71
4.1.11 Department of Transport and Major Infrastructure (DTMI) 73
4.1.12 Pilbara Ports 76
4.1.13 Western Australian Museum (WAM) 78
4.2 Commonwealth and WA State Government departments or agencies – environment 80
4.2.1 Department of Agriculture, Fisheries and Forestry (DAFF) – Biosecurity (marine pests, vessels, aircraft and personnel) 80
4.2.2 Department of Biodiversity, Conservation and Attractions (DBCA) 82
4.2.3 Department of Climate Change, Energy, the Environment and Water (DCCEEW) 89
4.2.4 Director of National Parks (DNP) 91
4.2.5 Ningaloo Coast World Heritage Advisory Committee (NCWHAC) 94
4.3 Commonwealth and WA State Government departments or agencies – industry 96
4.3.1 Department of Mines, Petroleum and Exploration (DMPE) 96
4.3.2 Department of Industry, Science and Resources (DISR) 98

4.4 Commonwealth commercial fisheries and peak representative bodies 100
4.4.1 Commonwealth Fishery Association (CFA) 100
4.4.2 Tuna Australia 102
4.4.3 North West Slope Trawl Fishery and Western Deepwater Trawl Fishery 104
4.4.4 Western Tuna And Billfish Fishery 107
4.4.5 Australian Southern Bluefin Tuna Industry Assocation (ASBTIA) 109
4.5 State commercial fisheries and peak representative bodies 111
4.5.1 Aquaculture Council of Western Australia (ACWA) 111
4.5.2 Western Australian Fishing Industry Council (WAFIC) 113
4.5.3 Mackerel Managed Fishery, Pilbara Line Fishery, Pilbara Trap Fishery and Pilbara Trawl Fishery 115
4.6 Recreational marine users and peak representative bodies 117
4.6.1 Gascoyne Recreational Marine Users and Pilbara/Kimberley Recreational Marine Users 117
4.6.2 Marine Tourism WA 119
4.6.3 Recfishwest 121
4.6.4 WA Game Fishing Association 124
4.7 Titleholders and operators 126
4.7.1 Beagle No. 1, Carbon CQ, Carnarvon Energy Ltd, Exxon Mobil, Finder Energy, INPEX, JX Nippon, KATO Energy (WA), Kuwait Foreign Petroleum Exploration Company (KUFPEC), Kyushu Electric Wheatstone, Longreach Capital Investments, OMV Australia, OPIC Australia Pty Limited, PE Wheatstone, Pelsart Resources N.L., Shell, SK Earthon, Skye Resources Pty Ltd, Tanami Energy, Western Gas 126
4.7.2 BP Australia 128
4.7.3 Chevron Australia 130
4.7.4 InCapture 132
4.7.5 KUFPEC 135
4.7.6 Santos 137
4.8 Peak industry representative bodies 139
4.8.1 Australian Energy Producers (AEP) 139
4.9 Local government and elected parliamentary representatives, community groups or organisations 141
4.9.1 Broome Chamber of Commerce and Industry (Broome CCI) 141
4.9.2 Shire of Broome 143
4.9.3 Exmouth Chamber of Commerce and Industry (CCI) 145
4.9.4 Shire of Exmouth 147
4.9.5 Exmouth Community Liaison Group (Exmouth CLG) 149
4.9.6 Karratha & Districts Chamber of Commerce and Industry (CCI) 151
4.9.7 Karratha Community Liaison Group (Karratha CLG) 151
4.9.8 City of Karratha 154
4.9.9 Shire of Ashburton 156
4.10 Other non-government groups or organisations (NGOs) or individuals 158
4.10.1 Telstra 158
4.10.2 Vocus 160
4.10.3 Research institutes and local conservation groups or organisations 162
4.10.4 Cape Conservation Group (CCG) 162
4.10.5 Protect Ningaloo 164
4.11 Traditional custodians and nominated representative corporations 166
4.11.1 Buurabalayji Thalanyji Aboriginal Corporation (BTAC) 166
4.11.2 Karajarri Traditional Lands Association (KTLA) (Aboriginal Corporation) 170
4.11.3 Kariyarra Aboriginal Corporation (KAC) 173
4.11.4 Murujuga Aboriginal Corporation (MAC) 180

4.11.5 Nganhurra Thanardi Garrbu Aboriginal Corporation (NTGAC) 189
4.11.6 Ngarluma Aboriginal Corporation (NAC) 192
4.11.7 Nhuwala Claim Group (Nhuwala) 196
4.11.8 Nhuwala / Thalanyji People (Nhuwala / Thalanyji) 199
4.11.9 Nyangumarta Karajarri Aboriginal Corporation (NKAC) 202
4.11.10 Nyangumarta Warrarn Aboriginal Corporation (NWAC) 205
4.11.11 Robe River Kuruma Aboriginal Corporation (RRKAC) 208
4.11.12 Wanparta Aboriginal Corporation (Wanparta) 212
4.11.13 Wirrawandi Aboriginal Corporation (WAC) 221
4.11.14 Wong-Goo-Tt-Oo 226
4.11.15 Yindjibarndi Aboriginal Corporation (Yindjibarndi) 228
4.11.16 Yinggarda Aboriginal Corporation (YAC) 231
4.12 Native Title representative bodies 236
4.12.1 Kimberley Land Council (KLC) 236
4.12.2 Yamatji Marlpa Aboriginal Corporation (YMAC) 239
4.13 Self-identified Indigenous Groups..... 242
4.13.1 Ngarluma Yindjibarndi Foundation Ltd (NYFL) 242
4.14 Other Indigenous Groups 246
4.14.1 Save Our Songlines (SOS) 246
5. Table 3: Engagement report with persons or organisations assessed as not relevant 251
5.1 Other non-government groups or organisations (NGOs) or individuals..... 251
5.1.1 Australian Marine Conservation Society (AMCS) 251
5.1.2 Conservation Council of Western Australia (CCWA) 252
5.1.3 Greenpeace Australia Pacific (GPAP) 253
5.2 Research institutes and local conservation groups or organisations..... 254
5.2.1 Australian Institute of Marine Science (AIMS), Commonwealth Scientific and Industrial Research Organisation (CSIRO), Western Australian Marine Science Institution (WAMSI), University of Western Australia (UWA), Curtin University, Edith Cowan University, Murdoch University 254
5.3 Commonwealth commercial fisheries and peak representative bodies..... 255
5.3.1 Southern Bluefin Tuna Fishery Licence Holders, Western Skipjack Fishery Licence Holders 255
5.4 Commonwealth and WA State Government departments or agencies – environment 256
5.4.1 Department of Water and Environment Regulations (DWER) 256
6. Record of consultation..... 258
6.1 Initial consultation..... 258
6.1.1 Consultation Information Sheet 258
6.1.2 Summary Information Sheet 266
6.1.3 Defence zones map 269
6.1.4 Vessel density map 270
6.1.5 Shipwrecks 271
6.1.6 Submarine communication cables map 273
6.1.7 Email sent to Australian Border Force (ABF), Australian Energy Producers (AEP), Australian Marine Conservation Society (AMCS), Australian Maritime Safety Authority (AMSA)–Marine Pollution, BP, Beagle No. 1, Broome Chamber of Commerce and Industry (BCCI), Cape Conservation Group (CCG), Carbon CQ, Carnarvon Energy Ltd, City of Karratha, Conservation Council of WA (CCWA), Department of Industry, Science and Resources (DISR), Department of Mines, Petroleum and Exploration (DMPE), Department of Transport and Major Infrastructure (DTMI), Department of Water and Environmental Regulation (DWER), Exmouth Chamber of Commerce and Industry (Exmouth CCI), Exmouth Community Liaison Group (Exmouth CLG), Finder Energy, Greenpeace Australia Pacific (GPAP), INPEX (EP), InCapture, JX Nippon, KATO Energy (WA), Karratha & Districts Chamber of Commerce and Industry (KDCCI), Karratha Community Liaison Group (Karratha CLG),

Kuwait Foreign Petroleum Exploration Company (KUFPEC), Kyushu Electric Wheatstone, Longreach Capital Investments, Marine Tourism WA, Ningaloo Coast World Heritage Advisory Committee (NCWHAC), OMV Australia, OPIC Australia Pty Limited, PE Wheatstone, Pelsart Resources N.L., Pilbara Ports, Protect Ningaloo, Recfishwest, SK Earthon, Santos, Shire of Broome, Shire of Exmouth, Skye Resources Pty Ltd, Tanami Energy, WA Game Fishing Association, Western Gas – 16 April 2026 274

6.1.8 Email sent to Department of Defence (DoD) – 16 April 2026 276

6.1.9 Email sent to Australian Communications and Media Authority (ACMA), Telstra, Vocus – 16 April 2026 278

6.1.10 Email sent to Australian Hydrographic Office (AHO), Australian Maritime Safety Authority (AMSA)–Navigation Safety – 16 April 2026 280

6.1.11 Email sent to Australian Fisheries Management Authority (AFMA), Commonwealth Fisheries Association (CFA), Department of Agriculture, Fisheries and Forestry (DAFF)–Fisheries, Tuna Australia – 16 April 2026 282

6.1.12 Email sent to Australian Southern Bluefin Tuna Fishery, Australian Southern Bluefin Tuna Industry Association (ASBTIA), North West Slope Trawl Fishery, Western Deepwater Trawl Fishery, Western Skipjack Fishery and Western Tuna and Billfish Fishery – 16 April 2026 285

6.1.13 Email sent to Department of Agriculture, Fisheries and Forestry (DAFF) – Biosecurity, marine pests, vessels, aircraft and personnel – 16 April 2026 287

6.1.14 Email sent to Director of National Parks (DNP) – 16 April 2026 289

6.1.15 Email sent to Department of Primary Industries and Regional Development (DPIRD) – 16 April 2026 292

6.1.16 Email sent to Gascoyne Recreational Marine Users, Pilbara/Kimberley Recreational Marine Users– 16 April 2026 296

6.1.17 Letter sent to Gascoyne Recreational Marine Users, Pilbara/Kimberley Recreational Marine Users– 16 April 2026 298

6.1.18 Email sent to Australian Institute of Marine Science (AIMS), Commonwealth Scientific and Industrial Research Organisation (CSIRO), Curtin University, Edith Cowan University (ECU), Murdoch University, University of Western Australia (UWA), Western Australian Marine Science Institution (WAMSI) – 16 April 2026 300

6.1.19 Email sent to Department of Climate Change, Energy, the Environment and Water (DCCEEW), Western Australian Museum (WAM) – 16 April 2026 302

6.1.20 Email sent to Department of Planning, Lands and Heritage (DPLH) – 16 April 2026 304

6.1.21 Email sent to Shire of Ashburton – 16 April 2026 306

6.1.22 Email sent to Chevron Australia – 16 April 2026 308

6.1.23 Email sent to Western Australian Fishing Industry Council – 16 April 2026 310

6.1.24 Email sent by WAFIC on behalf of Woodside to Mackerel Managed Fishery (Area 2), Pilbara Trap Fishery, Pilbara Line Fishery, Pilbara Trawl Fishery 310

6.1.25 Email sent to Department of Biodiversity, Conservation and Attractions (DBCA) – 16 April 2026 312

6.1.26 Email sent to Aquaculture Council of Western Australia (ACWA) – 16 April 2026 315

6.1.27 Email sent to Buurabalayji Thalanyji Aboriginal Corporation (BTAC) (via legal representative) – 13 April 2026 317

6.1.28 Email sent to Karajarri Traditional Lands Association (KTLA) – 13 April 2026 319

6.1.29 Email sent to Kariyarra Aboriginal Corporation (KAC) – 13 April 2026 320

6.1.30 Email sent to Murujuga Aboriginal Corporation (MAC) – 13 April 2026 322

6.1.31 Email sent to Nganhurra Thanardi Garrbu Aboriginal Corporation (NTGAC) (via YMAC)– 13 April 2026 326

6.1.32 Email sent to Ngarluma Aboriginal Corporation (NAC) – 13 April 2026 328

6.1.33 Email sent to Nhuwala Claim Group (via YMAC) – 13 April 2026 330

6.1.34 Email sent to Nhuwala / Thalanyji People (via BTAC) – 13 April 2026 332

6.1.35 Email sent to Nyangumarta Karajarri Aboriginal Corporation (NKAC) (via KLC) – 13 April 2026 334

6.1.36 Email sent to Nyangumarta Warrarn Aboriginal Corporation (NWAC) – 13 April 2026 335

6.1.37 Email sent to Robe River Kuruma Aboriginal Corporation (RRKAC) – 13 April 2026 337
6.1.38 Email sent to Wanparta Aboriginal Corporation (Wanparta) – 13 April 2026 339
6.1.39 Email sent to Wirrawandi Aboriginal Corporation (WAC) – 13 April 2026 341
6.1.40 Email sent to Wong-Goo-Tt-Oo – 24 April 2026 343
6.1.41 Email sent to Yindjibarndi Aboriginal Corporation (Yindjibarndi) (via NYFL) – 13 April 2026 346
6.1.42 Email sent to Yinggarda Aboriginal Corporation (YAC) – 13 April 2026 347
6.1.43 Email sent to Kimberley Land Council (KLC) – 13 April 2026 349
6.1.44 Email sent to Yamatji Marlpa Aboriginal Corporation (YMAC)– 13 April 2026 350
6.1.45 Email sent to Ngarluma Yindjibarndi Foundation Ltd (NYFL) – 13 April 2026 352
6.1.46 Email sent to Save Our Songlines (SOS) (via legal representative) – 13 April 2026 353
6.2 Follow-up to initial consultation 355
6.2.1 Email to Australian Border Force, Australian Energy Producers (AEP), Australian Marine Conservation Society (AMCS), Australian Maritime Safety Authority (AMSA)–Marine Pollution, Beagle No. 1, Broome Chamber of Commerce and Industry (BCCI), Cape Conservation Group (CCG), Carbon CQ, Carnarvon Energy Ltd, City of Karratha, Conservation Council of WA (CCWA), Department of Defence (DoD), Department of Industry, Science and Resources (DISR), Department of Mines, Petroleum and Exploration (DMPE), Department of Transport and Major Infrastructure (DTMI), Department of Water and Environmental Regulation (DWER), Director of National Parks Exmouth Chamber of Commerce and Industry (Exmouth CCI), Exmouth Community Liaison Group (Exmouth CLG), Chevron, Finder Energy, Greenpeace Australia Pacific (GPAP), INPEX, JX Nippon, KATO Energy (WA), Karratha & Districts Chamber of Commerce and Industry (KDCCI), Karratha Community Liaison Group (Karratha CLG), Kuwait Foreign Petroleum Exploration Company (KUFPEC), Kyushu Electric Wheatstone, Longreach Capital Investments, Marine Tourism WA, Ningaloo Coast World Heritage Advisory Committee (NCWHAC), OPIC Australia Pty Limited, PE Wheatstone, Pelsart Resources N.L., Pilbara Ports, Protect Ningaloo, Recfishwest, SK Earthon, Shire of Ashburton, Shire of Broome, Shire of Exmouth, Skye Resources Pty Ltd, Tanami Energy, WA Game Fishing Association, Western Gas, Aquaculture Council of Western Australia (ACWA), Department of Biodiversity, Conservation and Attractions (DBCA), Department of Planning, Lands and Heritage (DPLH) Department of Agriculture, Fisheries and Forestry (DAFF) – Biosecurity, marine pests, vessels, aircraft and personnel, Telstra, Commonwealth Fisheries Association (CFA), Department of Agriculture, Fisheries and Forestry (DAFF)–Fisheries, Australian Southern Bluefin Tuna Fishery, Australian Southern Bluefin Tuna Industry Association (ASBTIA), Gascoyne Recreational Marine Users, Pilbara/Kimberley Recreational Marine Users, North West Slope Trawl Fishery, Western Deepwater Trawl Fishery, Western Skipjack Fishery, Western Tuna and Billfish Fishery. Department of Primary Industries and Regional Development (DPIRD), Australian Institute of Marine Science (AIMS), Commonwealth Scientific and Industrial Research Organisation (CSIRO), Curtin University, Edith Cowan University (ECU), Murdoch University, University of Western Australia (UWA), Western Australian Marine Science Institution (WAMSI), Department of Climate Change, Energy, the Environment and Water (DCCEEW), Western Australian Museum (WAM), Shire of Ashburton, Chevron – 7 May 2026 355
6.3 Activity Update: Okha LWI EP 357
6.3.1 Consultation Information Sheet 357
6.3.2 Summary Information Sheet 364
6.3.3 Defence zones map 367
6.3.4 Letter sent to Gascoyne Recreational Marine Users, Pilbara/Kimberley Recreational Marine Users – 7 May 2026 368
6.3.5 Vessel density map 369
6.3.6 Shipwrecks 370
6.3.7 State data 370
6.3.8 Commonwealth data 371
6.3.9 Submarine communication cable map 372
6.3.10 Ports map 373
6.3.11 Email sent to Australian Border Force (ABF), Australian Energy Producers (AEP), Australian Marine Conservation Society (AMCS), Australian Maritime Safety Authority (AMSA)–Marine Pollution, BP, Beagle No. 1, Broome Chamber of Commerce and Industry (BCCI), Cape Conservation

Group (CCG), Carbon CQ, Carnarvon Energy Ltd, City of Karratha, Conservation Council of WA (CCWA), Department of Industry, Science and Resources (DISR), Department of Transport and Major Infrastructure (DTMI), Exmouth Chamber of Commerce and Industry (Exmouth CCI), Exmouth Community Liaison Group (Exmouth CLG), Finder Energy, Greenpeace Australia Pacific (GPAP), INPEX, InCapture, JX Nippon, KATO Energy (WA), Karratha & Districts Chamber of Commerce and Industry (KDCCI), Karratha Community Liaison Group (Karratha CLG), Kuwait Foreign Petroleum Exploration Company (KUFPEC), Kyushu Electric Wheatstone, Longreach Capital Investments, Marine Tourism WA, Ningaloo Coast World Heritage Advisory Committee (NCWHAC), OMV Australia, OPIC Australia Pty Limited, PE Wheatstone, Pelsart Resources N.L., Protect Ningaloo, Recfishwest, SK Earthon, Santos, Shire of Broome, Shire of Exmouth, Skye Resources Pty Ltd, Tanami Energy, WA Game Fishing Association, Western Gas, Department of Mines, Petroleum and Exploration (DMPE) – 23 July 2026 374

6.3.12 Email sent to Department of Defence (DoD) – 23 August 2026 376

6.3.13 Email sent to Australian Communications and Media Authority (ACMA), Telstra, Vocus – 23 July 2026 377

6.3.14 Email sent to Australian Hydrographic Office (AHO), Australian Maritime Safety Authority (AMSA)–Navigation Safety – 23 July 2026 379

6.3.15 Email sent to Australian Fisheries Management Authority (AFMA), Commonwealth Fisheries Association (CFA), Department of Agriculture, Fisheries and Forestry (DAFF)–Fisheries, Tuna Australia – 23 July 2026 381

6.3.16 Email sent to Australian Southern Bluefin Tuna Fishery, Australian Southern Bluefin Tuna Industry Association (ASBTIA), North West Slope Trawl Fishery, Western Deepwater Trawl Fishery, Western Skipjack Fishery and Western Tuna and Billfish Fishery – 23 July 2026 383

6.3.17 Email sent to Department of Agriculture, Fisheries and Forestry (DAFF) – Biosecurity, marine pests, vessels, aircraft and personnel – 23 July 2026 385

6.3.18 Email sent to Director of National Parks (DNP) – 23 July 2026 387

6.3.19 Email sent to Department of Primary Industries and Regional Development (DPIRD) – 23 July 2026 388

6.3.20 Email sent to Gascoyne Recreational Marine Users, Pilbara/Kimberley Recreational Marine Users– 26 July 2026 390

6.3.21 Letter sent to Gascoyne Recreational Marine Users, Pilbara/Kimberley Recreational Marine Users– 16 April 2026 393

6.3.22 Email sent to Australian Institute of Marine Science (AIMS), Commonwealth Scientific and Industrial Research Organisation (CSIRO), Curtin University, Edith Cowan University (ECU), Murdoch University, University of Western Australia (UWA), Western Australian Marine Science Institution (WAMSI) – 23 July 2026 395

6.3.23 Email sent to Department of Climate Change, Energy, the Environment and Water (DCCEEW), Western Australian Museum (WAM) – 23 July 2026 396

6.3.24 Email sent to Department of Planning, Lands and Heritage (DPLH) – 23 July 2026 398

6.3.25 Email sent to Shire of Ashburton – 23 July 2026 400

6.3.26 Email sent to Chevron Australia – 23 July 2026 402

6.3.27 Email sent to Western Australian Fishing Industry Council – 16 April 2026 404

6.3.28 Email sent by WAFIC on behalf of Woodside to Mackerel Managed Fishery (Area 2), Pilbara Trap Fishery, Pilbara Line Fishery, Pilbara Trawl Fishery 404

6.3.29 Email sent to Department of Biodiversity, Conservation and Attractions (DBCA) – 23 July 2026 406

6.3.30 Email sent to Aquaculture Council of Western Australia (ACWA) – 23 July 2026 407

6.3.31 Email sent to Pilbara Ports – 23 July 2026 409

6.4 Newspaper advertisements 412

6.4.1 The Australian – 16 April 2026 412

6.4.2 The West Australian – 16 April 2026 413

6.4.3 Pilbara News – 15 April 2026 414

6.4.4 Midwest Times – 15 April 2026 415

6.4.5 Broome Advertiser – 16 April 2026 416

6.4.6 Kimberley Echo – 16 April 2026 417

6.4.7 Koori Mail – 22 April 2026 418
6.4.8 National Indigenous Times – 28 April 2026 419
6.5 Social media 420
6.5.1 Social media EP targeted campaign 420
6.6 Community information sessions 420
6.6.1 Pilbara Region 421
6.6.1.1 KDCCI Markets at Red Earth Arts Festival (REAF) – 15 May 2026 421
6.6.1.2 Dampier Beachside Markets – 7 June 2026 424
6.6.1.3 FeNaCING Festival – 1 to 2 August 2026 426
6.6.1.4 Passions of the Pilbara – 8 August 2026 430
6.7 Community newsletter 432
6.7.1 Let's Talk – Edition 7 – May 2026 432

1. CONSULTATION APPROACH

Consultation under regulation 25 of the OPGGS(E) Regulations provides that, in the course of preparing an environment plan, a titleholder must consult each relevant person (regulation 25(1)), must give each relevant person sufficient information to allow the relevant person to make an informed assessment of the possible consequences of the activity on the functions, interests or activities of the relevant person (regulation 25(2)), and must allow a relevant person a reasonable period for consultation (regulation 25(3)).

A titleholder must also give a relevant person a reasonable opportunity to consult – this means that a titleholder will need to demonstrate that what it did constituted consultation appropriate and adapted to the nature of the interests of the relevant person (see Tipakalippa Full Court paragraph 104). The EP must contain a report on all consultations that contains an assessment of the merits of any objection or claim about the adverse impact of each activity to which the EP relates, and a statement of the titleholder's response, or proposed response, if any, to each objection or claim (regulation 24(b)).

The criteria for acceptance of an EP includes that the EP demonstrates that the measures (if any) that the titleholder has adopted, or proposes to adopt, because of the consultations are appropriate (regulation 34(g)).

The Okha Light Well Intervention Environment Plan (Okha LWI EP) was originally consulted on in April 2026 as the CK4 and LH3 Well Intervention EP. In July 2026, the scope was expanded to include two additional wells, prompting an Activity Update and a further consultation period. Woodside has taken a broad and proactive consultation approach over a period of 6 months, including by:

- allowing a 30-day period for consultation and an additional 30-day period for the consultation update.
- providing sufficient information adapted to the nature of each relevant person
- engaging in proactive activities to raise awareness of the consultation process and opportunity for relevant persons to provide feedback
- actively inviting participation in the consultation process. This approach was aimed at raising public awareness of the consultation opportunity and to enable self-identification. It included:
  - a social media campaign
  - advertising in national, state, regional and Indigenous newspapers
  - attendance at community events.

The consultation approach is consistent with regulation 25 of the OPGGS(E) Regulations. The approach is proactive, has enabled self-identification and has raised broad awareness of Woodside's activities to be carried out under this EP.

1.1 Woodside's approach to consultation



This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Woodside's consultation approach consistent with regulation 25 includes:

- Assessment and identification of relevant persons,
- Opportunities for relevant person self-identification through national, state, regional and Indigenous print advertising and regional social media campaign
- Two-way communication through emails, in-person meetings and phone calls
- Follow-up if Woodside considers it is required prior to consultation close
- Sufficient information and a reasonable period of time for consultation (see Section 5 of the EP).

Proactive activities to raise consultation awareness includes:

- Community events and engagement
- Local print advertising
- Website and social media
- Community newsletters
- Community bulletin board posting
- Additional supporting campaigns as needed
  -

1.2 Traditional Custodian consultation approach

Woodside has meaningful long-term relationships with relevant Traditional Custodians specifically tailored to provide for effective engagement which is continuous and is not confined to individual EPs, instead covering all EPs and other issues that are relevant at the time of engagement.

To this end, consultation on any particular EP, including the Okha LWI EP, happens before, during and after the designated consultation period in a more holistic manner allowing for an understanding of the bigger picture and accommodating cultural requirements. Ongoing consultation remains an important part of consulting with Traditional Custodians based on availability, cultural protocols and the preferred method of consultation for each relevant person.

1.3 NGO consultation approach

Woodside has an established history of consulting with environmental non-government organisations (NGOs) as part of its EP consultation process. In its methodology (Section 5.3.4, Table 5-2 of the EP), NGOs are considered "Other non-government groups or organisations" and "Research institutes and local conservation groups or organisations". Relevant person identification for these categories is based on registered non-government groups or organisations with current targeted public website material specific to the proposed activity at the time of developing the EP and who have demonstrated functions, interests or activities relevant to the potential risks and impacts associated with planned activities in accordance with the intended outcome of consultation.

So that NGOs were given sufficient information and a reasonable period of time to consult, Woodside:

- advertised the consultation period (social and traditional media)
- directly consulted NGOs
- participated in regional community events (which were advertised) in the Pilbara which could be attended by any NGOs including local groups. If NGOs attended these sessions, they did not identify themselves.

1.4 NGO response

During consultation for the Okha LWI EP, no responses from NGOs were received.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

2. RELEVANCY ASSESSMENT

2.1 Assessment of relevant persons for the proposed activity

The result of Woodside's assessment of relevant persons in accordance with regulation 25(1) of the Environment Regulations is outlined below at Table 1 and Table 2.

Persons or organisations that Woodside assessed as not relevant but nonetheless chose to contact at its discretion in accordance with Section 5.3.7 of the EP or self-identified and Woodside assessed as not relevant are summarised below at Table 1 and Table 3.

As per Woodside's methodology (Section 5 of the EP), assessment of relevant persons is informed by the EMBA, shown in Figure 2-1.

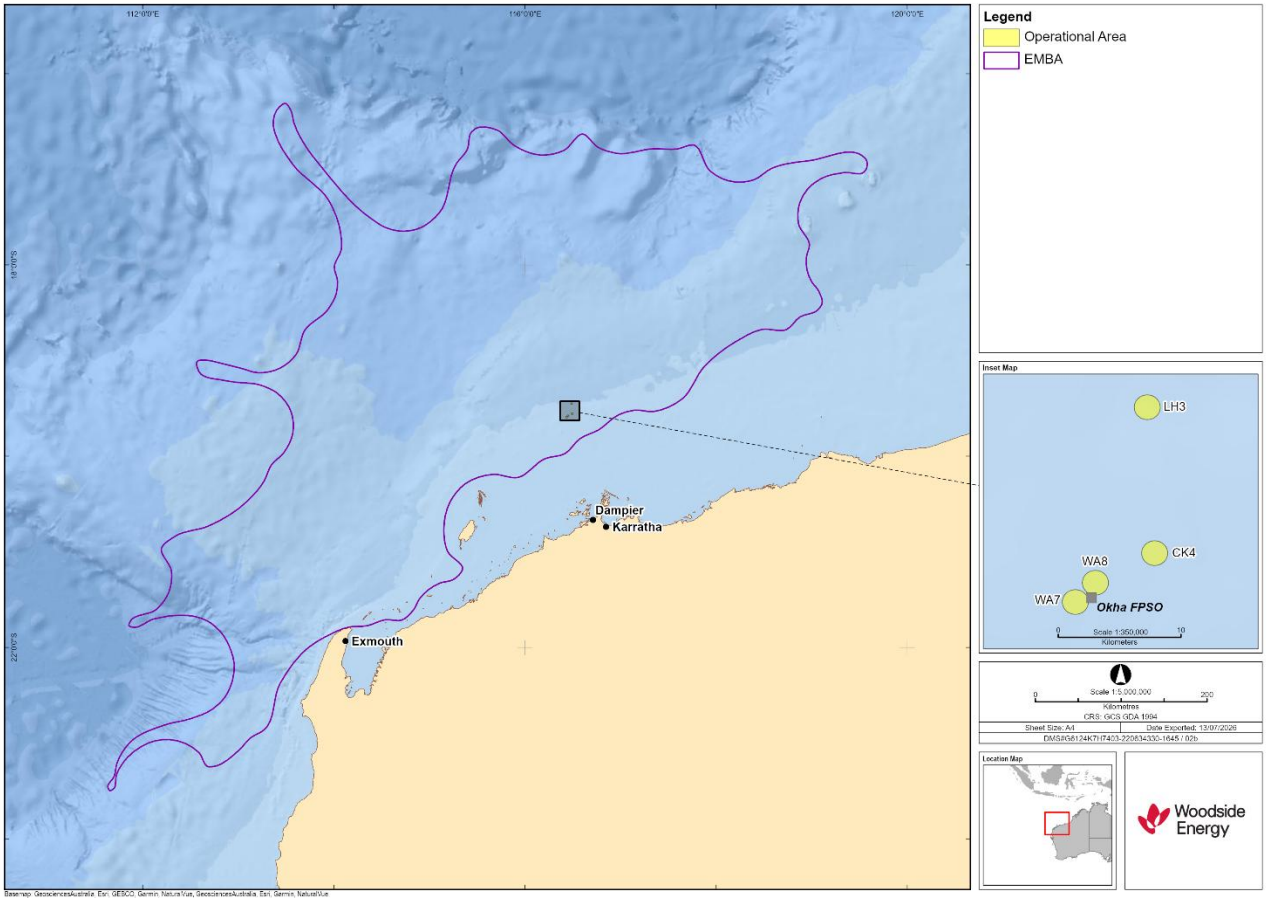


Figure 2-1: Operational Area and EMBA for Okha Light Well Intervention EP.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

2.2 Table 1: Assessment of relevance

2.2.1 Government, fisheries, community, titleholders, NGOs, research institutes

Person or Organisation	Summary of responsibilities and/or functions, interests or activities	Assessment of relevance	Relevant person
Commonwealth and WA State Government Departments or Agencies – Marine			
Australian Border Force (ABF)	Responsible for coordinating maritime security.	Woodside has applied its methodology for 'Government departments / agencies – marine' under regulation 25(1)(a) of the Environment Regulations. ABF's responsibilities may be relevant to the activity as there are proposed vessel activities.	Yes
Australian Communications and Media Authority (ACMA)	Regulator for communications and media.	Woodside has applied its methodology for 'Government departments / agencies – marine' under regulation 25(1)(a) of the Environment Regulations. ACMA's responsibilities may be relevant to the activity as there may be telecommunications lines that intersect the Operational Area or are in proximity to it..	Yes
Australian Fisheries Management Authority (AFMA)	Responsible for managing Commonwealth fisheries.	Woodside has applied its methodology for 'Government departments / agencies – marine' under regulation 25(1)(a) of the Environment Regulations. Southern Bluefin Tuna Fishery, Western Skipjack Fishery and Western Tuna and Billfish Fishery have overlap with the Operational Area, but are not active. Southern Bluefin Tuna Fishery, Western Skipjack Fishery, Western Tuna and Billfish Fishery, Western Deepwater Trawl Fishery and Northwest Slope Trawl Fishery overlap the EMBA and Northwest Slope Trawl Fishery, Western Deepwater Trawl Fishery and Western Tuna and Billfish Fishery are active in the EMBA. AFMA's responsibilities may be relevant to the activity given the fisheries' overlap with the EMBA.	Yes
Australian Hydrographic Office (AHO)	Responsible for maritime safety and Notices to Mariners.	Woodside has applied its methodology for 'Government departments / agencies – marine' under regulation 25(1)(a) of the Environment Regulations. AHO's responsibilities may be relevant to the activity as there are proposed vessel activities.	Yes

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Person or Organisation	Summary of responsibilities and/or functions, interests or activities	Assessment of relevance	Relevant person
Australian Maritime Safety Authority (AMSA) – Marine Pollution	Legislated responsibility for oil pollution response in Commonwealth waters.	Woodside has applied its methodology for 'Government departments / agencies – marine' under regulation 25(1)(a) of the Environment Regulations. AMSA – Marine Pollution's responsibilities may be relevant to the activity as the proposed activity has a hydrocarbon spill risk which may require AMSA response in Commonwealth waters.	Yes
Australian Maritime Safety Authority (AMSA) – Navigation Safety	Statutory agency for vessel safety and navigation.	Woodside has applied its methodology for 'Government departments / agencies – marine' under regulation 25(1)(a) of the Environment Regulations. AMSA – Navigation Safety's responsibilities may be relevant to the activity as there are proposed vessel activities.	Yes
Department of Agriculture, Fisheries and Forestry (DAFF) – Fisheries	Responsible for implementing Commonwealth policies and programs to support agriculture, fishery, food and forestry industries.	Woodside has applied its methodology for 'Government departments / agencies – marine' under regulation 25(1)(a) of the Environment Regulations. No Commonwealth fisheries are active in the Operational Area. The North West Slope Trawl Fishery is active in the EMBA. DAFF – Fisheries responsibilities may be relevant to the activity as the North West Slope Trawl Fishery is active in the EMBA.	Yes
Department of Defence (DoD)	Responsible for defending Australia and its national interests.	Woodside has applied its methodology for 'Government departments / agencies – marine' under regulation 25(1)(a) of the Environment Regulations. DoD's responsibilities may be relevant to the activity as defence training areas lie within the EMBA.	Yes
Department of Planning, Lands and Heritage (DPLH)	Responsible for state level land use planning and management, and oversight of Aboriginal cultural heritage and built heritage matters.	Woodside has applied its methodology for 'Government departments / agencies – marine' under regulation 25(1)(b) of the Environment Regulations. DPLH's responsibilities may be relevant to the activity as there is known Maritime Cultural Heritage overlapping the EMBA.	Yes
Department of Primary Industries and Regional Development (DPIRD)	Responsible for managing State fisheries.	Woodside has applied its methodology for 'Government departments / agencies – marine' under regulation 25(1)(b) of the Environment Regulations. The state Mackerel Managed Fishery (Area 2), Pilbara Trawl Managed Fishery, Pilbara Trap Managed Fishery and Pilbara Line Managed Fishery are active in the Operational Area.	Yes

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Person or Organisation	Summary of responsibilities and/or functions, interests or activities	Assessment of relevance	Relevant person
		The Exmouth Gulf Prawn Managed Fishery, Gascoyne Demersal Scalefish Managed Fishery, Mackerel Managed Fishery (Area 2), Marine Aquarium Managed Fishery, Nickol Bay Prawn Managed Fishery, Onslow Prawn Managed Fishery, Pilbara Crab Managed Fishery, Pilbara Line Managed Fishery, Pilbara Trap Managed Fishery, Pilbara Trawl Managed Fishery, Specimen Shell Managed Fishery and West Coast Deep Sea Crustacean Managed Fishery have been active in the EMBA within the past 5 years. DPIRD's responsibilities may be relevant to the activity as the government department responsible for State fisheries.	
Department of Transport and Major Infrastructure (DTMI)	Legislated responsibility for oil pollution response in State waters.	Woodside has applied its methodology for 'Government departments / agencies – marine' under regulation 25(1)(b) of the Environment Regulations. The proposed activity has a hydrocarbon spill risk, which may require DTMI response in State waters.	Yes
Pilbara Ports	Encompasses the Ports of Ashburton, Dampier, Port Hedland and Varanus Island. Oversees the operation of the greenfield ports of Anketell, Balla Balla, Cape Preston East, Cape Preston West and Urala. Oversees the Shipping and Pilotage Act 1967 (SPA) ports of Barrow Island, Cape Preston, Onslow and Port Walcott.	Woodside has applied its methodology for 'Government departments / agencies – marine' under regulation 25(1)(b) of the Environment Regulations. The proposed activity has the potential to impact Pilbara Ports' responsibilities as the EMBA overlaps the Pilbara Ports' area of responsibility (Port of Ashburton).	Yes
Western Australian Museum (WAM)	Manages 200 shipwreck sites of the 1,500 known to be located off the Western Australian coast.	Woodside has applied its methodology for 'Historical cultural heritage groups or organisations' under regulation 25(1)(d) of the Environment Regulations. There are known shipwrecks overlapping the EMBA for which the Western Australian Museum may be responsible.	Yes
Commonwealth and WA State Government Departments or Agencies – Environment			

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Clean Energy Regulator (CER)	The Clean Energy Regulator administers schemes legislated by the Australian Government for measuring, managing, reducing or offsetting Australia's carbon emissions.	Woodside has applied its methodology for 'Government departments / agencies – environment' under regulation 25(1)(a) of the Environment Regulations. CER's responsibilities are not relevant to non-operational EPs.	No
Department of Agriculture, Fisheries and Forestry (DAFF) – Biosecurity (marine pests, vessels, aircraft and personnel)	DAFF administers, implements and enforces the Biosecurity Act 2015. DAFF requests to be consulted where an activity has the potential to transfer marine pests. DAFF also has inspection and reporting requirements to ensure that all conveyances (vessels, installations and aircraft) arriving in Australian territory comply with international health regulations and that any biosecurity risk is managed. DAFF requests to be consulted where an activity involves the movement of aircraft or vessels between Australia and offshore petroleum activities either inside or outside Australian territory.	Woodside has applied its methodology for 'Government departments / agencies – environment' under regulation 25(1)(a) of the Environment Regulations. DAFF – Biosecurity's responsibilities may be relevant to the proposed activities in the EMBA in the prevention of introduced marine species.	Yes
Department of Biodiversity, Conservation and Attractions (DBCA)	Responsible for managing WA's parks, forests and reserves to achieve wildlife conservation and provide sustainable recreation and tourism opportunities.	Woodside has applied its methodology for 'Government departments / agencies – environment' under regulation 25(1)(b) of the Environment Regulations. The DBCA's responsibilities may be relevant to the activity as the EMBA overlaps WA parks, forests or reserves. Activities have the potential to impact marine tourism in the EMBA.	Yes

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Department of Climate Change, Energy, the Environment and Water (DCCEEW)	Responsible for implementing Commonwealth policies and programs to support climate change, sustainable energy use, water resources, the environment and our heritage. Administers the Underwater Cultural Heritage Act 2018 in collaboration with the States, Northern Territory and Norfolk Island, which is responsible for the protection of shipwrecks, sunken aircraft and other types of underwater heritage and their associated artefacts in Commonwealth waters.	Woodside has applied its methodology for 'Government departments / agencies – environment' under regulation 25(1)(a) of the Environment Regulations. DCCEEW's responsibilities may be relevant to the proposed activities in the EMBA as there are potential environmental impacts from the proposed activity. There is known Maritime Cultural Heritage overlapping the EMBA.	Yes
Department of Water Environment Regulation (DWER)	Responsible for management and regulation of WA's environment and water resources.	Woodside has applied its methodology for 'Government departments / agencies – environment' under regulation 25(1)(b) of the Environment Regulations. DWER has not been assessed as relevant for this activity as EPs are regulated under separate petroleum-specific approval frameworks administered by DMPE or NOPSEMA. DWER may be relevant where an activity requires, or has a clear link to, a DWER or EPA-administered approval or statutory function, however no such approval pathway or statutory function is engaged for this activity. Woodside chose to contact DWER at its discretion in line with Section 5.3.7 of the EP during the initial consultation.	No
Director of National Parks (DNP)	Responsible for the management of Commonwealth parks and conservation zones.	Woodside has applied its methodology for 'Government departments / agencies – environment' under regulation 25(1)(a) of the Environment Regulations. DNP's responsibilities may be relevant to the activity as DNP requires an awareness of activities that occur within Australian Marine Parks (AMPs), and an understanding of potential impacts and risks to the values of parks (NOPSEMA guidance note: N-04750-GN1785 A620236, June 2020). Titleholders are required to consult DNP on offshore petroleum if they occur in, or may impact on, the values of marine parks, including where potential spill response activities may occur in the event of a spill (i.e. scientific monitoring).	Yes

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Ningaloo Coast World Heritage Advisory Committee (NCWHAC)	Supports the DBCA to manage the Ningaloo Coast World Heritage Area.	Woodside has applied its methodology for 'Government departments / agencies – environment' under regulation 25(1)(a) of the Environment Regulations. The NCWHAC's responsibilities may be relevant to the activity as the EMBA overlaps the Ningaloo Marine Park.	Yes
Commonwealth and State Government Departments or Agencies – Industry			
Department of Mines, Petroleum and Exploration (DMPE)	Department of relevant State Minister.	Required to be consulted under regulation 25(1)(c) of the Environment Regulations.	Yes
Department of Industry, Science and Resources (DISR)	Department of relevant Commonwealth Minister.	Required to be consulted under regulation 25(1)(a) of the Environment Regulations.	Yes
Commonwealth commercial fisheries and peak representative bodies			
Australian Southern Bluefin Tuna Industry Association (ASBTIA)	Represents the interests of the Southern Bluefin Tuna Fishery and Western Skipjack Fishery.	Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under regulation 25(1)(d) of the Environment Regulations. The Southern Bluefin Tuna Fishery overlaps the Operational Area and EMBA but has not been active in the Operational Area or EMBA within the past five years. ASBTIA's functions, interests or activities may be relevant to the activity as the Southern Bluefin Tuna Fishery overlaps the EMBA.	Yes
Commonwealth Fisheries Association (CFA)	Represents the interests of commercial fishers with licences in Commonwealth waters.	Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under regulation 25(1)(d) of the Environment Regulations. Southern Bluefin Tuna Fishery, Western Skipjack Fishery and Western Tuna and Billfish Fishery have overlap with the Operational Area, but have not been active within past 5 years. Southern Bluefin Tuna Fishery, Western Skipjack Fishery, Western Tuna and Billfish Fishery, Western Deepwater Trawl Fishery and Northwest Slope Trawl Fishery overlap the EMBA and Northwest Slope Trawl Fishery, Western Deepwater Trawl Fishery and Western Tuna and Billfish Fishery have been active in the EMBA within the past 5 years. CFA's functions may be relevant to the activity as given the fisheries' overlap with the EMBA.	Yes

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

North West Slope Trawl Fishery	Commonwealth commercial fishery.	Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under regulation 25(1)(d) of the Environment Regulations. Although the fishery overlaps the Operational Area, it has not been active in the Operational Area within the past 5 years. The fishery overlaps the EMBA and has been active in the EMBA within the past 5 years.	Yes
Southern Bluefin Tuna Fishery	Commonwealth commercial fishery.	Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under regulation 25(1)(d) of the Environment Regulations. Although the fishery overlaps the Operational Area and EMBA, it has not been active in the Operational Area or EMBA within the past 5 years. Woodside does not consider that the proposed activity will present a risk to licence holders, given since 1992, the majority of Australian catch has concentrated in south-eastern Australia. (Patterson et al., 2022). In addition, given fishing methods by licence holders for species fished in this fishery (Australia has a 35% share of total global allowable catch of Southern Bluefin Tuna, which is value-added through tuna ranching near Port Lincoln (South Australia), or fishing effort in New South Wales (Australian Southern Bluefin Tuna Industry Association). Woodside chose to contact Southern Bluefin Tuna at its discretion in line with Section 5.3.7 of the EP.	No
Tuna Australia	Represents the interests of the Western Tuna and Billfish Fishery.	Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under regulation 25(1)(d) of the Environment Regulations. Western Skipjack Tuna Fishery and Western Tuna and Billfish Fishery have overlap with the EMBA and Western Tuna and Billfish Fishery is active within the EMBA. Tuna Australia's functions, interests or activities may be relevant to the activity as both fisheries have overlap with the EMBA.	Yes
Western Deepwater Trawl Fishery	Commonwealth commercial fishery.	Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under regulation 25(1)(d) of the Environment Regulations. While the fishery does not overlap the Operational Area, it overlaps the EMBA and has been active in the past 5 years.	Yes

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Western Skipjack Fishery	Commonwealth commercial fishery.	Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under regulation 25(1)(d) of the Environment Regulations. While Western Skipjack Fishery overlaps the Operational area and the EMBA, it has not been active within the past five years. Tuna Australia, as its representative body, was contacted. Woodside chose to contact Woodside chose to contact Western Skipjack Fishery at its discretion in line with Section 5.3.7 of the EP.	No
Western Tuna and Billfish Fishery	Commonwealth commercial fishery.	Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under regulation 25(1)(d) of the Environment Regulations. The fishery overlaps the Operational Area and the EMBA and has been active in the EMBA within the past 5 years. Tuna Australia, as its representative body, was also contacted.	Yes
State commercial fisheries and peak representative bodies			
Aquaculture Council of Western Australia (ACWA)	State peak body for WA's aquaculture industry.	Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under regulation 25(1)(d) of the Environment Regulations. As the peak body for WA's aquaculture industry, ACWA's function, interests or activities may be relevant to the activity as ACWA members overlap the EMBA are active in the EMBA.	Yes
Pearl Producers Association (PPA)	Peak representative organisation of The Australian South Sea Pearling Industry, with members in Western Australia and the Northern Territory.	Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under regulation 25(1)(d) of the Environment Regulations. The Pearl Oyster Managed Fishery has been assessed as not relevant to the proposed activity. As the peak representative body for the Pearl Oyster Managed Fishery, the PPA has also been assessed as not relevant.	No
Western Australian Fishing Industry Council (WAFIC)	Represents the interests of commercial fishers with licences in State waters.	Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under regulation 25(1)(d) of the Environment Regulations.	Yes

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

		The Mackerel Managed Fishery (Area 2), Pilbara Trap Managed Fishery, Pilbara Trawl Managed Fishery have been active in the Operational Area within the past 5 years. The Mackerel Managed Fishery (Area 2), Marine Aquarium Managed Fishery, Nickol Bay Prawn Managed Fishery, Onslow Prawn Managed Fishery, Pilbara Line Managed Fishery, Pilbara Trap Managed Fishery, Pilbara Trawl Managed Fishery, Specimen Shell Managed Fishery, West Coast Deep Sea Crustacean Managed Fishery and Exmouth Gulf Prawn Managed Fishery have been active in the EMBA within the past 5 years. WAFIC's functions may be relevant to the activity as the peak representative body for State fisheries. Under an agreement WAFIC issued consultation materials to relevant commercial fisheries licence holders. Woodside acknowledges WAFIC's consultation guidance and has applied this by consulting, via WAFIC, fisheries that are assessed as having a potential for interaction in the Operational Area. As per WAFIC's Commercial Fishing Consultation Framework for the Offshore Oil and Gas Sector and Consultation Approach for Unplanned Events, consultation with State fisheries relevant to the EMBA of the proposed activity would be undertaken only in the event of an unplanned emergency scenario.	
Abalone Managed Fishery	State commercial fishery.	Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under regulation 25(1)(d) of the Environment Regulations. While the fishery overlaps the Operational Area and EMBA, it has not been active in the Operational Area or EMBA within the past five years.	No
Mackerel Managed Fishery (Area 2)	State commercial fishery.	Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under regulation 25(1)(d) of the Environment Regulations. The fishery overlaps the Operational Area and EMBA and has been active in the Operational Area and EMBA within the past 5 years. Woodside acknowledges WAFIC's consultation guidance and has applied this by consulting fisheries that are assessed as having a potential for interaction in the Operational Area via WAFIC.	Yes

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Marine Aquarium Managed Fishery	State commercial fishery.	Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under regulation 25(1)(d) of the Environment Regulations. Although the fishery overlaps the Operational Area and EMBA , it has not been active in the Operational Area within the past 5 years. The fishery has been active in the EMBA within the past 5 years, however, based on WAFIC's advice, Woodside does not need to consult fisheries. in the EMBA. As per WAFIC's Commercial Fishing Consultation Framework for the Offshore Oil and Gas Sector and Consultation Approach for Unplanned Events, consultation with State fisheries relevant to the EMBA of the proposed activity would be undertaken only in the event of an unplanned emergency scenario.	No
Nickol Bay Prawn Managed Fishery	State commercial fishery.	Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under regulation 25(1)(d) of the Environment Regulations. The fishery does not overlap the Operational Area. The fishery overlaps the EMBA and has been active within the past 5 years, however based on WAFIC's advice, Woodside does not need to consult fisheries in the EMBA. As per WAFIC's Commercial Fishing Consultation Framework for the Offshore Oil and Gas Sector and Consultation Approach for Unplanned Events, consultation with State fisheries relevant to the EMBA of the proposed activity would be undertaken only in the event of an unplanned emergency scenario.	No
North Coast Shark Fishery	State Commercial Fishery	Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under regulation 25(1)(d) of the Environment Regulations. While the fishery overlaps the Operational Area and EMBA, it has not been active in the Operational Area or EMBA within the past five years.	No
Onslow Prawn Managed Fishery (Area 1and 2)	State commercial fishery.	Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under regulation 25(1)(d) of the Environment Regulations. While the fishery does overlap the Operational Area and EMBA, it has only been active in the EMBA within the past 5 years. However, based on WAFIC's advice, Woodside does not need to consult fisheries in the EMBA. As per WAFIC's Commercial Fishing Consultation Framework for the Offshore Oil and Gas Sector and Consultation Approach for Unplanned Events, consultation	No

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

		with State fisheries relevant to the EMBA of the proposed activity would however be undertaken only in the event of an unplanned emergency scenario.	
Pearl Oyster Managed Fishery	State commercial fishery.	Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under regulation 25(1)(d) of the Environment Regulations. While the fishery overlaps the Operational Area and EMBA, it has not been active in the Operational Area or EMBA within the past five years.	No
Pilbara Crab Managed Fishery	State commercial fishery.	Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under regulation 25(1)(d) of the Environment Regulations. While the fishery overlaps the Operational Area and EMBA, it has only been active within the EMBA within the past 5 years. However, based on WAFIC's advice, Woodside does not need to consult fisheries in the EMBA. As per WAFIC's Commercial Fishing Consultation Framework for the Offshore Oil and Gas Sector and Consultation Approach for Unplanned Events, consultation with State fisheries relevant to the EMBA of the proposed activity would however be undertaken only in the event of an unplanned emergency scenario.	No
Demersal Scalefish Fishery: Pilbara Trawl Fishery	State commercial fishery.	Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under regulation 25(1)(d) of the Environment Regulations. The fishery overlaps the Operational Area and EMBA and has been active in the Operational Area and EMBA within the past 5 years. Woodside acknowledges WAFIC's consultation guidance and has applied this by consulting fisheries that are assessed as having a potential for interaction in the Operational Area via WAFIC. Under an agreement WAFIC issued consultation materials to relevant commercial fisheries licence holders.	Yes
Demersal Scalefish Fishery: Pilbara Trap Fishery	State commercial fishery.	Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under regulation 25(1)(d) of the Environment Regulations. The fishery overlaps the Operational Area and EMBA and has been active in the Operational Area and EMBA within the past 5 years.	Yes

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

		Woodside acknowledges WAFIC's consultation guidance and has applied this by consulting fisheries that are assessed as having a potential for interaction in the Operational Area via WAFIC. Under an agreement WAFIC issued consultation materials to relevant commercial fisheries licence holders.	
Demersal Scalefish Fishery: Pilbara Line Fishery	State commercial fishery.	Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under regulation 25(1)(d) of the Environment Regulations. The fishery overlaps the Operational Area and EMBA and has been active in the Operational Area and EMBA within the past 5 years. Woodside acknowledges WAFIC's consultation guidance and has applied this by consulting fisheries that are assessed as having a potential for interaction in the Operational Area via WAFIC. Under an agreement WAFIC issued consultation materials to relevant commercial fisheries licence holders.	Yes
South West Coast Salmon Fishery	State Commercial Fishery	Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under regulation 25(1)(d) of the Environment Regulations. While the fishery overlaps the Operational Area and EMBA, it has not been active in the Operational Area or EMBA within the past five years.	No
Specimen Shell Managed Fishery	State commercial fishery.	Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under regulation 25(1)(d) of the Environment Regulations. While the fishery does overlap the Operational Area and EMBA, it has only been active in the EMBA within the past 5 years. However, based on WAFIC's advice, Woodside does not need to consult fisheries in the EMBA. As per WAFIC's Commercial Fishing Consultation Framework for the Offshore Oil and Gas Sector and Consultation Approach for Unplanned Events, consultation with State fisheries relevant to the EMBA of the proposed activity would however be undertaken only in the event of an unplanned emergency scenario.	No
West Coast Deep Sea Crustacean Managed Fishery	State commercial fishery.	Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under regulation 25(1)(d) of the Environment Regulations.	No

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

		While the fishery overlaps the Operational Area and EMBA, it has only been active in the EMBA in the past 5 years. However, based on WAFIC's advice, Woodside does not need to consult fisheries in the EMBA. As per WAFIC's Commercial Fishing Consultation Framework for the Offshore Oil and Gas Sector and Consultation Approach for Unplanned Events, consultation with State fisheries relevant to the EMBA of the proposed activity would however be undertaken only in the event of an unplanned emergency scenario.	
Exmouth Gulf Prawn Managed Fishery	State commercial fishery.	Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under regulation 25(1)(d) of the Environment Regulations. The fishery overlaps the EMBA and has been active in the EMBA within the past 5 years. Based on WAFIC's advice, Woodside does not need to consult fisheries in the EMBA. As per WAFIC's Commercial Fishing Consultation Framework for the Offshore Oil and Gas Sector and Consultation Approach for Unplanned Events, consultation with State fisheries relevant to the EMBA of the proposed activity would however be undertaken only in the event of an unplanned emergency scenario.	No
Recreational marine users and peak representative bodies			
Marine Tourism WA	Represents the interests of marine tourism in WA.	Woodside has applied its methodology for 'Recreational marine users and representative bodies' under regulation 25(1)(d) of the Environment Regulations. Activities have the potential to impact recreational fishers' functions, interests or activities due to the location offshore and there has been recorded charter effort in the EMBA in the past 5 years.	Yes
Pilbara/Kimberley Recreational Marine Users	Pilbara/Kimberley-based dive, tourism and charter operators.	Woodside has applied its methodology for 'Recreational marine users and representative bodies' under regulation 25(1)(d) of the Environment Regulations. AdCru Assets Pty Ltd, AOA International Pty Ltd, Australian Port and Marine Services Pty Ltd, Bloor Street Investments Pty Ltd, Bondall Pty Ltd, Brefjen Nominees Pty Ltd, Broome Chiropractic Pty Ltd, Capricorn Mist Pty Ltd, Chapel Nominees Pty Ltd, Charter Express Pty Ltd, Cm Marine Pty Ltd, Cm Ventures Pty Ltd, Compagnie Du Ponant Pty Ltd, Coral Princess Cruises (NQ) Pty Ltd, Discovery Holiday Parks Pty Limited, Diversity Charter Company WA Pty Ltd, Eco Wharf Pty Ltd, Eco-Abrolhos Pty Ltd, Fawesome Expeditions Pty Ltd, Go Beyond Broome Pty Ltd, Hartley Motorcycles Pty Ltd, Hotel and Resort Investments Pty Ltd, Humbug Fishing Pty Ltd, KCC Group Pty Ltd, Kimberley Getaway Cruises Pty Ltd, Kimberly Pearl Tours Pty Ltd, King Sound Resort Hotel Pty Ltd, KW Marine Pty	Yes

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

		Ltd, L & S Family Holdings Pty Ltd, Lake Argyle Cruises Pty Ltd, Lombadina Aboriginal Corporation, Lulamanzi Investments Pty Ltd, Mackerel Islands Pty Ltd, , Marbil WA Pty Ltd, Marine Agents Australia Pty Ltd, Maritime Engineering Services Pty Ltd, Melkit Pty Ltd, Millennial Charters Pty Ltd, Monster Sportfishing Adventures Pty Ltd, North Star Cruises Australia Pty Ltd, Ocean Charters Pty Ltd, Pearl Expeditions Pty Ltd, Sea 2 Pty Ltd, Sealife Charters Pty Ltd, Silverado Charters Pty Ltd, Split Tide Pty Ltd, Super Yachts Perth Pty Ltd, The Great Escape Charter Company Pty Ltd, Western Wave Marine Pty Ltd, Willie Creek Pearl Farm Pty Ltd, Wongs Way Out Pty Ltd, Archipelago Adventures, Broome Tours Pty Ltd, Hampton Harbour Boat & Sailing Club, Mackerel Islands Pty Ltd, Marine Rescue Dampier, Nickol Bay Sport Fishing Club, Port Walcott Volunteer Marine Rescue, Port Walcott Yacht Club. (The above list of businesses is in addition to individuals as per SI Report A, reference 21.1.) Activities have the potential to impact Pilbara/Kimberley-based dive, tourism and charter operator's functions, interests or activities due to the location of activities and there has been recorded charter effort in the EMBA in the past 5 years.	
Gascoyne Recreational Marine Users	Gascoyne-based dive, tourism and charter operators.	Woodside has applied its methodology for 'Recreational marine users and representative bodies' under regulation 25(1)(d) of the Environment Regulations. AOA International Pty Ltd, , Atgni Super Pty Ltd, Austanley Pty Ltd, Bluecity Enterprises Pty Ltd & Alltric Pty Ltd, Bondall Pty Ltd, Brefjen Nominees Pty Ltd, Chapel Nominees Pty Ltd, D & N Nominees Pty Ltd, Eco Wharf Pty Ltd, Eco-Abrolhos Pty Ltd, Fawesome Expeditions Pty Ltd, Fire Tiger Pty Ltd, Jostan Holdings Pty Ltd, KM Charters Pty Ltd, KW Marine Pty Ltd, L & S Family Holdings Pty Ltd, Lulamanzi Investments Pty Ltd, Makalee Pty Ltd, Maritime Engineering Services Pty Ltd, Melkit Pty Ltd, Millennial Charters Pty Ltd, Monkey Mia Yacht Charters Pty Ltd, Monster Sportfishing Adventures Pty Ltd, North Star Cruises Australia Pty Ltd, Oceaneer Marine Brokers Pty Ltd, On Strike Charters (WA) Pty Ltd, Reel Force Charters Pty Ltd, Seafresh Holdings Pty Ltd, Sharkbay Charters Pty Ltd, Silverado Charters Pty Ltd, The Great Escape Charter Company Pty Ltd, Wongs Way Out Pty Ltd, Andro Maritime Services Australia, Aquatic Adventure Exmouth, Birds Eye View, Blue Horizon Charters, Blue Lightning Charters, Cape Immersion Tours, Coastal Adventure Tours, Coral Bay Ecotours, Dive Ningaloo, Evolution Fishing Charters, Exmouth Adventure Co., Exmouth Dive Centre, Innkeeper Sport Fishing, Kings Ningaloo Reef Tours, Live Ningaloo, Montebello Island Safaris, Ningaloo Aviation, Ningaloo Blue, Ningaloo Coral Bay Boats, Ningaloo Discovery, Ningaloo Fly Fishing, Ningaloo Marine Interaction, Ningaloo Reef Dive, Ningaloo Reef to Range Tours, Ningaloo Sportfishing Charters, Ningaloo Whaleshark n Dive, Ningaloo Whaleshark Swim, Ocean Eco Adventures,	Gascoyne Recreational Marine Users

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

		Peak Sportfishing Charters, Pelican Charters, Seaforce Charters, Seafresh Holdings Pty Ltd, Set the Hook, Three Islands, Top Gun Charters, Ultimate WaterSports, View Ningaloo, Yardi Creek Boat Tours. (The above list of businesses is in addition to individuals as per SI Report A, reference 22.2) Activities have the potential to impact Gascoyne-based dive, tourism and charter operator's functions, interests or activities due to the location of activities and there has been recorded charter effort in the EMBA in the past 5 years.	
Recfishwest	Represents the interests of recreational fishers in WA.	Woodside has applied its methodology for 'Recreational marine users and representative bodies' under regulation 25(1)(d) of the Environment Regulations. Activities have the potential to impact recreational fishers' functions, interests or activities due to the location offshore and there has been recorded charter effort in the EMBA in the past 5 years.	Yes
WA Game Fishing Association	Represents the interests of game fishers in WA.	Woodside has applied its methodology for 'Recreational marine users and representative bodies' under regulation 25(1)(d) of the Environment Regulations. Activities have the potential to impact game fishers' functions, interests or activities due to the location offshore and there has been recorded charter effort in the EMBA in the past 5 years.	Yes
Titleholders and Operators			
Beagle No. 1	Titleholder or Operator.	Woodside has applied its methodology for 'Titleholders and Operators' under regulation 25(1)(d) of the Environment Regulations. Titleholder or Operator's permit area/s overlap/s the EMBA.	Yes
BP Developments Australia	Titleholder or Operator.	Woodside has applied its methodology for 'Titleholders and Operators' under regulation 25(1)(d) of the Environment Regulations. Titleholder or Operator's permit area/s overlap/s the EMBA.	Yes
Carnarvon Energy	Titleholder or Operator.	Woodside has applied its methodology for 'Titleholders and Operators' under regulation 25(1)(d) of the Environment Regulations. Titleholder or Operator's permit area/s overlap/s the EMBA.	Yes
Carbon CQ	Titleholder or Operator.	Woodside has applied its methodology for 'Titleholders and Operators' under regulation 25(1)(d) of the Environment Regulations. Titleholder or Operator's permit area/s overlap/s the EMBA.	Yes
Chevron Australia /New Energies	Titleholder or Operator.	Woodside has applied its methodology for 'Titleholders and Operators' under regulation 25(1)(d) of the Environment Regulations.	Yes

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

		Titleholder or Operator's permit area/s overlap/s the EMBA.	
Finder No 16	Titleholder or Operator.	Woodside has applied its methodology for 'Titleholders and Operators' under regulation 25(1)(d) of the Environment Regulations. Titleholder or Operator's permit area/s overlap/s the EMBA.	Yes
InCapture	Titleholder or Operator.	Woodside has applied its methodology for 'Titleholders and Operators' under regulation 25(1)(d) of the Environment Regulations. Titleholder or Operator's permit area/s overlap/s the EMBA.	Yes
INPEX Alpha	Titleholder or Operator.	Woodside has applied its methodology for 'Titleholders and Operators' under regulation 25(1)(d) of the Environment Regulations. Titleholder or Operator's permit area/s overlap/s the EMBA.	Yes
JERA Gorgon (part of Chevron)	Titleholder or Operator.	Woodside has applied its methodology for 'Titleholders and Operators' under regulation 25(1)(d) of the Environment Regulations. Titleholder or Operator's permit area/s overlap/s the EMBA.	Yes
JX Nippon O&G Exploration (Australia)	Titleholder or Operator.	Woodside has applied its methodology for 'Titleholders and Operators' under regulation 25(1)(d) of the Environment Regulations. Titleholder or Operator's permit area/s overlap/s the EMBA.	Yes
KATO Amulet/Corowa/Energy/NWS	Titleholder or Operator.	Woodside has applied its methodology for 'Titleholders and Operators' under regulation 25(1)(d) of the Environment Regulations. Titleholder or Operator's permit area/s overlap/s the EMBA.	Yes
KUFPEC	Titleholder or Operator.	Woodside has applied its methodology for 'Titleholders and Operators' under regulation 25(1)(d) of the Environment Regulations. Titleholder or Operator's permit area/s overlap/s the EMBA.	Yes
Kyushu Electric Wheatstone	Titleholder or Operator.	Woodside has applied its methodology for 'Titleholders and Operators' under regulation 25(1)(d) of the Environment Regulations. Titleholder or Operator's permit area/s overlap/s the EMBA.	Yes
Longreach Capital Investment	Titleholder or Operator.	Woodside has applied its methodology for 'Titleholders and Operators' under regulation 25(1)(d) of the Environment Regulations. Titleholder or Operator's permit area/s overlap/s the EMBA.	Yes
MidOcean Gorgon	Titleholder or Operator.	Woodside has applied its methodology for 'Titleholders and Operators' under regulation 25(1)(d) of the Environment Regulations.	Yes

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

		Titleholder or Operator's permit area/s overlap/s the EMBA.	
Mobil Australia	Titleholder or Operator.	Woodside has applied its methodology for 'Titleholders and Operators' under regulation 25(1)(d) of the Environment Regulations. Titleholder or Operator's permit area/s overlap/s the EMBA.	
OMV Australia	Titleholder or Operator.	Woodside has applied its methodology for 'Titleholders and Operators' under regulation 25(1)(d) of the Environment Regulations. Titleholder or Operator's permit area/s overlap/s the EMBA.	Yes
OPIC Australia	Titleholder or Operator.	Woodside has applied its methodology for 'Titleholders and Operators' under regulation 25(1)(d) of the Environment Regulations. Titleholder or Operator's permit area/s overlap/s the EMBA.	Yes
Osaka Gas Gorgon	Titleholder or Operator.	Woodside has applied its methodology for 'Titleholders and Operators' under regulation 25(1)(d) of the Environment Regulations. Titleholder or Operator's permit area/s overlap/s the EMBA.	Yes
Pathfinder Energy	Titleholder or Operator.	Woodside has applied its methodology for 'Titleholders and Operators' under regulation 25(1)(d) of the Environment Regulations. Titleholder or Operator's permit area/s overlap/s the EMBA.	Yes
PE Wheatstone	Titleholder or Operator.	Woodside has applied its methodology for 'Titleholders and Operators' under regulation 25(1)(d) of the Environment Regulations. Titleholder or Operator's permit area/s overlap/s the EMBA.	Yes
Pelsart Resources	Titleholder or Operator.	Woodside has applied its methodology for 'Titleholders and Operators' under regulation 25(1)(d) of the Environment Regulations. Titleholder or Operator's permit area/s overlap/s the EMBA.	Yes
Santos, (BOL)/NA Energy Holdings/Offshore/WA Northwest/WA PVG/WA Southwest	Titleholder or Operator.	Woodside has applied its methodology for 'Titleholders and Operators' under regulation 25(1)(d) of the Environment Regulations. Titleholder or Operator's permit area/s overlap/s the EMBA.	Yes
Shell Australia	Titleholder or Operator.	Woodside has applied its methodology for 'Titleholders and Operators' under regulation 25(1)(d) of the Environment Regulations. Titleholder or Operator's permit area/s overlap/s the EMBA.	Yes

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

SK Earthon Australia	Titleholder or Operator.	Woodside has applied its methodology for 'Titleholders and Operators' under regulation 25(1)(d) of the Environment Regulations. Titleholder or Operator's permit area/s overlap/s the EMBA.	Yes
Skye Resources	Titleholder or Operator.	Woodside has applied its methodology for 'Titleholders and Operators' under regulation 25(1)(d) of the Environment Regulations. Titleholder or Operator's permit area/s overlap/s the EMBA.	Yes
Tanami Energy	Titleholder or Operator.	Woodside has applied its methodology for 'Titleholders and Operators' under regulation 25(1)(d). of the Environment Regulations Titleholder or Operator's permit area/s overlap/s the EMBA.	Yes
Western Gas	Titleholder or Operator.	Woodside has applied its methodology for 'Titleholders and Operators' under regulation 25(1)(d). of the Environment Regulations Titleholder or Operator's permit area/s overlap/s the EMBA.	Yes
Peak Industry Representative bodies			
Australian Energy Producers (AEP)	Represents the interests of oil and gas explorers and producers in Australia.	Woodside has applied its methodology for 'Peak Industry Representative bodies' under regulation 25(1)(d) of the Environment Regulations. AEP's responsibilities are identified as having an intersect with Woodside's planned activities in the EMBA.	Yes
Local government and elected Parliamentary representatives, community groups or organisations			
Broome Chamber of Commerce and Industry (CCI)	Independent not-for-profit organisation responsible for promoting the interests of its members in the business community in the town of Broome and surrounding areas.	Woodside has applied its methodology for 'Local government and recognised local community reference/liaison groups or organisations' under regulation 25(1)(d) of the Environment Regulations. The Broome Chamber of Commerce and Industry's interests have the potential to be impacted by the proposed activities.	Yes
Exmouth Chamber of Commerce and Industry (CCI)	Independent not-for-profit organisation responsible for promoting the interests of its members in the business community in the town of Exmouth and surrounding areas.	Woodside has applied its methodology for Local government and recognised local community reference/liaison groups or organisations' under regulation 25(1)(d) of the Environment Regulations. The Exmouth Chamber of Commerce and Industry's interests have the potential to be impacted by the proposed activities.	Yes

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Exmouth Community Liaison Group (CLG)	The Exmouth CLG represents the interests of a range of local government, industry and community organisations in relation to oil and gas matters in the Exmouth region.	Woodside has applied its methodology for 'Local government and recognised local community reference/liaison groups or organisations' under regulation 25(1)(d) of the Environment Regulations. Base Marine, Bhagwan Marine, Cape Conservation Group Inc, Cape Range Riders, DBCA, Department of Defence, Department of Transport and Major Infrastructure, Exmouth Bus Charter, Exmouth Chamber of Commerce and Industry, Exmouth District High School, Exmouth Escape Resort, Exmouth Freight and Logistics, Exmouth Game Fishing Club, Exmouth Tackle and Camping Supplies, Exmouth Visitors Centre, Exmouth Volunteer Marine Rescue, Fat Marine, Gascoyne Development Commission, Gun Marine Services, Ningaloo Centre, Ningaloo Lodge, Ningaloo Coast World Heritage Advisory Council, PHI Aviation, Offshore Unlimited, Shire of Exmouth, Santos, Terrafirma Offshore, WA Country Health Service. The Exmouth CLG's area of responsibility under its terms of reference overlaps the EMBA.	Yes
Karratha & Districts Chamber of Commerce and Industry (CCI)	Independent not-for-profit organisation responsible for promoting the interests of its members in the business community in the City of Karratha and surrounding areas.	Woodside has applied its methodology for 'Local government and recognised local community reference/liaison groups or organisations' under regulation 25(1)(d) of the Environment Regulations. The KDCCI's interests have the potential to be impacted by the proposed activities. Woodside has also consulted the KDCCI through its participation in the Karratha CLG.	Yes
Karratha Community Liaison Group (CLG)	The Karratha CLG is the recognised community group that represents the interests of a range of local government, industry and community organisations in relation to oil and gas matters in the Pilbara region.	Woodside has applied its methodology for 'Local government and recognised local community reference/liaison groups or organisations' under regulation 25(1)(d) of the Environment Regulations. The Karratha CLG's area of responsibility under its terms of reference does not overlap the EMBA. WA Police, Karratha Health Care, Development WA, Ngarluma Yindjibarndi Foundation Ltd (NYFL)*, Department of Education, Pilbara Ports, Regional Development Australia, Pilbara Development Commission, Dampier Community Association, City of Karratha, Karratha & Districts Chamber of Commerce and Industry, Horizon Power, Murujuga Aboriginal Corporation (MAC)*. *NFYL and MAC were consulted directly as described below. Under regulation 25(1)(e), Woodside, at its discretion, chose to assess the CLG as a relevant person.	Yes

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

City of Karratha	Local government governed by the Local Government Act 1995 representing the suburbs and localities of Baynton, Baynton West, Bulgarra, Cossack, Dampier, Gap Ridge, Karratha, Karratha Industrial Estate, Jingarri, Madigan, Millars Well, Nickol, Pegs Creek, Point Samson, Roebourne, Whim Creek and Wickham.	Woodside has applied its methodology for 'Local government and recognised local community reference/liaison groups or organisations' under regulation 25(1)(d) of the Environment Regulations. The City of Karratha's area of responsibility does not overlap the EMBA. Under regulation 25(1)(e), Woodside, at its discretion, chose to assess the City of Karratha as a relevant person.	Yes
Shire of Ashburton	Local government governed by the Local Government Act 1995 representing the suburbs and localities of Onslow, Pannawonica, Paraburdoo and Tom Price.	Woodside has applied its methodology for 'Local government and recognised local community reference/liaison groups or organisations under regulation 25(1)(d) of the Environment Regulations. The Shire of Ashburton's area of responsibility overlaps the EMBA.	Yes
Shire of Broome	Local government governed by the Local Government Act 1995 representing the suburbs and localities of Mile, Bilingurr, Broome, Cable Beach, Cape Leveque, Coconut Well, Djugun, Lombadina, Minyirr, Morell Park, Skuthorpe	Woodside has applied its methodology for 'Local government and recognised local community reference/liaison groups or organisations' under regulation 25(1)(d) of the Environment Regulations. The Shire of Broome's area of responsibility overlaps the EMBA.	Yes
Shire of Exmouth	Local government governed by the Local Government Act 1995 representing the suburbs and localities of Exmouth, Learmonth and North West Cape.	Woodside has applied its methodology for 'Local government and recognised local community reference/liaison groups or organisations' under regulation 25(1)(d) of the Environment Regulations. The Shire of Exmouth's area of responsibility overlaps the EMBA.	Yes

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Other non-government groups or organisations (NGOs) or individuals			
Australian Marine Conservation Society (AMCS)	Non-government organisation.	Woodside has applied its methodology for 'Other non-government groups or organisations or individuals' under regulation 25(1)(d) of the Environment Regulations to determine AMCS' relevance for the proposed activity. Woodside has assessed that AMCS has publicly available statements, campaigns or initiatives relating to broader environmental and energy policy matters. Woodside chose to contact AMCS at its discretion in line with Section 5.3.7 of the EP to provide an opportunity to engage with AMCS to assist to identify whether its functions, interests or activities may be affected by the planned activities.	No
Conservation Council of Western Australia (CCWA)	Non-government organisation.	Woodside has applied its methodology for 'Other non-government groups or organisations or individuals' under regulation 25(1)(d) of the Environment Regulations to determine CCWA's relevance for the proposed activity. Woodside has assessed that CCWA has publicly available statements, campaigns or initiatives relating to broader environmental and energy policy matters. Woodside chose to contact CCWA at its discretion in line with Section 5.3.7 of the EP to provide an opportunity to engage with CCWA to assist to identify whether its functions, interests or activities may be affected by the planned activities.	No
Greenpeace Australia Pacific (GPAP)	Non-government organisation.	Woodside has applied its methodology for 'Other non-government groups or organisations or individuals' under regulation 25(1)(d) of the Environment Regulations to determine GPAP's relevance for the proposed activity. Woodside has assessed that GPAP has publicly available statements, campaigns or initiatives relating to broader environmental and energy policy matters. Woodside chose to contact GPAP at its discretion in line with Section 5.3.7 of the EP to provide an opportunity to engage with GPAP to assist to identify whether its functions, interests or activities may be affected by the planned activities.	No
Telstra	Non-government organisation.	Woodside has applied its methodology for 'Other non-government groups or organisations' under regulation 25(1)(d) of the Environment Regulations to determine Telstra's relevance for the proposed activity. There are communication cables that intersect the Operational Area.	Yes
Vocus	Non-government organisation.	Woodside has applied its methodology for 'Other non-government groups or organisations' under regulation 25(1)(d) of the Environment Regulations to determine Vocus' relevance for the proposed activity. There are communication cables that intersect the Operational Area.	Yes

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Research institutes and local conservation groups or organisations			
Australian Institute of Marine Science (AIMS)	Research institute.	Woodside has applied its methodology for 'Research institutes and local conservation groups or organisations' under regulation 25(1)(d) of the Environment Regulations. There may be research being undertaken by AIMS that intersects within the EMBA. Woodside chose to contact AIMS at its discretion in line with Section 5.3.7 of the EP.	No
Commonwealth Scientific and Industrial Research Organisation (CSIRO)	Research institute.	Woodside has applied its methodology for 'Research institutes and local conservation groups or organisations' under regulation 25(1)(d) of the Environment Regulations. There may be research being undertaken by CSIRO that intersects within the EMBA. Woodside chose to contact CSIRO at its discretion in line with Section 5.3.7 of the EP.	No
Western Australian Marine Science Institution (WAMSI)	Research institute.	Woodside has applied its methodology for 'Research institutes and local conservation groups or organisations' under regulation 25(1)(d) of the Environment Regulations. There may be research being undertaken by WAMSI that intersects within the EMBA. Woodside chose to contact WAMSI at its discretion in line with Section 5.3.7 of the EP.	No
Curtin University	Research institute.	Woodside has applied its methodology for 'Research institutes and local conservation groups or organisations' under regulation 25(1)(d) of the Environment Regulations. There may be research being undertaken by Curtin University that intersects within the EMBA. Woodside chose to contact Curtin University at its discretion in line with Section 5.3.7 of the EP.	No
Edith Cowan University (ECU)	Research institute.	Woodside has applied its methodology for 'Research institutes and local conservation groups or organisations' under regulation 25(1)(d) of the Environment Regulations. There is no known research being undertaken by the ECU that intersects within the EMBA.	No

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

		Woodside chose to contact ECU at its discretion in line with Section 5.3.7 of the EP.	
Murdoch University	Research institute.	Woodside has applied its methodology for 'Research institutes and local conservation groups or organisations' under regulation 25(1)(d) of the Environment Regulations. There is no known research being undertaken by the Murdoch University that intersects within the EMBA. Woodside chose to contact Murdoch University at its discretion in line with in line with Section 5.3.7 of the EP.	No
University of Western Australia (UWA)	Research institute.	Woodside has applied its methodology for 'Research institutes and local conservation groups or organisations' under regulation 25(1)(d) of the Environment Regulations. There may be research being undertaken by UWA that intersects within the EMBA. Woodside chose to contact UWA at its discretion in line with in line with Section 5.3.7 of the EP.	No
Cape Conservation Group (CCG)	Local conservation group focused on protecting the terrestrial and marine environment of the North West Cape.	Woodside has applied its methodology for 'Research institutes and local conservation groups or organisations' under regulation 25(1)(d) of the Environment Regulations. CCG's conservation activities have the potential to intersect with the EMBA as the EMBA overlaps North West Cape.	Yes
Protect Ningaloo	Local conservation group focused on protecting the Exmouth Gulf and Ningaloo Reef and Cape Range.	Woodside has applied its methodology for 'Research institutes and local conservation groups or organisations' under regulation 25(1)(d) of the Environment Regulations. Protect Ningaloo's conservation activities have the potential to intersect with the EMBA as the EMBA overlaps North West Cape and Ningaloo Reef.	Yes

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

2.2.2 Traditional custodians and nominated representative corporations

Traditional Custodians and nominated representative corporations			
Buurabalayji Thalanyji Aboriginal Corporation (BTAC)	Representative Aboriginal Corporation.	Woodside has applied its methodology for 'Traditional Custodians and Nominated Representative Corporations' under regulation 25(1)(d) of the Environment Regulations. The Thalanyji native title claim does not overlap the EMBA. The claim is coastally adjacent to the EMBA, for which BTAC is the Registered Native Title Body Corporate. BTAC is also party to the Macedon Indigenous Land Use Agreement (ILUA), Onslow Iron Protect Haulage Road ILUA and the Thalanyji and Minderoo Pastoral ILUA which is coastally adjacent to the EMBA.	Yes
Karajarri Traditional Lands Association (Aboriginal Corporation) (KTLA)	Representative Aboriginal Corporation.	Woodside has applied its methodology for 'Traditional Custodians and Nominated Representative Corporations' under regulation 25(1)(d) of the Environment Regulations. The Karajarri People (Area A) / Karajarri People (Area B) native title claim does not overlap the EMBA. The claim is coastally adjacent to the EMBA, for which the Karajarri Traditional Lands Association (Aboriginal Corporation) is the Registered Native Title Body Corporate. The Karajarri Traditional Lands Association (Aboriginal Corporation) is also party to the Gingerah Energy Protect ILUA, Great Sandy Desert Protect ILUA and the Karajarri Traditional Lands Association KSCS Eighty-Mile Beach ILUA which is coastally adjacent to the EMBA.	Yes
Kariyarra Aboriginal Corporation (KAC))	Representative Aboriginal Corporation.	Woodside has applied its methodology for 'Traditional Custodians and Nominated Representative Corporations' under regulation 25(1)(d) of the Environment Regulations. The Kariyarra native title claim does not overlap the EMBA. The claim is coastally adjacent to the EMBA, for which the KAC is the Registered Native Title Body Corporate. KAC is also party to the Kariyarra and State ILUA which is coastally adjacent to the EMBA.	Yes
Murujuga Aboriginal Corporation (MAC)	Representative Aboriginal Corporation.	Woodside has applied its methodology for 'Traditional Custodians and Nominated Representative Corporations' under regulation 25(1)(d) of the Environment Regulations.	Yes

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

		MAC is the Nominated Representative Corporation under the Burrup and Maitland Industrial Estates Agreement (BMIEA). The EMBA does not overlap the Murujuga National Park. MAC was established to represent the members of competing Native Title claims over Murujuga, collectively known as the Ngarda Ngarli and comprising Mardudhunera, Ngarluma, Yaburara, Yindjibarndi and Wong-Goo-Tt-Oo people. The determination of the competing Native Title claims resulted in no native title being found over the lands subject to the BMIEA or below the low water mark. MAC also owns and co-manages the Murujuga National Park, is responsible for the Dampier Archipelago National Heritage Place and the World Heritage Listed Murujuga Cultural Landscape.	
Nganhurra Thanardi Garrbu Aboriginal Corporation (NTGAC)	Representative Aboriginal Corporation	Woodside has applied its methodology for 'Traditional Custodians and Nominated Representative Corporations' under regulation 25(1)(d) of the Environment Regulations. The Gnulli, Gnulli #2 and Gnulli #3 - Yinggarda, Baiyungu and Thalanyji People native title claim, which the Baiyungu, Thalanyji and Yinggarda people are party to, overlaps the EMBA. The NTGAC and Yinggarda Aboriginal Corporation are the Registered Native Title Body Corporates holding native title on behalf of the Baiyungu, Thalanyji and Yinggarda people. The NTGAC is also party, with the WA State Government, to the Ningaloo Conservation Estate ILUA, which is coastally adjacent to the EMBA. The NTGAC is responsible for the joint management of the inner Ningaloo Marine Park (State Waters), the Cape Range National Park and new conservation areas extending along the Ningaloo Coast, which runs in parallel to the outer Ningaloo Marine Park in Commonwealth waters. The NTGAC is also party to the Nganhurra Thanardi Garrbu Aboriginal Corporation Conservation Estate ILUA, which is coastally adjacent to the EMBA. The NTGAC's nominated representative is the Yamatji Marlpa Aboriginal Corporation (YMAC) and the NTGAC executive officer and contact officer pursuant to the Corporations (Aboriginal and Torres Strait Islander) Act 2006 is employed by YMAC. Woodside has therefore consulted the NTGAC, via YMAC.	Yes
Ngarluma Aboriginal Corporation (NAC)	Representative Aboriginal Corporation	Woodside has applied its methodology for 'Traditional Custodians and Nominated Representative Corporations' under regulation 25(1)(d) of the Environment Regulations.	Yes

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

		The Ngarluma People native title claim does not overlap the EMBA. The claim is coastally adjacent to the EMBA, for which NAC is the Registered Native Title Body Corporate. The Ngarluma/Yindjibarndi People native title claim does not overlap the EMBA. The claim is coastally adjacent to the EMBA, for which NAC and the Yindjibarndi Aboriginal Corporation are the Registered Native Title Body Corporates. NAC is also party to the Anketell Port, Infrastructure Corridor and Industrial Estate Agreement ILUA and the RTIO Ngarluma ILUA (Body Corporate Agreement) which is coastally adjacent to the EMBA.	
Nhuwala Claim Group (Nhuwala)	Native Title Group	Woodside has applied its methodology for 'Traditional Custodians and Nominated Representative Corporations' under regulation 25(1)(d) of the Environment Regulations. The Nhuwala Claim Group is a registered native title claim but does not yet have a determination. It is adjacent to the EMBA. All communications with Nhuwala are via YMAC.	Yes
Nhuwala / Thalanyji People	Native Title Group	Woodside has applied its methodology for 'Traditional Custodians and Nominated Representative Corporations' under regulation 25(1)(d) of the Environment Regulations. The Nhuwala / Thalanyji People is a registered native title claim but does not yet have a determination. It is adjacent to the EMBA. All communications with Nhuwala / Thalanyji People are via BTAC.	Yes
Nyangumarta Karajarri Aboriginal Corporation (NKAC)	Representative Aboriginal Corporation	Woodside has applied its methodology for 'Traditional Custodians and Nominated Representative Corporations' under regulation 25(1)(d) of the Environment Regulations. The Nyangumarta-Karajarri Overlap Proceeding (Yawinya) native title claim does not overlap the EMBA. The claim is coastally adjacent to the EMBA, for which the NKAC is the Registered Native Title Body Corporate. The NKAC is also party to the NKAC KSCS Eighty-Mile Beach ILUA, Nyangumarta Karajarri and Anna Plains Station ILUA, and the Nyangumarta Karajarri and Mandora Station ILUA which is coastally adjacent to the EMBA.	Yes
Nyangumarta Warrarn Aboriginal Corporation (NWAC)	Representative Aboriginal Corporation	Woodside has applied its methodology for 'Traditional Custodians and Nominated Representative Corporations' under regulation 25(1)(d) of the Environment Regulations.	Yes

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

		The Nyangumarta People (Part A) native title claim does not overlap the EMBA. The claim is coastally adjacent to the EMBA, for which the Nyangumarta Warrarn Aboriginal Corporation is the Registered Native Title Body Corporate. The Nyangumarta Warrarn Aboriginal Corporation is also party to the Nyangumarta PBC KSCS Indigenous ILUA, Nyangumarta Warrarn Aboriginal Corporation and Mandora Pastoral Lease ILUA and Nyangumarta Warrarn Aboriginal Corporation and Wallal Downs Pastoral Lease ILUA, which is coastally adjacent to the EMBA.	
Robe River Kuruma Aboriginal Corporation (RRKAC)	Representative Aboriginal Corporation	Woodside has applied its methodology for 'Traditional Custodians and Nominated Representative Corporations' under regulation 25(1)(d) of the Environment Regulations. RRKAC is party to the RTIO Kuruma Marthudunera People ILUA, and the KM & YM ILUA 2018, which is coastally adjacent to the EMBA.	Yes
Wanparta Aboriginal Corporation (Wanparta)	Representative Aboriginal Corporation	Woodside has applied its methodology for 'Traditional Custodians and Nominated Representative Corporations' under regulation 25(1)(d) of the Environment Regulations. The Ngarla and Ngarla #2 (Determination Area A), Ngarla Overlap Proceeding and the Ngarla People (Mount Goldsworthy Lease Proceeding) native title claim does not overlap the EMBA. The claim is coastally adjacent to the EMBA, for which Wanparta Aboriginal Corporation is the Registered Native Title Body Corporate. The Wanparta Aboriginal Corporation is party to the Ngarla Pastoral ILUA and the Ngarla PBC KSCS ILUA which is coastally adjacent to the EMBA.	Yes
Wirrawandi Aboriginal Corporation (WAC)	Representative Aboriginal Corporation	Woodside has applied its methodology for 'Traditional Custodians and Nominated Representative Corporations' under regulation 25(1)(d) of the Environment Regulations. The Yaburara & Mardudhunera People native title claim does not overlap the EMBA. The claim is coastally adjacent to the EMBA, for which WAC is the Registered Native Title Body Corporate. WAC is party to the Cape Preston Protect Deed YM Mardie ILUA Agreement, KM & YM ILUA and the Cape Preston West Export Facility ILUA, which is coastally adjacent to the EMBA.	Yes
Wong-Goo-Tt-Oo	Traditional Owner of Murujuga	Woodside has applied its methodology for 'Traditional Custodians and Nominated Representative Corporations' under regulation 25(1)(d) of the Environment Regulations.	Yes

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

		Wong-Goo-Tt-Oo is part of the Ngarda Ngarli which is represented by MAC. Wong-Goo-Tt-Oo has self-identified for all EPs relevant to Murujuga and requested to be consulted directly	
Yindjibarndi Aboriginal Corporation	Representative Aboriginal Corporation	Woodside has applied its methodology for 'Traditional Custodians and Nominated Representative Corporations' under regulation 25(1)(d) of the Environment Regulations. The Ngarluma/ Yindjibarndi People native title claim does not overlap the EMBA. The claim is coastally adjacent to the EMBA, for which NAC and the Yindjibarndi Aboriginal Corporation are the Registered Native Title Body Corporates.	Yes
Yinggarda Aboriginal Corporation (YAC)	Representative Aboriginal Corporation	Woodside has applied its methodology for 'Traditional Custodians and Nominated Representative Corporations' under regulation 25(1)(d). The Gnulli, Gnulli #2 and Gnulli #3 - Yinggarda, Baiyungu and Thalanyji People native title claim, which the Baiyungu, Thalanyji and Yinggarda people are party to, overlaps the EMBA. The NTGAC and YAC are the Registered Native Title Body Corporates holding native title on behalf of the Baiyungu, Thalanyji and Yinggarda people. YAC is party to the Estate ILUA, and the Ningaloo Conservation Estate ILUA, which overlaps the EMBA.	Yes
Native Title Representative Bodies			
Kimberley Land Council (KLC)	Native Title Representative Body	Woodside has applied its methodology for 'Native Title Representative Bodies' under regulation 25(1)(d) of the Environment Regulations. KLC is the Native Title Representative Body for the Kimberley region of Western Australia. As such, they are not a Prescribed or Registered Native Title Body Corporate but exist to assist native title claimants and holders. KLC's functions may be relevant to the proposed activity in relation to its facilitation and coordination function as a Native Title Representative Body under applicable federal legislation.	Yes
Yamatji Marlpa Aboriginal Corporation (YMAC)	Native Title Representative Body	Woodside has applied its methodology for 'Native Title Representative Bodies' under regulation 25(1)(d) of the Environment Regulations. YMAC is the Native Title Representative Body for the Yamatji and Pilbara regions of Western Australia. As such, they are not a Prescribed or Registered Native Title Body Corporate but exist to assist native title claimants and holders. The NTGAC's nominated representative is YMAC. Woodside has therefore consulted the NTGAC via YMAC.	Yes

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

		The Nhuwala Claim Group is a registered native title claim but does not yet have a determination. It is adjacent to the EMBA. All communications with Nhuwala are via YMAC. Woodside contacted YMAC to seek guidance with respect to the appropriate Traditional Custodian group(s) to engage with respect to the proposed activity where this was not clear. YMAC is party to the KM & YM ILUA 2018 and the Kariyarra and State ILUA, which is adjacent to the EMBA. YMAC is also party to the following marine parks – Abrolhos, Dampier, Montebello, Ningaloo, Gascoyne, Shark Bay, Cape Range National Park, which overlap the EMBA.	
Self-identified Indigenous Groups			
Ngarluma Yindjibarndi Foundation Ltd (NYFL)	Representative Aboriginal Corporation	Woodside has applied its methodology for 'Traditional Custodians and Nominated Representative Corporations' under regulation 25(1)(d) of the Environment Regulations. The Ngarluma and Yindjibarndi People, the NWS JVs and Woodside entered into an agreement on 22 December 1998 (Agreement). NYFL was subsequently incorporated under the terms of the Agreement to act as trustee for the trust established to benefit the Ngarluma and Yindjibarndi People and the Roebourne Aboriginal Community. Subsequent to that, the Ngarluma people settled their native title claim and established their nominated representative corporation, the Ngarluma Aboriginal Corporation (PBC); and the Yindjibarndi people settled their native title claim and established their nominated representative corporation, the Yindjibarndi Aboriginal Corporation (PBC). The Ngarluma Aboriginal Corporation and the Yindjibarndi Aboriginal Corporation are the appropriate representative bodies for consultation in relation to cultural interests. NYFL's functions may be relevant to the proposed activity in relation to its functions under the Agreement.	Yes
Other Indigenous Groups			
Save Our Songlines (SOS) and/ or [Individual 2]	Representatives of Non-Government Organisation Save Our Songlines and/ or [Individual 2]	Woodside has applied its methodology for 'Traditional Custodians and nominated representative corporations' and 'Other non-government groups or organisations' under regulation 25(1)(d) of the Environment Regulations to determine Save Our Songlines (SOS) and/ or [Individual 2] relevance for the proposed activity.	No

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

		Save Our Songlines and/ or [Individual 2] stated interest is to stop or pause Scarborough gas and to stop new industry on the Burrup; and oppose planned expansion of the Burrup Hub industry by Woodside, Perdaman and Yara. In addition, their stated interests also include the protection of Murujuga rock art. This scope of the activity under this EP does not fall within their stated interests (see Section 6.6 of the EP). Save Our Songlines and/ or [Individual 2] have not identified for this activity despite opportunity to do so.	

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

3. CONSULTATION ACTIVITIES

3.1 Okha LWI EP consultation activities

Woodside has consulted with relevant persons and other parties for this EP since April 2026 (originally named CK4 and LH3 Well Intervention EP) when consultation commenced as part of a planned, integrated and consistent approach to consultation for Woodside's proposed activities. An activity update was issued in July 2026 for the Okha LWI EP

A broad consultation process has been undertaken with relevant persons for the Okha LWI EP. Consultation aims to be inclusive, transparent, voluntary, respectful and two-way. Consultation was undertaken by email, letter, phone call and/or meetings and through advertising.

3.2 Discharging Regulation 25 of the Environment Regulations

Consultation for the EP began in April 2026 with public notification via newspaper and social media advertising and direct engagement with identified relevant persons and other persons and organisations Woodside chose to contact.

This approach has a number of aims, including, where relevant to be inclusive, transparent, voluntary, respectful and two-way. Consultation was undertaken, where relevant, by email, letter, phone call and/or meetings and through advertising. Further details on these activities are provided in the following sections.

3.2.1 Newspaper advertising

Woodside advertised the EP consultation with an overview of planned activities in national, state regional and Indigenous newspapers as per the table below (also see Record of Consultation, reference 6.4) to reach relevant communities within or adjacent to the EMBA.

No direct comments or feedback were received from the advertisements.

Newspaper	Coverage	Readership	Publication dates
The Australian	National	Weekly – 453,000	16 April 2026
The West Australian	State (WA)	Daily – 364,000	16 April 2026
Pilbara News	Regional (WA)	Weekly – 17,611	15 April 2026
Broome Advertiser	Regional (WA)	Weekly - 12,000	16 April 2026
Kimberley Echo	Regional (WA)	Weekly 12,000	16 April 2026
Midwest Times	Regional (WA)	Weekly - 25,000	15 April 2026
Koori Mail	Indigenous	Monthly – 80,000	22 April 2026
National Indigenous Times	Indigenous	Monthly – 1,484,340	28 April 2026

3.2.2 Direct consultation

Woodside provided a Consultation Information Sheet to relevant persons and to other persons and organisations it chose to contact, during the initial consultation period. See Section 5.3.4 and Section 5.3.7 of the EP.

The Consultation Information Sheet included an overview of the activity, maps, a summary of key risks and/or impacts and associated management measures (Record of Consultation, references 6.1.1, 6.3.1). It also outlined the timeframe for providing feedback and included Woodside's toll-free phone number (1800 442 977) and the consultation email address feedback@woodside.com to support consultation.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

As part of the EP's initial consultation and the activity update, Woodside provided additional targeted information to specific relevant persons, as necessary. This information included:

- defence zone map (Record of Consultation, reference 6.1.3, 6.3.3)
- GIS shape files
- shipwreck information (Record of Consultation, reference 6.1.5, 6.3.5)
- submarine communication cable map (Record of Consultation, reference 6.1.6, 6.3.8)
- vessel density map (Record of Consultation, reference 6.1.4, 6.3.4)
- ports map (Record of Consultation, reference 6.3.9)

Where appropriate, Woodside conducted phone calls and meetings with relevant persons.

Where appropriate, follow-up emails or letters were sent to relevant persons who had not responded prior to the close of the advertised feedback period.

Woodside considered relevant person responses and assessed the merits and relevance of objections and claims about the potential adverse impact of the proposed activity set out in the EP, in accordance with the intended outcome of consultation (see Section 5.2 of the EP).

Consultation activities undertaken with relevant persons are summarised at Appendix F, Table 2.

Engagement with persons or organisations Woodside assessed as not relevant but chose to contact (see Section 5.3.7 of the EP) or self-identified and Woodside assessed as not relevant are summarised at Appendix F, Table 3.

3.2.3 Website and social media

Since the commencement of the initial consultation period (April 2026), the Consultation Information Sheet has been available on Woodside's website. The website also includes alternative methods for relevant persons to provide feedback to Woodside and information on other Woodside activities. From April 2026, Woodside ran a geotargeted paid social media campaign (Record of Consultation, reference 6.5) covering various local government authorities within, or coastally adjacent to, the EMBA for the proposed activities. The campaign focused on persons whose functions, interests or activities might be affected by the EP's activities and directed them to Woodside's Consultation Activities page so that, if they wanted further information, they could learn more about the EP and proposed activities.

Below is a summary of the reach and impact of the social campaign.

Platforms	Geotargeted reach	Post dates	Impact
Meta – Facebook and Instagram	Denham, Carnarvon, Coral Bay, Exmouth, Onslow, Dampier, Karratha, Roebourne, Port Hedland	17/04/2026 30/04/2026 13/05/2026	Reach: 86,255 Impressions: 132,709 Link Clicks: 400 Click Through Rate: 0.3%

Below is a summary of comments and reactions to the social media campaign. Please note comments and reactions are not available for Instagram.

Platform	Number of reactions	Number of comments	Comments relevant to EP
Facebook	61 👍 2 ❤️‍🩹	9	0

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

3.3 Proactive consultation

3.3.1 Community engagement

The community events that Woodside has conducted or attended are outlined below (and captured in more detail in Record of Consultation, reference 6.6). To support attendance, Woodside may publish advertisements ahead of these sessions and events in relevant local newspapers and on social media.

Date	Location	Event (if applicable)
15 May 2026	Karratha	KDCCI REAF Festival
7 June 2026	Dampier	Dampier Beachside Markets
1-2 August 2026	Karratha	FeNaCING Festival
8 August 2026	Onslow	Passion of the Pilbara

3.3.2 Community Liaison Group engagement

The Exmouth and Karratha Community Liaison Groups (CLGs) represent the interests of a range of local government, industry and community organisations in relation to oil and gas matters in the Exmouth and Karratha regions. Woodside regularly meets with the two CLGs to discuss a range of issues including consultation of specific EPs. For this EP, see reference 4.8.5 for consultation summary with Exmouth CLG and reference 4.8.7 for Karratha CLG.

3.3.3 Newsletter

Woodside's EP focussed newsletter *Let's Talk* is designed to reach existing and potential relevant persons, supports self-identification and provides information about Woodside's EP-related activities. The newsletter provides regular updates about EP consultation activities, case studies on effective consultation with relevant persons and other EP related information such as upcoming events where the Woodside team will consult with the local community. *Let's Talk* is distributed in a variety of locations including Karratha, Roebourne, Exmouth and Perth. as well as across digital platforms including Woodside's website and social media channels. People can also subscribe to receive *Let's Talk* on Woodside's website. (Record of Consultation, reference 6.7.1).

3.4 Consultation activity update (July/August 2026)

Following the initial consultation on the EP, two additional wells, WA7 and WA8, were added to the EP's planned light well intervention activities and it was renamed to the Okha Light Well Intervention EP. No changes to the EMBA occurred. With this update, sent on 23 July 2026, Woodside provided a second 30-day consultation period for relevant persons and persons or organisations who were previously consulted at Woodside's discretion to provide feedback. Following the initial consultation in April 2026 and a follow-up reminder sent in May 2026 (for those who did not respond), the activity update for the Okha LWI EP marked the third opportunity to provide feedback on the EP. While feedback was received on the activity update, there were no objections or claims about the adverse impacts of the proposed activity. Woodside consulted these persons and organisations in accordance with regulation 25 of the Environment Regulations and the summary of that consultation is set out in **Appendix F, Table 2** and **Table 3.**

3.5 Traditional Custodian specific consultation

In addition to the approaches outlined above including community information sessions, additional activities were undertaken with relevant Traditional Custodians, which were specifically designed to

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

provide for effective engagement with Traditional Custodians and so that information was provided in a form that was readily accessible and appropriate (see Section 5.5.4 of the EP).

Consultation undertaken specifically with Traditional Custodians for this EP includes direct engagement with nominated representative bodies via the contact listed on the Office of the Registrar of Indigenous Corporations (ORIC) website, requesting advice on how they would like to be engaged and asking whether other members and/or individuals should be consulted. This has resulted in:

- the EP's Summary Information Sheet, being provided to relevant Traditional Custodian groups (Record of Consultation, reference 6.1.2). The resource is developed and reviewed by subject matter experts with knowledge and experience in Indigenous affairs, in collaboration with technical experts to ensure content is appropriate to the intended recipients
- meetings with directors, Elders and any nominated representatives, at a time and location nominated by them
- the exchange of written feedback and correspondence
- telephoning relevant persons to provide context, if requested and/or required
- invitations to and/or attendance at community monthly luncheons for Traditional Custodians.

Ongoing efforts were made to engage and develop relationships with these bodies via a variety of means such as email, phone calls, alternative contacts, texts, social media and, in some cases, physical visits.

Consultation meetings with attendees decided by Traditional Custodian groups and supported by senior Woodside representatives, subject matter experts and Indigenous Affairs advisers with skills and experience in community engagement. Meetings are developed through a two-way consultation process to help enable effective information sharing via:

- mutually agreed agenda avoiding time pressure
- encouraging Traditional Custodian attendees to control the pace of the meeting and pause at any time to ask questions, seek clarification or provide feedback
- visual aids such as posters, presentations, maps, simplified technical videos and real-world pictures and footage
- emphasis on potential planned and unplanned risks and impacts of the activity
- ample opportunity for questions and feedback
- discussion about ongoing relationship development and opportunities
- distribution of hard-copy Consultation Information Sheets (Record of Consultation, 6.1.1 and 6.3.1) and Summary Consultation Information Sheets (Record of Consultation, reference 6.1.2) are available face-to-face consultation
- meeting costs which could include sitting fees, travel, legal support and executive support and other support required
- advertising in Indigenous publications such as the National Indigenous Times (28 April 2026) and Koori Mail (22 April 2026) (Record of Consultation, reference 6.6.7 and reference 6.6.8)

Newspaper	Coverage	Publication dates
Koori Mail	Indigenous	22 April 2026
National Indigenous Times	Indigenous	28 April 2026

Woodside also ran a geotargeted sponsored social media campaign (Record of Consultation, reference 6.7.1) to various communities that are coastally adjacent to the EMBA for the proposed activities.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Social media is a highly effective means to engage Indigenous audiences as outlined in Indigenous Digital Life: The Practice and Politics of Being Indigenous on Social Media (Bronwyn Carlson and Ryan Frazer, 2021).

The campaign brought the proposed activity to the attention of persons who may be interested and advised persons or organisations how they can learn more about Woodside's proposed activities by visiting Woodside's website. The advertisements linked to Woodside's website, which details the intent of consultation with relevant persons under the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (Cth).

Woodside uses a diverse range of techniques to reach relevant persons and build awareness of the proposed activity and how it may affect their functions, activities or interests, and to understand how to provide feedback. The combination of Prescribed Bodies Corporate (PBC) engagement meetings, traditional print media, social media and face-to face community interaction provides a wide-ranging opportunity to consult.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

4. TABLE 2: CONSULTATION REPORT WITH RELEVANT PERSONS OR ORGANISATIONS

The black numbering **(N)** in the 'Summary of information provided and record of consultation for this EP' in Table 2 denotes an item raised by a stakeholder. The green numbering **(N)** in this section denotes Woodside's response to that issue.

4.1 Commonwealth and WA State Government departments or agencies – marine

4.1.1 Australian Border Force (ABF)

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed the Australian Border Force (ABF) advising of the proposed activity (Record of Consultation, reference 6.1.7), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure 'Consultation on offshore petroleum environment plans: Information for the community'.
- On 7 May 2026, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 23 July 2026, Woodside sent an Activity Update to ABF based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.10). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP was provided.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
No feedback, objections or claims about the adverse impact of the activity received despite follow-up.		Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	No changes or additional measures are required

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with ABF for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically:

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Sufficient Information

Woodside has given ABF sufficient information to allow ABF to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to ABF on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.
  - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.
  - A timeframe for consultation and the provision of feedback.
  - A link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
  - Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).
- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to ABF. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.

Reasonable Period

Woodside allowed ABF a reasonable period for consultation in the preparation of the EP because:

- A consultation period was stated in the initial correspondence and in the Activity Update to ABF advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.
- Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period.
- Consultation for this EP commenced 6 months ago.
- In this Woodside allowed ABF a reasonable period for consultation in preparation of the EP.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with ABF is appropriate and adapted to the nature of interests of ABF:

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign. This allowed for broad awareness of the activity under the EP and also of consultation.
- In the absence of feedback, Woodside sent a follow-up consultation email on 7 May 2026, reminding ABF of the opportunity to provide feedback. That was followed by the activity update on 23 July 2026.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- No additional measures were considered as a result of consultation as ABF did not provide feedback for this EP.
- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.
- The measures and controls described in this EP address the potential impact from the proposed activity on ABF's functions, interests or activities.

4.1.2 Australian Communications and Media Authority (ACMA)

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed the ACMA advising of the proposed activity (Record of Consultation, reference 6.1.9), provided a Consultation Information Sheet, Submarine Communication Cables Map (Record of Consultation, reference 6.3.8) and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 16 April 2026, ACMA emailed Woodside, thanked it for the information (SI Report A, reference 1.1) and noted items **(1)**–**(2)**.
- On 16 April 2026, Woodside responded to ACMA, thanked it for its response (SI Report A, reference 1.2) and responded to items **(1)-(2)**.
- On 23 July 2026, Woodside sent an Activity Update to ACMA based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.12). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP and a submarine communication cables map were provided.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
(1) ACMA recommended Woodside engage owners of submarine cable infrastructure in EMBA, including Vocus and Telstra, otherwise no comments on activity.	**(1)** Woodside recognises Vocus and Telstra as relevant for the activities and understands that is the extent of ACMA's feedback.	**(1)** Woodside confirmed Telstra and Vocus were consulted for the EP and that ACMA has no additional comments on the proposed activity.	**(1)** No changes or additional measures are required. Submarine cable infrastructure is set out in Section 4.9.7 of the EP.
(2) Noted it did not require ongoing consultation on activities.	**(2)** Woodside understands that ACMA does not require additional consultation on this EP.	**(2)** Woodside confirmed ACMA's request that it needed no additional consultation on activities.	**(2)** No changes or additional measures are required.
While feedback has been received, there were no objections or claims.	Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which	Woodside engages in ongoing consultation throughout the life of an EP. Woodside notes that further feedback	No changes or additional measures are required.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

	the EP relates, as required under Regulation 24.	may be received as part of ongoing consultation. Should further feedback be received, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with ACMA for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically:

Sufficient Information

Woodside has given ACMA sufficient information to allow ACMA to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to ACMA on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.
  - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.
  - A timeframe for consultation and the provision of feedback.
  - A link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
  - Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).
- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to ACMA. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.
- On 16 April 2026, ACMA shared its feedback, claims or objections regarding this activity, indicating the information provided was sufficient to enable ACMA to make an informed assessment of the possible consequences of the activity on its functions, interests or activities.

Reasonable Period

Woodside allowed ACMA a reasonable period for consultation in the preparation of the EP because:

- A consultation period was stated in the initial correspondence and in the Activity Update to ACMA advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.
- Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period.
- Consultation for this EP commenced 6 months ago.
- In this context, Woodside allowed ACMA a reasonable period for consultation in preparation of the EP as evidenced by ACMA's response on 16 April 2026.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with ACMA is appropriate and adapted to the nature of interests of ACMA:

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- ACMA provided feedback but no objections or claims in line with the intended outcome of consultation as set out in Section 5.2 and Regulations 24(b) and 34(g). Woodside has:
  - Responded to feedback from ACMA.
  - Made no changes or inclusions to the EP as a result of consultation with ACMA because appropriate measures are already included in the EP.
- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.

4.1.3 Australian Fisheries Management Authority (AFMA)

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed AFMA advising of the proposed activity (Record of Consultation, reference 6.1.11), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 23 April 2026, AFMA emailed Woodside, thanked it for the information (SI Report A, reference 2.1) and noted points **(1)** to **(3):**
- On 24 April 2026, Woodside thanked AFMA for the response and responded to points **(1)** to **(3)**:
- On 23 July 2026, Woodside sent an Activity Update to AFMA based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.14). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP was provided.
- On 24 July 2026, AFMA thanked Woodside for the email (SI Report A, reference 2.3) and reiterated **(1)** to **(3)**.
- On 27 July 2026, Woodside thanked AFMA for its review of the update (SI Report A, reference 2.4) and confirmed **(1)** to **(3)**.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

(1) AFMA confirmed it had no direct comments on the EP.	**(1)** Woodside accepts that AFMA had no comments for the EP.	**(1)** Woodside confirmed that AFMA had no comments for the EP.	**(1)** No changes or additional measures are required
(2) Requested to be included in future consultation on the activities.	**(2)** Woodside understands that AFMA wants to receive ongoing information about the activities. Woodside sends notifications to AFMA as a standard practice.	**(2)** Woodside confirmed AFMA would receive activity notifications and any consultation updates.	**(2)** As per Woodside's standard notifications, AFMA will be notified as referenced as C 1.4 and set out in Section 7.10 of the EP. No changes or additional measures are required.
(3) Encouraged Woodside to talk with Commonwealth fishing operators as Relevant Persons and noted: • Access to industry contacts on its website. • CFA, Tuna Australia and Australian Southern Bluefin Tuna Industry Association as relevant to the proposal. • Contact information for the associations	**(3)** Woodside provides information to Commonwealth fishery representative bodies based on management area overlap, in acknowledgement of advice from AFMA	**(3)** Woodside confirmed the Commonwealth fisheries and representative bodies contacted during consultation.	**(3)** Woodside's relevancy assessment for Commonwealth fishery representative bodies is set out in Appendix F, Table 1. No changes or additional measures are required
While feedback has been received, there were no objections or claims.	Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24.	Woodside engages in ongoing consultation throughout the life of an EP. Woodside notes that further feedback may be received as part of ongoing consultation. Should further feedback be received, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	Woodside has assessed the potential for interaction with Commonwealth managed fisheries in Section 4.9.2 of the EP. No changes or additional measures are required
Summary Report – Consultation Complete			

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with AFMA for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically:

Sufficient Information

Woodside has given AFMA sufficient information to allow AFMA to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to AFMA on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.
  - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.
  - A timeframe for consultation and the provision of feedback.
  - A link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
  - Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).
- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to AFMA. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.
- On 23 April 2026 and 24 July 2026, AFMA shared its feedback, claims or objections regarding this activity, indicating the information provided was sufficient to enable AFMA to make an informed assessment of the possible consequences of the activity on its functions, interests or activities.

Reasonable Period

Woodside allowed AFMA a reasonable period for consultation in the preparation of the EP because:

- A consultation period was stated in the initial correspondence and in the Activity Update to AFMA advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.
- Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period.
- Consultation for this EP commenced 6 months ago.
- In this context, Woodside allowed AFMA a reasonable period for consultation in preparation of the EP as evidenced by AFMA's response on 23 April 2026 and again on 24 July 2026.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with AFMA is appropriate and adapted to the nature of interests of AFMA.

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- Woodside ran a targeted social media campaign. This allowed for broad awareness of the activity under the EP and also of consultation.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- AFMA provided feedback but no objections or claims in line with the intended outcome of consultation as set out in Section 5.2 and Regulations 24(b) and 34(g). Woodside has:
  - · Responded to feedback from AFMA.
  - Made no changes or inclusions to the EP as a result of consultation with AFMA because appropriate measures are already included in the EP.
- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.

4.1.4 Australian Hydrographic Office (AHO)

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed AHO advising of the proposed activity (Record of Consultation, reference 6.1.10), provided a Consultation Information Sheet, Shape Files, Vessel Density Map and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 16 April 2026, AHO emailed Woodside, thanked it for the information (SI Report A , reference 3.1) and noted items **(1)** to **(2)**:
- On 16 April 2026, Woodside thanked AHO for its response (SI Report A, reference 3.2) and responded to items **(1)** to **(2).**
- On 14 July 2026, Woodside (outside of this EP) emailed AHO and sought to clarify notification approach for AHO and DoD. (SI Report A, reference 3.3)
- On 15 July 2026, AHO confirmed it had no issue with the proposal for Notice to Mariners notification. (SI Report A, reference 3.4)
- On 23 July 2026, Woodside sent an Activity Update to AHO based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.13). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP, vessel density map and GIS shape files were also provided.
- On 23 July 2026, AHO acknowledged receipt of the activity update (SI Report A, reference 3.5).
- On 17 August 2026, Woodside emailed AHO to confirm the updated notification approach for Okha LWI EP to align to what was agreed overall for EPs with AHO on 15 July 2026. (SI Report A, reference 3.6) **(3)**
- On 18 August 2026, AHO responded (SI Report, reference 3.7) to item **(3).**

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

(1) AHO confirmed it had no concerns with proposed activities.	**(1)** Woodside understands AHO has no concerns with the proposed activities.	**(1)** Woodside noted that AHO that had no concerns with the proposed activities.	**(1)** No changes or additional measures are required.
(2) Requested updates once activity that may impact mariners is due to start and provided fact sheet with guidance if needed.	**(2)** Woodside provides notifications as a standard to AHO at least 4 weeks prior to the commencement of activities as a standard which reflect guidance contained in the AHO fact sheet.	**(2)** Woodside confirmed it would provide AHO with start of activity notifications to inform Australian Notices to Mariners.	**(2)** No changes or additional measures are required as point **(3)** addresses updated approach.
(3) Confirmed revised notification approach.	**(3)** Woodside notes that AHO agree that the revised notification approach applies to this EP as follows: AHO will be notified no less than four weeks prior to the commencement of the first activity under the EP, and then subsequently when vessels are undertaking activities within the Operational Area for more than three weeks at a time	**(3)** Not required as Woodside had previously sought AHO's review and approval of the proposed notification approach.	**(3)** Woodside will notify AHO as referenced as PS 1.3.1 and set out in Section 7.10 of the EP. Woodside considers the measures and controls in the EP are appropriate.
While feedback has been received, there were no objections or claims.	Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24.	Woodside engages in ongoing consultation throughout the life of an EP. Woodside notes that further feedback may be received as part of ongoing consultation. Should further feedback be received, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	No additional changes or additional measures are required.
Summary Report – Consultation Complete			
Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with AHO for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically: **Sufficient Information**			

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Woodside has given AHO sufficient information to allow AHO to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to AHO on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.
  - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.
  - A timeframe for consultation and the provision of feedback.
  - A link to NOPSEMA's brochure 'Consultation on offshore petroleum environment plans: Information for the community'.
  - Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).
- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to AHO. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.

Reasonable Period

Woodside allowed AHO a reasonable period for consultation in the preparation of the EP because:

- A consultation period was stated in the initial correspondence and in the Activity Update to AHO advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.
- Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period.
- Consultation for this EP commenced 6 months ago.
- In this context, Woodside allowed AHO a reasonable period for consultation in preparation of the EP as evidenced by AHO's response on 16 April 2026 and again on 23 August 2026.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with AHO is appropriate and adapted to the nature of interests of AHO:

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- AHO provided feedback but no objections or claims in line with the intended outcome of consultation as set out in Section 5.2 and Regulations 24(b) and 34(g). Woodside has:

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- Responded to feedback from AHO.
- Made change to AHO notification schedule in EP based on Woodside proposal for all EPs with AHO's review and acceptance.

- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.

4.1.5 Australian Maritime Safety Authority (AMSA) – Marine Pollution

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed the AMSA – Marine Pollution advising of the proposed activity (Record of Consultation, reference 6.1.7), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure 'Consultation on offshore petroleum environment plans: Information for the community'.
- On 7 May 2026, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 23 July 2026, Woodside sent an Activity Update to AMSA based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.10). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP was provided.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
No feedback, objections or claims about the adverse impact of the activity received despite follow-up.		Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	Woodside has addressed Oil Pollution First Strike Plan at Appendix H. No changes or additional measures are required.

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with AMSA – Marine Pollution for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically:

Sufficient Information

Woodside has given AMSA – Marine Pollution sufficient information to allow AMSA – Marine Pollution to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to AMSA – Marine Pollution on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.
  - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.
  - A timeframe for consultation and the provision of feedback.
  - A link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community'*.
  - Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).
- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to AMSA- Marine Pollution. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.

Reasonable Period

Woodside allowed AMSA – Marine Pollution a reasonable period for consultation in the preparation of the EP because:

- A consultation period was stated in the initial correspondence and in the Activity Update to AMSA – Marine Pollution advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.
- Woodside's methodology allows a 30-day consultation period and Woodside allowed AMSA – Marine Pollution 60 days for consultation.
- Consultation for this EP commenced 6 months ago.
- In this context, Woodside allowed AMSA – Marine Pollution a reasonable period for consultation in preparation of the EP.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with AMSA – Marine Pollution is appropriate and adapted to the nature of interests of AMSA – Marine Pollution:

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.
- In the absence of feedback, Woodside sent a follow-up consultation email on 7 May 2026, reminding AMSA – Marine Pollution of the opportunity to provide feedback. In addition, AMSA was consulted for the activity update on 23 August 2026.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- No additional measures were considered as a result of consultation as AMSA – Marine Pollution did not provide feedback for this EP.
- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.
- The measures and controls described in this EP address the potential impact from the proposed activity on AMSA – Marine Pollution 's functions, interests or activities.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

4.1.6 Australian Maritime Safety Authority (AMSA) – Navigation Safety

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed AMSA – Navigation Safety advising of the proposed activity (Record of Consultation, reference 6.1.10, provided a Consultation Information Sheet, Vessel Density Map, Shape Files and a link to NOPSEMA's brochure 'Consultation on offshore petroleum environment plans: Information for the community'.
- On 7 May 2026, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 15 May 2026, AMSA – Navigation Safety emailed Woodside (SI Report A, reference 4.1) and referenced point **(1)**.
- On 15 May 2026, Woodside thanked AMSA – Navigation Safety (SI Report A, reference 4.2) and responded to point **(1)**.
- On 25 May 2026, AMSA – Navigation Safety thanked Woodside for consulting it, provided vessel traffic chartlets (SI Report A, reference 4.3) and provided points **(2)** to **(7)**.
- Between 16 June 2026 and 27 July 2026, Woodside and AMSA – Navigation Safety exchanged emails to set up a meeting and discuss AMSA's new framework for notifications for all EPs (not specific to, but including, Okha LWI). (SI Report A, references 4.4 – 4.10, 4.12)
- On 23 July 2026, Woodside sent an Activity Update to AMSA - Navigation Safety based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.13). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP, vessel density map and GIS shape files were provided.
- On 27 July 2026, AMSA-Navigation Safety thanked Woodside for the activity update, noting no additional navigational safety comments (SI Report A, 4.11) and referred back to previously provided advice, points **(1)** to **(7).**
- On 31 July 2026, Woodside and AMSA Navigation Safety held an online meeting to discuss the notification framework (SI Report A, reference 4.13). AMSA provided further information on item **(6).**
- On 1 September 2026, Woodside thanked AMSA for feedback from 25 May and 27 July 2026 (SI Report A, reference 4.14) and responded to points **(2)** to **(7)**.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
(1) AMSA -Navigation Safety requested an extension of the feedback deadline.	**(1)** Woodside understands AMSA-Navigation Safety's request for additional time to review consultation materials.	**(1)** Woodside confirmed the requested extension to 25 May 2026.	**(1)** No changes or additional measures are required.
(2)	**(2)**	**(2)**	**(2)**

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Provided marine traffic overview based on AIS data noting that in titled areas, it's generally restricted to vessels engaged in offshore operations which include: • Tug operations in WA-3-L • Operations over LH3 well • Okha FPSO offtake operation • Added that there's a small frequency of cargo vessels transiting to north of WA-16-L and eastern side of WA-3-L. And that cargo vessels will remain within designated shipping route and clear from W-16-L and WA-9-L.	Woodside notes the advice on vessel traffic based on AIS data.	Woodside confirmed the advice based on AIS data that marine traffic in titled areas is generally restricted to vessels engaged in offshore operations.	As referenced as C 1.1 of the EP, vessels will comply with Marine Orders for safe vessel operations, specifically Marine Orders 21, 27 and 30. A 500 m temporary exclusion zone will be established around the light well intervention vehicle, as referenced as C 1.2 of the EP. A description of commercial shipping relevant to this activity is set out in Section 4.9.5 of the EP. No changes or additional measures are required.
(3) Provided advice on control measures noting in some cases, Woodside had provided information. This includes: Evaluating and implementing adequate anti-collision measures which may include: • Additional warnings and/or lights to attract attention • Installation of Automatic Identification Systems (AIS) units • Offshore guard vessels that can monitor traffic and alert vessels about activities in Operational Area	**(3)** Woodside acknowledges AMSA's advice and complies with International Rules for Preventing Collisions at Sea. As this EP relates to ongoing operations, Woodside does not propose to implement further anti-collision measures at this time.	**(3)** Woodside confirmed AIS system use and AMSA's advice. Woodside did not propose to implement further anti-collision measures but added it evaluated risk reduction and mitigation measures as part of routine EP development process, including vessel collision.	**(3)** Controls relating to anti-collision measures are set out in Section 6.6.1 of the EP. No changes or additional measures are required.
(4) Recommended AMSA's spatial data gateway and Spatial@AMSA portal for downloads of digital data sets and maps.	**(4)** Woodside notes the information available from AMSA's spatial data gateway and portal.	**(4)** Woodside noted that additional data was available from AMSA's spatial data gateway and portal.	**(4)** No changes or additional measures are required.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

(5) Asked that AHO be notified no less than four weeks before operations commence so AHO can distribute Notices to Mariners.	**(5)** Woodside understands request to notify AHO and has aligned with AHO on timing considerations.	**(5)** Woodside confirmed it has aligned with AHO on timing no less than four weeks prior to the first activity under the EP, and then subsequently when vessels are undertaking activities within the Operational Area for more than three weeks at a time.	**(5)** No changes or additional measures are required. Notification to AHO has been included in the EP as standard, as referenced as P.S. 1.3.1 and set out in Section 7.10.
(6) Requested that AMSA JRCC be notified 72-96 hours before operations commence for radio navigation warnings and provided information and vessel details to include. In a meeting on 31 July 2026, AMSA provided more information on its notification framework advised its framework was risk-based and considered on a case-by-case basis. It noted that that longer lead times for certain activities, including those with a higher risk of interaction, assisted with the promulgation of AUSCOAST warnings to mariners, which sometimes took time to disseminate amongst vessels . AMSA noted if Woodside could justify shorter lead times due to the nature of the activity, that was potentially acceptable (as AMSA assessment and response are based on the additional context).	**(6)** Woodside has reviewed vessels activities associated with the proposed activities and considers a 24-48 hour notification, when operationally practicable, is sufficient given the distance from marine fairways, the frequency of traffic, and the short duration of activities.	**(6)** Woodside proposed consideration of an at least 24-48 hour notification, where operationally practicable, to AMSA's JRCC based on the following: • None of AMSA's marine fairways intersect with the Operational Area and nearest fairway is 34 km away. • Low frequency of traffic overall outside boundaries of the titles • Short duration at each well location, (estimated as 14 to 35 days), well locations are low traffic areas, and we'll have notified AHO as previously stated.	**(6)** Notification to the JRCC before activities commence has been included in the EP as standard, as referenced as P.S. 1.5.1 and set out in Section 7.10. No changes or additional measures are required.
(7) Noted that during operations, vessels should exhibit appropriate lights and shapes to reflect nature of operations and comply with COLREGs and ensure vessel navigation is set correctly in	**(7)** Woodside understands AMSA's advice regarding the International Rules for Preventing Collisions at Sea	**(7)** Woodside confirmed Woodside chartered vessels are in compliance with COLREGS as well as with the Navigation Act 2012, including	**(7)** As referenced as C 1.1 of the EP, vessels will comply with Marine Orders for safe vessel operations, specifically Marine Orders 21, 27 and 30.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

ship's AIS unit. AMSA referenced Offshore oil and gas exploration | Australian Maritime Safety Authority	(COLREGs) and that its chartered vessels are compliant.	navigation status is set within vessel AIS system.	No changes or additional measures are required.
While feedback has been received, there were no objections or claims.	Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24.	Woodside engages in ongoing consultation throughout the life of an EP. Woodside notes that further feedback may be received as part of ongoing consultation. Should further feedback be received, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	No changes or additional measures are required.

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with AMSA – Navigation Safety for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically:

Sufficient Information

Woodside has given AMSA – Navigation Safety sufficient information to allow AMSA – Navigation Safety to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to AMSA – Navigation Safety on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.
  - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.
  - A timeframe for consultation and the provision of feedback.
  - A link to NOPSEMA's brochure 'Consultation on offshore petroleum environment plans: Information for the community'.
  - Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).
- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to AMSA-Navigation Safety. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.
- On 25 May 2026 and 27 July 2026, AMSA-Navigation Safety shared its feedback, claims or objections regarding this activity, indicating the information provided was sufficient to enable 25 May 2026 and 27 July 2026, to make an informed assessment of the possible consequences of the activity on its functions, interests or activities.

Reasonable Period

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Woodside allowed AMSA – Navigation Safety a reasonable period for consultation in the preparation of the EP because:

- A consultation period was stated in the initial correspondence and in the Activity Update to AMSA – Navigation Safety advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.
- Woodside's methodology allows a 30-day consultation period and Woodside allowed AMSA – Navigation Safety >37 days for consultation as it requested a one week extension and an additional 30 days for the Activity Update.
- Consultation for this EP commenced 6 months ago.
- In this context, Woodside allowed AMSA – Navigation Safety a reasonable period for consultation in preparation of the EP as evidenced by AMSA – Navigation Safety's response on 15 for an extension which was given and on 25 May 2026 and its responses on 25 May and 27 July 2026.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with AMSA – Navigation Safety is appropriate and adapted to the nature of interests of AMSA – Navigation Safety:

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.
- In the absence of feedback, Woodside sent a follow-up consultation email on 7 May 2026, reminding AMSA – Navigation Safety of the opportunity to provide feedback.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- AMSA – Navigation Safety provided feedback but no objections or claims in line with the intended outcome of consultation as set out in Section 5.2 and Regulations 24(b) and 34(g). Woodside has:
  - · Responded to feedback from AMSA – Navigation Safety.
  - Made no changes or inclusions to the EP as a result of consultation with AMSA – Navigation Safety because appropriate measures are already included in the EP.
- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

4.1.7 Department of Agriculture, Fisheries and Forestry (DAFF) – Fisheries

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed DAFF – Fisheries advising of the proposed activity (Record of Consultation, reference 6.1.11), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
- On 7 May 2026, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 23 July 2026, Woodside sent an Activity Update to DAFF - Fisheries based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.14). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP was provided.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
No feedback, objections or claims about the adverse impact of the activity received despite follow-up.		Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	As a standard practice, Woodside will provide start and end of activity notifications referenced as C 1.4 and set out in Section 7.10 of the EP. Woodside has assessed the potential for interaction with Commonwealth managed commercial fisheries in Section 4.9.2 of the EP. No changes or additional measures are required.

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with DAFF - Fisheries for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically:

Sufficient Information

Woodside has given DAFF - Fisheries sufficient information to allow DAFF - Fisheries to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to DAFF - Fisheries on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.
- A timeframe for consultation and the provision of feedback.
- A link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
- Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).

- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to DAFF - Fisheries. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.

Reasonable Period

Woodside allowed DAFF - Fisheries a reasonable period for consultation in the preparation of the EP because:

- A consultation period was stated in the initial correspondence and in the Activity Update to DAFF - Fisheries advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.
- Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period.
- Consultation for this EP commenced 6 months ago.
- In this context, Woodside allowed DAFF - Fisheries a reasonable period for consultation in preparation of the EP.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with DAFF - Fisheries is appropriate and adapted to the nature of interests of DAFF - Fisheries:

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.
- In the absence of feedback, Woodside sent a follow-up consultation email on 7 May 2026, reminding DAFF - Fisheries of the opportunity to provide feedback. In addition, DAFF - Fisheries received the activity update on 23 July 2026.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- No additional measures were considered as a result of consultation as DAFF - Fisheries did not provide feedback for this EP.
- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.
- The measures and controls described in this EP address the potential impact from the proposed activity on DAFF - Fisheries' functions, interests or activities.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

4.1.8 Department of Defence (DoD)

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed DoD advising of the proposed activity (Record of Consultation, reference 6.1.8), provided a Consultation Information Sheet, Defence Zones Map (Record of Consultation, reference 6.1.3) and a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community'*.
- On 7 May 2026, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 23 July 2026, Woodside sent an Activity Update to DoD based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.11). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP and Defence Zones maps (Record of Consultation, reference 6.3.3) were provided.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
No feedback, objections or claims about the adverse impact of the activity received despite follow-up.		Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	Woodside has recorded the defence areas overlapping the EMBA in Section 4.9.8 of the EP. No changes or additional measures are required.

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with DoD for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically:

Sufficient Information

Woodside has given DoD sufficient information to allow DoD to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to DoD on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.
  - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- A timeframe for consultation and the provision of feedback.
- A link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).

- In addition to the Consultation Information Sheet, Woodside provided DoD with information tailored to DoD by including a map of Defence zones in relation to the activity.
- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to DoD. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.

Reasonable Period

Woodside allowed DoD a reasonable period for consultation in the preparation of the EP because:

- A consultation period was stated in the initial correspondence and in the Activity Update to DoD advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.
- Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period.
- Consultation for this EP commenced 6 months ago.
- In this context, Woodside allowed DoD a reasonable period for consultation in preparation of the EP.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with DoD is appropriate and adapted to the nature of interests of DoD:

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.
- In the absence of feedback, Woodside sent a follow-up consultation email on 7 May 2026, reminding DoD of the opportunity to provide feedback. In addition, DoD received the activity update on 23 July 2026.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- No additional measures were considered as a result of consultation as DoD did not provide feedback for this EP.
- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.
- The measures and controls described in this EP address the potential impact from the proposed activity on DoD's functions, interests or activities.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

4.1.9 Department of Planning, Lands and Heritage (DPLH)

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed the DPLH advising of the proposed activity (Record of Consultation, reference 6.1.20), provided a Consultation Information Sheet, Shipwrecks map and a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
- On 7 May 2026, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 23 July 2026, Woodside sent an Activity Update to DPLH based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.23). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP and Shipwrecks map were provided.
- On 7 August 2026, DPLH thanked Woodside for the opportunity to provide updated comments (SI Report A, reference 29.1) and noted items **(1)** and **(2)**.
- On 11 August 2026, Woodside thanked DPLH for its response (SI Report A, reference 29.2) and responded to items **(1)** and **(2)**.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
(1) Given proposed program is in Commonwealth waters and petroleum title areas, DPLH had no comments from a Crown land assembly or tenure perspective.	**(1)** Woodside accepts that DPLH has no comments given location of activities.	**(1)** Woodside confirmed that DPLH had no comments given proposed activities are in Commonwealth waters and petroleum title areas.	**(1)** No changes or additional measures are required.
(2) Encouraged consultation with DWER as appropriate.	**(2)** Woodside considered DPLH's recommendation and consulted DWER during initial consultation. Based on feedback received from DWER regarding its functions and interests, further consultation with DWER was not considered necessary.	**(2)** Woodside noted that it had consulted DWER during the April consultation but DWER had responded that outside of events or activities which require an application, EPA services would not provide comments.	**(2)** No changes or additional measures are required.
While feedback has been received, there were no objections or claims.	Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24.	Woodside engages in ongoing consultation throughout the life of an EP. Woodside notes that further feedback may be received as part of ongoing consultation. Should further feedback be received, it will be assessed and, where	The EP demonstrates that there are no known underwater heritage sites or shipwrecks within the Operational Area and identifies that there are no credible impacts to the values of any underwater heritage or shipwrecks as a result of

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

		appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	planned activities (Sections 4.9.1 and 6.9 of the EP). While impacts to underwater heritage sites or shipwrecks are possible in the event of an unplanned hydrocarbon spill, Woodside considers it adopts appropriate controls to prevent a hydrocarbon spill and controls to respond in the highly unlikely event of a hydrocarbon spill, as demonstrated in Section 6.9 of the EP. No changes or additional measures are required.

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with DPLH for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically:

Sufficient Information

Woodside has given DPLH sufficient information to allow DPLH to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to DPLH on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.
  - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.
  - A timeframe for consultation and the provision of feedback.
  - A link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
  - Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).
- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to DPLH. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.

Reasonable Period

Woodside allowed DPLH a reasonable period for consultation in the preparation of the EP because:

- A consultation period was stated in the initial correspondence and in the Activity Update to DPLH advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period.
- Consultation for this EP commenced 6 months ago.
- In this context, Woodside allowed DPLH a reasonable period for consultation in preparation of the EP as DPLH provided feedback on 7 August 2026.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with DPLH is appropriate and adapted to the nature of interests of DPLH:

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.
- In the absence of feedback, Woodside sent a follow-up consultation email on 7 May 2026, reminding DPLH of the opportunity to provide feedback. DPLH provided feedback on 7 August, following the July activity update.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- No additional measures were considered as a result of consultation as DPLH did not provide feedback for this EP.
- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.
- The measures and controls described in this EP address the potential impact from the proposed activity on DPLH's functions, interests or activities.

4.1.10 Department of Primary Industries and Regional Development (DPIRD)

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed DPIRD advising of the proposed activity (Record of Consultation, reference 6.1.15), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 7 May 2026, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 23 July 2026, Woodside sent an Activity Update to DPIRD based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.15). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP was provided.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

No feedback, objections or claims about the adverse impact of the activity received despite follow-up.		Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	As a standard practice, Woodside will provide start and end of activity notifications referenced in Table 7-5, Section 7.10 of the EP. Woodside has assessed the potential for interaction with State managed fisheries issues in Section 4.9.2 of the EP. No changes or additional measures are required.

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with DPIRD for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically:

Sufficient Information

Woodside has given DPIRD sufficient information to allow DPIRD to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to DPIRD on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.
  - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.
  - A timeframe for consultation and the provision of feedback.
  - A link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
  - Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).
- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to DPIRD. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.

Reasonable Period

Woodside allowed DPIRD a reasonable period for consultation in the preparation of the EP because:

- A consultation period was stated in the initial correspondence and in the Activity Update to DPIRD advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.
- Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period. .

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- Consultation for this EP commenced 6 months ago.
- In this context, Woodside allowed DPIRD a reasonable period for consultation in preparation of the EP.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with DPIRD is appropriate and adapted to the nature of interests of DPIRD:

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.
- In the absence of feedback, Woodside sent a follow-up consultation email on 7 May 2026, reminding DPIRD of the opportunity to provide feedback. In addition, DPIRD received the activity update on 23 July 2026.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- No additional measures were considered as a result of consultation as DPIRD did not provide feedback for this EP.
- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.
- The measures and controls described in this EP address the potential impact from the proposed activity on DPIRD's functions, interests or activities.

4.1.11 Department of Transport and Major Infrastructure (DTMI)

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed DTMI advising of the proposed activity (Record of Consultation, reference 6.1.7, provided a Consultation Information Sheet, and a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
- On 7 May 2026, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 15 May 2026, DMTI thanked Woodside (SI Report A, reference 5.1) and confirmed point **(1)**.
- On 15 May 2026 Woodside thanked DTMI for response (SI Report A, references 5.2-5.3) and noted point **(1)**.
- On 23 July 2026, Woodside sent an Activity Update to DTMI based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.11). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP was provided.
- On 5 August 2026, DTMI thanked Woodside for keeping it informed and provided no feedback (SI Report A, reference 5.4) **(1).**
- On 6 August 2026, Woodside thanked DTMI for its review (SI Report A, reference 5.5) and confirmed **(1).**

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- On 4 September 2026, Woodside sent DTMI the Okha Light Well Intervention Oil Pollution First Strike Plan to review and/or provide comment along with the Consultation Information Sheet and a table related to recent engagement activities between DTMI and Woodside as requested in the *Offshore Petroleum Industry Guidance Note* (July 2020))(SI Report A, reference 5.6)

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
(1) DTMI confirmed it had no feedback at this time.	**(1)** Woodside accepts that DTMI has no feedback for the EP at this time.	**(1)** Woodside confirmed DTMI had no feedback at this time.	**(1)** No changes or additional measures are required.
While feedback has been received, there were no objections or claims.	Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24.	Woodside engages in ongoing consultation throughout the life of an EP. Woodside notes that further feedback may be received as part of ongoing consultation. Should further feedback be received, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	Woodside will consult DTMI if there is a spill impacting State waters from the proposed activity, as referenced in the Oil Pollution First Strike Plan (Appendix H). No changes or additional measures are required.

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with DTMI for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically:

Sufficient Information

Woodside has given DTMI sufficient information to allow DTMI to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to DTMI on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.
  - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- A timeframe for consultation and the provision of feedback.
- A link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
- Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).

- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to DTMI. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.

Reasonable Period

Woodside allowed DTMI a reasonable period for consultation in the preparation of the EP because:

- A consultation period was stated in the initial correspondence and in the Activity Update to DTMI advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.
- Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period.
- Consultation for this EP commenced 6 months ago.
- In this context, Woodside allowed DTMI a reasonable period for consultation in preparation of the EP as evidenced by DTMI's response on 15 May 2026 and on 5 August 2026.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with DTMI is appropriate and adapted to the nature of interests of DTMI:

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.
- In the absence of feedback, Woodside sent a follow-up consultation email on 7 May 2026, reminding DTMI of the opportunity to provide feedback to which DTMI responded on 15 May 2026. DTMI also responded to the 23 July 2026 activity update on 5 August 2026.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- DTMI provided feedback but no objections or claims in line with the intended outcome of consultation as set out in Section 5.2 and Regulations 24(b) and 34(g). Woodside has:
  - Responded to feedback from DTMI.
  - Made no changes or inclusions to the EP as a result of consultation with DTMI because appropriate measures are already included in the EP.
- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

4.1.12 Pilbara Ports

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed Pilbara Ports advising of the proposed activity (Record of Consultation, reference 6.1.7), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure 'Consultation on offshore petroleum environment plans: Information for the community'.
- On 7 May 2026, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 23 July 2026, Woodside sent an Activity Update to Pilbara Ports based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.31). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP and Ports map were provided.
- On 27 July 2026, Pilbara Ports noted it had completed its consultation (SI Report A, reference 28.1) and provided item **(1).**
- On 27 July 2026, Woodside thanked Pilbara Ports for its review of the Okha LWI EP update (SI Report A, reference 28.2) and confirmed item **(1).**
- On 3 August 2026, Woodside sent a second response and thanked Pilbara Ports for its review of the Okha LWI EP update (SI Report A, reference 28.3) and responded to **(1).**

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
(1) Pilbara Ports noted it had no comment on the Protect.	**(1)** Woodside understands Pilbara Ports has reviewed the consultation materials and has no comments.	**(1)** Woodside confirmed it understood Pilbara Ports had no comments for the EP's activity update.	**(1)** No changes or additional measures are required.
While feedback has been received, there were no objections or claims.	Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24.	Woodside engages in ongoing consultation throughout the life of an EP. Woodside notes that further feedback may be received as part of ongoing consultation. Should further feedback be received, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	No changes or additional measures are required.

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with Pilbara Ports for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically:

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Sufficient Information

Woodside has given Pilbara Ports sufficient information to allow Pilbara Ports to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to Pilbara Ports on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.
  - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.
  - A timeframe for consultation and the provision of feedback.
  - A link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
  - Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).
- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to Pilbara Ports along with a ports map. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.

Reasonable Period

Woodside allowed Pilbara Ports a reasonable period for consultation in the preparation of the EP because:

- A consultation period was stated in the initial correspondence and in the Activity Update to Pilbara Ports advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.
- Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period.
- Consultation for this EP commenced 6 months ago.
- In this context, Woodside allowed Pilbara Ports a reasonable period for consultation in preparation of the EP.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with Pilbara Ports is appropriate and adapted to the nature of interests of Pilbara Ports:

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside participated in the REAF festival and shared EP information with community on 15 May 2026.
- In the absence of feedback, Woodside sent a follow-up consultation email on 7 May 2026, reminding Pilbara Ports of the opportunity to provide feedback. In addition, Pilbara Ports received the activity update on 23 July 2026 which it responded to on 27 July 2026.

Outcomes of Consultation

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- No additional measures were considered as a result of consultation as Pilbara Ports did not provide feedback for this EP.
- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.
- The measures and controls described in this EP address the potential impact from the proposed activity on Pilbara Ports's functions, interests or activities.

4.1.13 Western Australian Museum (WAM)

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed WAM advising of the proposed activity (Record of Consultation, reference 6.1.19), provided a Consultation Information Sheet, Shipwrecks data (Record of Consultation, reference 6.1.5 and 6.3.5) and a link to NOPSEMA's brochure 'Consultation on offshore petroleum environment plans: Information for the community'.
- On 7 May 2026, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 23 July 2026, Woodside sent an Activity Update to WAM based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.23). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP and Shipwrecks map were provided.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
No feedback, objections or claims about the adverse impact of the activity received despite follow-up.		Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	The EP demonstrates that there are no known underwater heritage sites or shipwrecks within the Operational Area and identifies that there are no credible impacts to the values of any underwater heritage or shipwrecks as a result of planned activities (Sections 4.9.1 and 6.9 of the EP). While impacts to underwater heritage sites or shipwrecks are possible in the event of an unplanned hydrocarbon spill, Woodside considers it adopts appropriate controls to prevent a hydrocarbon spill and controls to

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

			respond in the highly unlikely event of a hydrocarbon spill, as demonstrated in Section 6.9 of the EP. As part of ongoing consultation engagements as set out in Section 7.10 of the EP, Woodside will notify WAM of any unexpected finds of potential Underwater Cultural Heritage under the Unexpected Finds Procedure (as described in Section 7.2.3 of the EP). No changes or additional measures are required.

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with WAM for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically:

Sufficient Information

Woodside has given WAM sufficient information to allow WAM to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to WAM on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.
  - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.
  - A timeframe for consultation and the provision of feedback.
  - A link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
  - Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).
- In addition to the Consultation Information Sheet, Woodside provided WAM with information tailored to WAM by including shipwrecks data in relation to the activity.
- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to WAM. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.

Reasonable Period

Woodside allowed WAM a reasonable period for consultation in the preparation of the EP because:

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- A consultation period was stated in the initial correspondence and in the Activity Update to WAM advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.
- Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period.
- Consultation for this EP commenced 6 months ago.
- In this context, Woodside allowed WAM a reasonable period for consultation in preparation of the EP.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with WAM is appropriate and adapted to the nature of interests of WAM:

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.
- In the absence of feedback, Woodside sent a follow-up consultation email on 7 May 2026, reminding WAM of the opportunity to provide feedback. In additional WAM received the activity update on 23 July 2026.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- No additional measures were considered as a result of consultation as WAM did not provide feedback for this EP.
- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.
- The measures and controls described in this EP address the potential impact from the proposed activity on WAM's functions, interests or activities.

4.2 Commonwealth and WA State Government departments or agencies – environment

4.2.1 Department of Agriculture, Fisheries and Forestry (DAFF) – Biosecurity (marine pests, vessels, aircraft and personnel)

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed the DAFF - Biosecurity advising of the proposed activity (Record of Consultation, reference 6.1.13), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 7 May 2026, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 23 July 2026, Woodside sent an Activity Update to DAFF - Biosecurity based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.17). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP was provided.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
No feedback, objections or claims about the adverse impact of the activity received despite follow-up.		Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	Vessels are required to comply with the Australian Biosecurity Act 2015, specifically the Australian Ballast Water Management Requirements (as defined under the Biosecurity Act 2015) (aligned with the International Convention for the Control and Management of Ships' Ballast Water and Sediments) to prevent introducing IMS. Vessels will be assessed and managed to prevent the introduction of invasive marine species in accordance with Woodside's Invasive Marine Species Management Plan (see Section 6.7.7 of the EP). No changes or additional measures are required.

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with DAFF - Biosecurity for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically:

Sufficient Information

Woodside has given DAFF - Biosecurity sufficient information to allow DAFF - Biosecurity to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to DAFF - Biosecurity on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.
  - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.
  - A timeframe for consultation and the provision of feedback.
  - A link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community'.*

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).

- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to DAFF-Biosecurity. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.

Reasonable Period

Woodside allowed DAFF - Biosecurity a reasonable period for consultation in the preparation of the EP because:

- A consultation period was stated in the initial correspondence and in the Activity Update to DAFF - Biosecurity advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.
- Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period.
- Consultation for this EP commenced 6 months ago.
- In this context, Woodside allowed DAFF - Biosecurity a reasonable period for consultation in preparation of the EP.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with DAFF - Biosecurity is appropriate and adapted to the nature of interests of DAFF-Biosecurity

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.
- In the absence of feedback, Woodside sent a follow-up consultation email on 7 May 2026, reminding DAFF - Biosecurity of the opportunity to provide feedback. In addition, DAFF - Biosecurity received the activity update on 23 July 2026.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- No additional measures were considered as a result of consultation as DAFF - Biosecurity did not provide feedback for this EP.
- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.
- The measures and controls described in this EP address the potential impact from the proposed activity on DAFF-Biosecurity's functions, interests or activities.

4.2.2 Department of Biodiversity, Conservation and Attractions (DBCA)

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed DBCA advising of the proposed activity (Record of Consultation, reference 6.1.25), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
- On 7 May 2026, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- On 14 May 2026, DBCA emailed Woodside (SI Report A, reference 6.1) and referred to points **(1)** to **(9)**
- On 8 June 2026, Woodside responded to DBCA (SI Report A, reference 6.2) and responded to points **(1)** to **(9).**
- On 23 July 2026, Woodside sent an Activity Update to DBCA based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.29). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP was provided.
- On 14 August, DBCA responded to Woodside it had reviewed documentation provided, previously provided comment on 14 May 2026 and Woodside responded (SI Report A, reference, 6.3) and reiterated points **(1)** to **(2)** and noted points **(10)** to **(12)**.
- On 1 September, Woodside thanked DBCA (SI Report A, reference 6.4) and responded to points **(1)** and **(2)** and **(10)** to **(12)**.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
(1) Noted there are a number of Biologically Important Areas (BIAs) for species, marine parks/management areas and island conservation reserves in the EMBA. Publicly available information should be considered when identifying potential impacts including DCCEEW's website, Dandjoo platform and DBCA's data set.	**(1)** Woodside acknowledges there are BIAs within the EMBA and that it considers DCCEEW's website and DBCA's land and waters data set as sources of information for the EP. The Dandjoo is not referenced in EP but any species identified in the PMST has their threatened status checked against the *WA Biodiversity Conservation Act 2016* which the Dandjoo platform also uses to maintain the threatened status of terrestrial species.	**(1)** Woodside confirmed it considers publicly available sources for identifying potential impacts including the DCCEEW's website and DBCA's land and waters data set. Woodside also confirmed it verifies the threatened status of species identified in the PMST against listings under the WA Biodiversity Conservation Act 2016, which is also used to inform the Dandjoo platform. A comprehensive list of BIAs, marine parks and conservation reserves within the EMBA and their proximity to the Operational Area will be included within the EP.	**(1)** A comprehensive list of BIAs within the EMBA and their proximity to the Operational Area are found in Section 4.6 of the EP. A comprehensive list of the marine parks and conservation reserves within the EMBA and their proximity to the Operational Area are found in Section 4.8 of the EP. No changes or additional measures are required.
(2) Given importance of areas potentially affected by a hydrocarbon release from proposed activities, DBCA considered it essential for baseline values and state of environment to be understood and documented prior to any activities commencing.	**(2)** Woodside understands importance of establishing baseline values and recognises its current approach to include baseline data sources, risk-based collection approach and assessment of information gaps.	**(2)** Woodside confirmed the EP included description of baseline environmental values of the Operational Area and EMBA. Woodside has established a Management of Knowledge process to ensure baseline environmental values and connections are reviewed and updated as needed. The EP also	**(2)** The description of the baseline environmental values of the Operational Area and EMBA are in Section 6.6 of the EP. While impacts to BIAs are possible in the event of a hydrocarbon spill, Woodside considers it adopts appropriate controls to prevent a hydrocarbon spill and controls to

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

DBCA would like Woodside to have appropriate baseline survey data on current states areas within EMBA that support important ecological values and may identify any current contamination present. This includes collection of appropriate baseline abundance and distribution data for benthic habitat and marine fauna species in the EMBA, with information on key habitats used by threatened and protected species. If baseline information is not available, Woodside should assess and identify suitable sources or methods to attain that information.		included a detail risk assessment of hydrocarbon spill scenarios to inform spill response scenarios.	respond in the highly unlikely event of a hydrocarbon spill, as demonstrated in Section 6.7 of the EP. No changes or additional measures are required.
(3) Suggested inclusion of potential impacts to values and BIAs to be highlighted within the consultation information sheet.	**(3)** Woodside acknowledges DBCA's interest in additional information on BIAs and will consider how this information is included in future consultation materials.	**(3)** Woodside noted that it is available to meet with DBCA to discuss the EP further, including how relevant BIAs and conservation values have been considered within the environmental impact and risk assessment process.	**(3)** No changes or additional measures are required.
(4) While DBCA monitors in marine parks and reserves and makes data available, it is not suitable to provide all baseline information required for oil spill risk assessment and management planning	**(4)** Woodside understands the scope and intent of DBCA's monitoring and reporting and understands need to acquire or generate fit-for-purpose baseline information to support its environmental management responsibilities.	**(4)** Woodside acknowledged the scope and intent of DBCA's monitoring efforts and noted that it remained committed to acquiring or generating fit-for-purpose baseline information to support its environmental management responsibilities.	**(4)** No changes or additional measures are required.
(5) DBCA encouraged Woodside to implement a before-after, control impact	**(5)** Woodside understands DBCA's guidance on importance of having	**(4)** Woodside confirmed that its OSM-BIP outlines the application of the BACI	**(5)** A description of existing environment that may be affected is provided in

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

(BACI) framework for planning and evaluation.	information to implement a BACI framework	framework noting the availability of baseline data or ability to timely collect it and how approach supports longer-term monitoring to track recovery and evaluate effectiveness of restoration.	Section 4 of the EP. Section 4.5 (habitats and biological communities) references baseline data collected within the Operational Area. Appendix C provides further details on the environmental baseline within the EMBA. Review of knowledge relevant to the existing environment is undertaken as described in Section 7.6 of the EP. No changes or additional measures are required.
(6) DBCA recommended the Commonwealth Department of Climate Change, Energy, the Environment and Water's *National Light Pollution Guidelines for Wildlife* as a best-practice industry standard for managing potential impacts of light pollution on marine fauna	**(6)** Woodside refers to the DCCEEW's *National Light Pollution Guidelines for Wildlife* when developing EPs.	**(6)** Woodside confirmed it refers to DCCEEW's *National Light Pollution Guidelines for Wildlife* during development of the EP.	**(6)** DCCEEW's *National Light Pollution Guidelines for Wildlife* is referenced in EP (see Sections 6.7.7 and 7.2.4) No changes or additional measures are required.
(7) Provided contact information in the event of a hydrocarbon release.	**(7)** Woodside understands DBCA's 'Incidents and Emergency Response' process and the inclusion of DBCA's Pilbara's contact information in Oil Pollution First Strike Plan	**(7)** Woodside confirmed the DBCA Pilbara phone number had been incorporated as part of the Oil Pollution First Strike Plan.	**(7)** DBCA's Pilbara phone number is incorporated into the Oil Pollution First Strike Plan for this EP (see Appendix H). No changes or additional measures are required.
(8) Noted DBCA will not implement an oiled wildlife management response on behalf of a petroleum operator and said Woodside should commit to monitoring	**(8)** Woodside accepts that DBCA would not implement an oiled wildlife management response unless mandated and notes that its response is covered in its Oil	**(8)** Woodside confirmed that DBCA would not implement an oiled wildlife management response on behalf of a petroleum operator and confirmed the EP will have its own strategies related to	**(8)** Woodside's Oiled Wildlife Response is included in the Oil Spill Preparedness and Response Mitigation Assessment for this EP (see Appendix G).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

and clean-up of any DBCA interests, in consultation with DBCA.	Spill Preparedness and Response Mitigation Assessment.	wildlife response, shoreline clean-up and operational and scientific monitoring within in the Oil Spill Preparedness and Response Mitigation Assessment.	No changes or additional measures are required.
(9) Referred Woodside to Department of Transport's web content on marine pollution and the Offshore Petroleum Industry Guidance Note of July 2020 titled *Marine Oil Pollution: Response and Consultation Arrangements*..	**(9)** Woodside refers to DMTI's marine pollution content in development of its response plans.	**(9)** Woodside noted DBCA's reference to DTMI's marine oil pollution content and confirmed use of the DTMI's Industry Guidance Note to inform the Oil Pollution First Strike Plan.	**(9)** Woodside refers to the specified marine oil pollution content and guidance note in its Oil Pollution First Strike Plan for this activity (see Appendix H).. No changes or additional measures are required.
(10) DBCA requested, where possible, that additional consideration be given to planning activities to avoid peak migration periods for conservation significant species.	**(10)** Woodside considered the variation of timing of the activity to avoid migration and foraging periods but will not include control given location, duration and nature of activity, along with other controls in place for risk reduction.	**(10)** Woodside confirmed that beyond the requirements of EPBC Regulations 25 Part 9 Division 8.1, it had adopted controls for risk reduction of interaction with marine fauna: • Vessels will not deliberately approach greater than 8 knots within 250 m of a whale shark and not allow the vessel to approach closer than 30 m of a whale shark. • Vessels will not travel faster than 6 knots within 300 m of a cetacean (caution zone) and not approach closer than 100 m from a whale. • Vessels will not approach closer than 50 m for a dolphin or 100 m for a whale (except animals bow riding). • If the cetacean shows signs of being disturbed, support vessels will immediately withdraw from the caution zone at a constant speed of less than 6 knots.	**(10)** Woodside refers to controls to reduce risk of interaction with marine fauna found in Section 6.7.6. Controls C.4.1-C.4.3. No changes or additional measures are required.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

		Woodside also noted it considered the variation of timing to avoid migration and foraging periods but will not include the control given other controls are in place.	
(11) Requested additional information related to monitoring or oil spill response preparedness, if available.	**(11)** Woodside considers it previously provided information related to monitoring and spill response preparedness.	**(11)** Woodside referred back to information provided on 8 June 2026 and asked DBCA to please provide any specific questions or feedback as needed.	**(11)** No changes or additional measures are required.
(12) Noted that access to reserves managed by DBCA under CALM Act or requiring the taking / disturbance of threatened fauna listed under the BC Act in State waters may require additional approvals.	**(12)** Woodside acknowledges DBCA's advice and notes that it is not applicable to this activity, which does not require access to marine parks or involve the taking or disturbance of threatened fauna.	**(12)** Woodside confirmed it understood that activities requiring access to reserve managed by DBCA or requiring taking/disturbance of threatened fauna may require additional approvals.	**(12)** No changes or additional measures are required.
While feedback has been received, there were no objections or claims.	Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24.	Woodside engages in ongoing consultation throughout the life of an EP. Woodside notes that further feedback may be received as part of ongoing consultation. Should further feedback be received, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	No changes or additional measures are required.

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with DBCA for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically:

Sufficient Information

Woodside has given DBCA sufficient information to allow DBCA to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to DBCA on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.
- A timeframe for consultation and the provision of feedback.
- A link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
- Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).

- On 14 May 2026 and 14 August 2026, DBCA shared its feedback, claims or objections regarding this activity, indicating the information provided was sufficient to enable DBCA to make an informed assessment of the possible consequences of the activity on its functions, interests or activities.
- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to DBCA. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.

Reasonable Period

Woodside allowed DBCA a reasonable period for consultation in the preparation of the EP because:

- A consultation period was stated in the initial correspondence and in the Activity Update to DBCA advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.
- Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period.
- Consultation for this EP commenced 6 months ago.
- In this context, Woodside allowed DBCA a reasonable period for consultation in preparation of the EP as evidenced by DBCA's response on 14 May 2026 and 14 August 2026.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with DBCA is appropriate and adapted to the nature of interests of DBCA:

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.
- In the absence of feedback, Woodside sent a follow-up consultation email on 7 May 2026, reminding DBCA of the opportunity to provide feedback which DBCA provided on 14 May 2026.In addition, DBCA received the activity update on 23 July 2026.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- DBCA provided feedback but no objections or claims in line with the intended outcome of consultation as set out in Section 5.2 and Regulations 24(b) and 34(g). Woodside has:
  - Responded to feedback from DBCA.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- Made no changes or inclusions to the EP as a result of consultation with DBCA because appropriate measures are already included in the EP.

- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.

4.2.3 Department of Climate Change, Energy, the Environment and Water (DCCEEW)

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed the DCCEEW advising of the proposed activity (Record of Consultation, reference 6.1.19), provided a Consultation Information Sheet, Shipwrecks data (Record of Consultation, reference 6.1.5 and 6.3.5) and a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
- On 7 May 2026, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 23 July 2026, Woodside sent an Activity Update to DCCEEW based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.23). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP and Shipwrecks map were provided.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
No feedback, objections or claims about the adverse impact of the activity received despite follow-up.		Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	The Environment Plan demonstrates that there are no known underwater heritage sites or shipwrecks within the Operational Area and identifies that there are no credible impacts to the values of any underwater heritage or shipwrecks as a result of planned activities (Sections 4.9.1 and 6.9 of the EP). While impacts to underwater heritage sites or shipwrecks are possible in the event of an unplanned hydrocarbon spill, Woodside considers it adopts appropriate controls to prevent a hydrocarbon spill and controls to respond in the highly unlikely event of a hydrocarbon spill, as demonstrated in Section 6.7 of the EP.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

			No changes or additional measures are required.

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with DCCEEW for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically:

Sufficient Information

Woodside has given DCCEEW sufficient information to allow DCCEEW to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to DCCEEW on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.
  - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.
  - A timeframe for consultation and the provision of feedback.
  - A link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
  - Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).
- In addition to the Consultation Information Sheet, Woodside provided DCCEEW with information tailored to DCCEEW by including Shipwrecks data in relation to the activity.
- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to DCCEEW. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.

Reasonable Period

Woodside allowed DCCEEW a reasonable period for consultation in the preparation of the EP because:

- A consultation period was stated in the initial correspondence and in the Activity Update to DCCEEW advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.
- Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period.
- Consultation for this EP commenced 6 months ago.
- In this context, Woodside allowed DCCEEW a reasonable period for consultation in preparation of the EP.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with DCCEEW is appropriate and adapted to the nature of interests of DCCEEW:

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.
- In the absence of feedback, Woodside sent a follow-up consultation email on 7 May 2026, reminding DCCEEW of the opportunity to provide feedback. In addition, DCCEEW received the activity update on 23 July 2026.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- No additional measures were considered as a result of consultation as DCCEEW did not provide feedback for this EP.
- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.
- The measures and controls described in this EP address the potential impact from the proposed activity on DCCEEW's functions, interests or activities.

4.2.4 Director of National Parks (DNP)

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed DNP advising of the proposed activity (Record of Consultation, reference 6.1.14), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 7 May 2026, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 11 May 2026 DNP thanked Woodside for the opportunity to comment (SI Report A, reference 7.1) and noted points **(1)** to **(3).**
  - Provided contact email for further questions.
- On 12 May 2026, Woodside thanked DNP for its feedback (SI Report A, reference 7.2) and responded to points **(1)** to **(3).**
  - Confirmed contact email for DNP.
- On 23 July 2026, Woodside sent an Activity Update to DNP based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.18). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP and GIS shape files were provided.
- On 3 August 2026, DNP thanked Woodside for the update on activities (SI Report A, reference 7.3) and confirmed **(1), (3)**.
- On 6 August 2026, Woodside thanks DNP for its review of the activity update (SI Report A, reference 7.4) and noted **(1), (3)**.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

(1) DNP confirmed there are no authorisation requirements given planned activities do not overlap any Australian Marine Parks.	**(1)** Woodside had not identified any overlap with AMPs prior to consultation and accepts DNP's confirmation.	**(1)** Woodside confirmed DNP's confirmation that given there is no activity overlap with AMPs, that no authorisation requirements are needed.	**(1)** No changes or additional measures are required.
(2) Noted *North-west Marine Parks Network Management Plan 2018* for information on parks and spatial information on marine parks' values is located on Australian Marine Spatial Information System.	**(2)** Woodside acknowledges DNP's advice and has considered the information provided in relation to marine park values during development of the EP.	**(2)** Woodside confirmed it had referred to the management plan during the development of the EP and noted the availability of spatial information.	**(2)** Woodside will ensure DNP is made aware of any incidences within a marine park for the activity, as per the commitment in the Oil Pollution First Strike Plan (Appendix H). No changes or additional measures are required.
(3) Confirmed no further notification is needed unless an activity change results in a new impact to a marine park or for emergency response.	**(3)** Woodside understands DNP does not require further notification unless in the event of new impact to marine park or for an emergency response.	**(3)** Woodside confirmed DNP does not require progress notifications but it will notify DNP in the event of a new impact to marine park or emergency response.	**(3)** Woodside will provide notification of significant change, as appropriate, to relevant persons as referenced in Table 7-5 of the EP. Woodside will ensure DNP is made aware of any incidences within a marine park for the activity, as per the commitment in the Oil Pollution First Strike Plan (Appendix H). No changes or additional measures are required.
While feedback has been received, there were no objections or claims.	Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24.	Woodside engages in ongoing consultation throughout the life of an EP. Woodside notes that further feedback may be received as part of ongoing consultation. Should further feedback be received, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	The EP demonstrates how Woodside will identify and manage all impacts and risks on Australian marine park values (including ecosystem values) to an ALARP and acceptable level and that the activity is not inconsistent with the management plan (see Section 6.6 of the EP).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

			No changes or additional measures are required.

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with DNP for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically:

Sufficient Information

Woodside has given DNP sufficient information to allow DNP to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to DNP on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.
  - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.
  - A timeframe for consultation and the provision of feedback.
  - A link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
  - Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).
- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to DNP. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.
- On 11 May 2026 and 3 August 2026, DNP shared its feedback, claims or objections regarding this activity, indicating the information provided was sufficient to enable DNP to make an informed assessment of the possible consequences of the activity on its functions, interests or activities.

Reasonable Period

Woodside allowed DNP a reasonable period for consultation in the preparation of the EP because:

- A consultation period was stated in the initial correspondence and in the Activity Update to DNP advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.
- Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period.
- Consultation for this EP commenced 6 months ago.
- In this context, Woodside allowed DNP a reasonable period for consultation in preparation of the EP as evidenced by DNP's response on 11 May 2026 and 3 August 2026.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with DNP is appropriate and adapted to the nature of interests of DNP:

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.
- In the absence of feedback, Woodside sent a follow-up consultation email on 7 May 2026, reminding DNP of the opportunity to provide feedback which DNP provided on 11 May 2026. DNP also provided feedback on 3 August 2026, following the 23 July activity update.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- DNP provided feedback but no objections or claims in line with the intended outcome of consultation as set out in Section 5.2 and Regulations 24(b) and 34(g). Woodside has:
  - Responded to feedback from DNP.
  - Made no changes or inclusions to the EP as a result of consultation with DNP because appropriate measures are already included in the EP.
- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.

4.2.5 Ningaloo Coast World Heritage Advisory Committee (NCWHAC)

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed the NCWHAC advising of the proposed activity (Record of Consultation, reference 6.1.7), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
- On 7 May 2026, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 23 July 2026, Woodside sent an Activity Update to NCWHAC based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.11). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP was provided.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
No feedback, objections or claims about the adverse impact of the activity received despite follow-up.		Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of	No changes or additional measures are required.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

		Change and Revision process (see Section 7.8.1 of the EP).	

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with NCWHAC for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically:

Sufficient Information

Woodside has given NCWHAC sufficient information to allow NCWHAC to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to NCWHAC on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.
  - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.
  - A timeframe for consultation and the provision of feedback.
  - A link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
  - Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).
- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to NCWHAC. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.

Reasonable Period

Woodside allowed NCWHAC a reasonable period for consultation in the preparation of the EP because:

- A consultation period was stated in the initial correspondence and in the Activity Update to NCWHAC advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.
- Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period.
- Consultation for this EP commenced 6 months ago.
- In this context, Woodside allowed NCWHAC a reasonable period for consultation in preparation of the EP.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with NCWHAC is appropriate and adapted to the nature of interests of NCWHAC:

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.
- In the absence of feedback, Woodside sent a follow-up consultation email on 7 May 2026, reminding NCWHAC of the opportunity to provide feedback. In addition, NCWHAC received the activity update on 23 July 2026.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- No additional measures were considered as a result of consultation as NCWHAC did not provide feedback for this EP.
- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.
- The measures and controls described in this EP address the potential impact from the proposed activity on NCWHAC's functions, interests or activities.

4.3 Commonwealth and WA State Government departments or agencies – industry

4.3.1 Department of Mines, Petroleum and Exploration (DMPE)

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed the DMPE advising of the proposed activity (Record of Consultation, reference 6.1.7), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community'*.
- On 7 May 2026, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 23 July 2026, Woodside sent an Activity Update to DMPE based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.11). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP was provided.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
No feedback, objections or claims about the adverse impact of the activity received despite follow-up.		Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	No changes or additional measures are required.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Summary Report – Consultation Complete
Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with DMPE for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically: **Sufficient Information** Woodside has given DMPE sufficient information to allow DMPE to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because: • The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to DMPE on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included: - The purpose of consultation and set out what was being sought through consultation. - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures. - A timeframe for consultation and the provision of feedback. - A link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'. - Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations). • A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to DMPE. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time. **Reasonable Period** Woodside allowed DMPE a reasonable period for consultation in the preparation of the EP because: • A consultation period was stated in the initial correspondence and in the Activity Update to DMPE advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission. • Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period. • Consultation for this EP commenced 6 months ago. • In this context, Woodside allowed DMPE a reasonable period for consultation in preparation of the EP. **Reasonable Opportunity** A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with DMPE is appropriate and adapted to the nature of interests of DMPE: • Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation. • Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- In the absence of feedback, Woodside sent a follow-up consultation email on 7 May 2026, reminding DMPE of the opportunity to provide feedback. In addition, DMPE received the activity update on 23 July 2026 for another opportunity to provide feedback.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- No additional measures were considered as a result of consultation as DMPE did not provide feedback for this EP.
- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.
- The measures and controls described in this EP address the potential impact from the proposed activity on DMPE's functions, interests or activities.

4.3.2 Department of Industry, Science and Resources (DISR)

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed the DISR advising of the proposed activity (Record of Consultation, reference 6.1.7), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure 'Consultation on offshore petroleum environment plans: Information for the community'.
- On 7 May 2026, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 23 July 2026, Woodside sent an Activity Update to DISR based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.11). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP was provided.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
No feedback, objections or claims about the adverse impact of the activity received despite follow-up.		Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	No changes or additional measures are required.
Summary Report – Consultation Complete			

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with DISR for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically:

Sufficient Information

Woodside has given DISR sufficient information to allow DISR to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to DISR on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.
  - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.
  - A timeframe for consultation and the provision of feedback.
  - A link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
  - Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).
- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to DISR. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.

Reasonable Period

Woodside allowed DISR a reasonable period for consultation in the preparation of the EP because:

- A consultation period was stated in the initial correspondence and in the Activity Update to DISR advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.
- Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period.
- Consultation for this EP commenced 6 months ago.
- In this context, Woodside allowed DISR a reasonable period for consultation in preparation of the EP.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with DISR is appropriate and adapted to the nature of interests of DISR:

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.
- In the absence of feedback, Woodside sent a follow-up consultation email on 7 May 2026, reminding DISR of the opportunity to provide feedback. In addition, DISR received the 23 July 2026 activity update for another opportunity to provide feedback.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- No additional measures were considered as a result of consultation as DISR did not provide feedback for this EP.
- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.
- The measures and controls described in this EP address the potential impact from the proposed activity on DISR's functions, interests or activities.

4.4 Commonwealth commercial fisheries and peak representative bodies

4.4.1 Commonwealth Fishery Association (CFA)

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed the CFA advising of the proposed activity (Record of Consultation, reference 6.1.11), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
- On 7 May 2026, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 23 July 2026, Woodside sent an Activity Update to CFA based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.15). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP was provided.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
No feedback, objections or claims about the adverse impact of the activity received despite follow-up.		Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	As a standard practice, Woodside will provide start and end of activity notifications referenced as C 1.4 and set out in Section 7.10 of the EP. Woodside has assessed the potential for interaction with Commonwealth managed commercial fisheries in Section 4.9.2 of the EP. No changes or additional measures are required.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Summary Report – Consultation Complete
Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with CFA for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically: **Sufficient Information** Woodside has given CFA sufficient information to allow CFA to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because: • The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to CFA on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included: - The purpose of consultation and set out what was being sought through consultation. - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures. - A timeframe for consultation and the provision of feedback. - A link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'. - Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations). • A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to CFA. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time. **Reasonable Period** Woodside allowed CFA a reasonable period for consultation in the preparation of the EP because: • A consultation period was stated in the initial correspondence and in the Activity Update to CFA advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission. • Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period. • Consultation for this EP commenced 6 months ago. • In this context, Woodside allowed CFA a reasonable period for consultation in preparation of the EP. **Reasonable Opportunity** A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with CFA is appropriate and adapted to the nature of interests of CFA: • Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation. • Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- In the absence of feedback, Woodside sent a follow-up consultation email on 7 May 2026, reminding CFA of the opportunity to provide feedback. In addition, CFA received the 23 July 2026 activity update for another opportunity to provide feedback.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- No additional measures were considered as a result of consultation as CFA did not provide feedback for this EP.
- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.
- The measures and controls described in this EP address the potential impact from the proposed activity on CFA's functions, interests or activities.

4.4.2 Tuna Australia

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed Tuna Australia advising of the proposed activity (Record of Consultation, reference 6.1.11), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
- On 20 April 2026, Tuna Australia emailed Woodside, (SI Report A, reference 8.1) Tuna Australia noted points **(1)** and **(2)**:
- Between 11 and 13 May 2026, Woodside and Tuna Australia exchanged emails regarding a potential services agreement. Emails were not specific to this EP but noting for reference. (SI Report A, references 8.2-8.3).
- On 18 May 2026, Woodside thanked Tuna Australia for its feedback (SI Report A, reference 8.4) and responded to points **(1)** and **(2).**
- On 23 July 2026, Woodside sent an Activity Update to Tuna Australia based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.15). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP was provided.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
(1) Tuna Australia said it could reach out to relevant stakeholders with Statutory Fishing Rights (SFR) in WA's Commonwealth water and: • Provided its services agreement and industry position statement.	**(1)** Woodside has directly consulted individual Commonwealth fishery licence holders it has assessed as relevant for this EP.	**(1)** Woodside referenced correspondence from 11-13 May 2026 to address this point raised, noting contractual services are outside of the EP.	**(1)** No changes or additional measures are required.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

• Confirmed its contractual services are always available.			
(2) Suggested in lieu of working with Tuna Australia, Woodside should contact all SFR holders in Eastern/Western Tuna Billfish Fishery.	**(2)** Woodside consults Commonwealth fisheries assessed as having potential for interaction with the proposed activity in the Operational Area or EMBA. Consistent with this approach, Woodside has directly consulted Western Tuna and Billfish Fishery for this EP.	**(2)** Woodside confirmed it had consulted with Western Tuna and Billfish Fishery.	**(2)** No changes or additional measures are required. Woodside's assessment of relevant Commercial fisheries is set out in Appendix F, Table 1. Consultation records available in Appendix F references: 4.4.1, 6.1.12 and 6.2.1.
While feedback has been received, there were no objections or claims.	Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24.	Woodside engages in ongoing consultation throughout the life of an EP. Woodside notes that further feedback may be received as part of ongoing consultation. Should further feedback be received, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	As a standard practice, Woodside will provide start and end of activity notifications referenced as C 1.4 and set out in Section 7.10 of the EP. Woodside has assessed the potential for interaction with Commonwealth managed commercial fisheries in Section 4.9.2 of the EP. No changes or additional measures are required.

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with Tuna Australia for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically:

Sufficient Information

Woodside has given Tuna Australia sufficient information to allow Tuna Australia to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to Tuna Australia on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.
  - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- A timeframe for consultation and the provision of feedback.
- A link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
- Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).

- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to Tuna Australia. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.

Reasonable Period

Woodside allowed Tuna Australia a reasonable period for consultation in the preparation of the EP because:

- A consultation period was stated in the initial correspondence and in the Activity Update to Tuna Australia advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.
- Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period.
- Consultation for this EP commenced 6 months ago.
- In this context, Woodside allowed Tuna Australia a reasonable period for consultation in preparation of the EP as evidenced by Tuna Australia's response on 20 April 2026.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with Tuna Australia is appropriate and adapted to the nature of interests of Tuna Australia:

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- Tuna Australia provided feedback but no objections or claims in line with the intended outcome of consultation as set out in Section 5.2 and Regulations 24(b) and 34(g). Woodside has:
  - · Responded to feedback from Tuna Australia.
  - Made no changes or inclusions to the EP as a result of consultation with Tuna Australia because appropriate measures are already included in the EP.
- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.

4.4.3 North West Slope Trawl Fishery and Western Deepwater Trawl Fishery

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed North West Slope Trawl Fishery and Western Deepwater Trawl Fishery licence holders (licence holders) advising of the proposed activity (Record of Consultation, reference 6.1.12), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
- On 7 May 2026, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 23 July 2026, Woodside sent an Activity Update to North West Slope Trawl Fishery and Western Deepwater Trawl Fishery licence holders based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.16). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP was provided.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
No feedback, objections or claims about the adverse impact of the activity received despite follow-up.		Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	As a standard practice, Woodside will provide start and end of activity notifications referenced as C 1.4 and set out in Section 7.10 of the EP. Woodside has assessed the potential for interaction with Commonwealth managed commercial fisheries in Section 4.9.2 of the EP. No changes or additional measures are required.

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with licence holders for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically:

Sufficient Information

Woodside has given licence holders sufficient information to allow licence holders to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to licence holders on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.
- A timeframe for consultation and the provision of feedback.
- A link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
- Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).

- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to licence holders The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.

Reasonable Period

Woodside allowed licence holders a reasonable period for consultation in the preparation of the EP because:

- A consultation period was stated in the initial correspondence and in the Activity Update to licence holders advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.
- Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period.
- Consultation for this EP commenced 6 months ago.
- In this context, Woodside allowed licence holders a reasonable period for consultation in preparation of the EP.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with licence holders is appropriate and adapted to the nature of interests of licence holders:

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.
- In the absence of feedback, Woodside sent a follow-up consultation email on 7 May 2026, reminding licence holders of the opportunity to provide feedback. In addition, licence holders received the 23 July 2026 activity update for another opportunity to provide feedback.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- No additional measures were considered as a result of consultation as licence holders did not provide feedback for this EP.
- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.
- The measures and controls described in this EP address the potential impact from the proposed activity on licence holders' functions, interests or activities.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

4.4.4 Western Tuna And Billfish Fishery

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed Western Tuna and Billfish Fishery licence holders advising of the proposed activity (Record of Consultation, reference 6.1.12), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure 'Consultation on offshore petroleum environment plans: Information for the community'.
- On 16 April 2026, an individual licence holder responded to consultation (SI Report A, reference 11.1) and raised point **(1)**.
- On 16 April 2026, Woodside thanked the licence holder for their response (SI Report 11.2) and responded to point **(1).**
- On 7 May 2026, Woodside proactively sent a follow-up email to licence holders from whom no response had been received (Record of Consultation, reference 6.2.1).
- On 23 July 2026, Woodside sent an Activity Update to Western Tuna and Billfish Fishery licence holders based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.16). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP was provided.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
(1) Individual licence holder requested to be removed from Woodside's mailing list.	**(1)** Woodside accepts that participation in the consultation process is voluntary.	**(1)** Woodside confirmed it had removed the licence holder from its mailing list.	**(1)** No changes or additional measures are required.
While feedback has been received, there were no objections or claims.	Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24.	Woodside engages in ongoing consultation throughout the life of an EP. Woodside notes that further feedback may be received as part of ongoing consultation. Should further feedback be received, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	As a standard practice, Woodside will provide start and end of activity notifications referenced as C 1.4 and set out in Section 7.10 of the EP. Woodside has assessed the potential for interaction with Commonwealth managed commercial fisheries in Section 4.9.2 of the EP. No changes or additional measures are required.

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with Western Tuna and Billfish Fishery licence holders for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically:

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Sufficient Information

Woodside has given Western Tuna and Billfish Fishery licence holders sufficient information to allow Western Tuna and Billfish Fishery licence holders to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to Western Tuna and Billfish Fishery licence holders on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.
  - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.
  - A timeframe for consultation and the provision of feedback.
  - A link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
  - Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).
- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to Western Tuna and Billfish Fishery licence holders. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.

Reasonable Period

Woodside allowed Western Tuna and Billfish Fishery licence holders a reasonable period for consultation in the preparation of the EP because:

- A consultation period was stated in the initial correspondence and in the Activity Update to Western Tuna and Billfish Fishery licence holders advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.
- Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period.
- Consultation for this EP commenced 6 months ago.
- In this context, Woodside allowed Western Tuna and Billfish Fishery licence holders a reasonable period for consultation in preparation of the EP as evidenced by one licence holder's response on 16 April 2026.In addition, all licence holders received the 23 July 2026 activity update for another opportunity to provide feedback.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with Western Tuna and Billfish Fishery licence holders is appropriate and adapted to the nature of interests of Western Tuna and Billfish Fishery licence holders :

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.
- In the absence of feedback from other licence holders, Woodside sent a follow-up consultation email on 7 May 2026, reminding Western Tuna and Billfish Fishery licence holders of the opportunity to provide feedback.

Outcomes of Consultation

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- An individual Western Tuna and Billfish Fishery licence holder provided feedback but no objections or claims in line with the intended outcome of consultation as set out in Section 5.2 and Regulations 24(b) and 34(g). Woodside has:
  - · Responded to feedback from the individual Western Tuna and Billfish Fishery licence holder .
  - Made no changes or inclusions to the EP as a result of consultation with Western Tuna and Billfish Fishery licence holders because appropriate measures are already included in the EP.
- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.

4.4.5 Australian Southern Bluefin Tuna Industry Assocation (ASBTIA)

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed the ASBTIA advising of the proposed activity (Record of Consultation, reference 6.1.12), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
- On 7 May 2026, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 23 July 2026, Woodside sent an Activity Update to ASBTIA based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.16). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP was provided.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
No feedback, objections or claims about the adverse impact of the activity received despite follow-up.		Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	As a standard practice, Woodside will provide start and end of activity notifications referenced as C 1.4 and set out in Section 7.10 of the EP. Woodside has assessed the potential for interaction with Commonwealth managed commercial fisheries in Section 4.9.2 of the EP. No changes or additional measures are required.
Summary Report – Consultation Complete			

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with ASBTIA for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically:

Sufficient Information

Woodside has given ASBTIA sufficient information to allow ASBTIA to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to ASBTIA on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.
  - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.
  - A timeframe for consultation and the provision of feedback.
  - A link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
  - Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).
- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to ASBTIA. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.

Reasonable Period

Woodside allowed ASBTIA a reasonable period for consultation in the preparation of the EP because:

- A consultation period was stated in the initial correspondence and in the Activity Update to ASBTIA advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.
- Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period.
- Consultation for this EP commenced 6 months ago.
- In this context, Woodside allowed ASBTIA a reasonable period for consultation in preparation of the EP.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with ASBTIA is appropriate and adapted to the nature of interests of ASBTIA:

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.
- In the absence of feedback, Woodside sent a follow-up consultation email on 7 May 2026, reminding ASBTIA of the opportunity to provide feedback. In addition, ASBTIA received the 23 July 2026 activity update for another opportunity to provide feedback.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- No additional measures were considered as a result of consultation as ASBTIA did not provide feedback for this EP.
- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.
- The measures and controls described in this EP address the potential impact from the proposed activity on ASBTIA's functions, interests or activities.

4.5 State commercial fisheries and peak representative bodies

4.5.1 Aquaculture Council of Western Australia (ACWA)

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed ACWA advising of the proposed activity (Record of Consultation, reference 6.1.26), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure 'Consultation on offshore petroleum environment plans: Information for the community'.
- On 7 May 2026, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 23 July 2026, Woodside sent an Activity Update to ACWA based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.30). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP was provided.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
No feedback, objections or claims about the adverse impact of the activity received despite follow-up.		Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	Woodside has assessed the potential for interaction with State managed commercial fisheries in Section 4.9.2 of the EP. No changes or additional measures are required.
Summary Report – Consultation Complete			

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with ACWA for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically:

Sufficient Information

Woodside has given ACWA sufficient information to allow ACWA to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to ACWA on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.
  - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.
  - A timeframe for consultation and the provision of feedback.
  - A link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
  - Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).
- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to ACWA. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.

Reasonable Period

Woodside allowed ACWA a reasonable period for consultation in the preparation of the EP because:

- A consultation period was stated in the initial correspondence and in the Activity Update to ACWA advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.
- Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period.
- Consultation for this EP commenced 6 months ago.
- In this context, Woodside allowed ACWA a reasonable period for consultation in preparation of the EP.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with ACWA is appropriate and adapted to the nature of interests of ACWA:

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.
- In the absence of feedback, Woodside sent a follow-up consultation email on 7 May 2026, reminding ACWA of the opportunity to provide feedback. ACWA also received the activity update on 23 July 2026, which provided an addition opportunity to share feedback.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- No additional measures were considered as a result of consultation as ACWA did not provide feedback for this EP.
- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.
- The measures and controls described in this EP address the potential impact from the proposed activity on ACWA's functions, interests or activities.

4.5.2 Western Australian Fishing Industry Council (WAFIC)

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed WAFIC advising of the proposed activity and asked WAFIC to send to Mackerel Managed Fishery (Area 2), Pilbara Trawl Managed Fishery, Pilbara Trap Managed Fishery and Pilbara Line Fishery on behalf of Woodside (SI Report A, reference 10.1). A Consultation Information Sheet, and a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*' was provided.
- On 22 April 2026, WAFIC emailed Woodside to confirm it sent the CK4 and LH3 EP consultation material to the fishery licence holders. (SI Report A, reference 10.2)
- On 3 June 2026, Woodside emailed WAFIC to follow-up on feedback from it or state fishery licence holders. (SI Report A, reference 10.3)
- On 4 June 2026, WAFIC emailed Woodside (SI Report A, reference 10.4) and confirmed point **(1).**
- On 5 June 2026, Woodside thanked WAFIC for its response (SI Report A, reference, 10.5) and confirmed point **(1)**.
- On 23 July 2026, Woodside sent an Activity Update to WAFIC based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (SI Report A, reference 10.6). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP was provided.
- On 7 August 2026, Woodside sought confirmation from WAFIC that the fishery licence holders had received the activity update and offered an extension to consultation period if needed. (SI Report A, reference 10.7)
- On 11 August 2026, WAFIC confirmed the information had been sent to fishery licence holders (SI Report A, reference 10.8) and provided copy of email. (Record of Consultation, reference 6.3.27)
- On 12 August 2026, Woodside thanked WAFIC for the confirmation and email (SI Report A, reference 10.9).

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
(1)	**(1)**	**(1)**	**(1)**

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

WAFIC confirmed no comments or industry feedback were received for the activity.	Woodside understands there is no feedback or comments for the EP.	Woodside thanked WAFIC for confirming there were no comments or feedback from the industry.	No changes or additional measures are required.
While feedback has been received, there were no objections or claims.	Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24.	Woodside engages in ongoing consultation throughout the life of an EP. Woodside notes that further feedback may be received as part of ongoing consultation. Should further feedback be received, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of this EP).	Woodside has assessed the potential for interaction with State-managed fisheries in Section 4.9.2 of the EP. No changes or additional measures are required.

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with WAFIC for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically:

Sufficient Information

Woodside has given WAFIC sufficient information to allow WAFIC to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to WAFIC on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.
  - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.
  - A timeframe for consultation and the provision of feedback.
  - A link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
  - Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).
- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to WAFIC. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.
- On 4 June 2026 and 11 August 2026, WAFIC shared its feedback, claims or objections regarding this activity, indicating the information provided was sufficient to enable WAFIC and relevant state fisheries to make an informed assessment of the possible consequences of the activity on its functions, interests or activities.

Reasonable Period

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Woodside allowed WAFIC a reasonable period for consultation in the preparation of the EP because:

- A consultation period was stated in the initial correspondence and in the Activity Update to WAFIC advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.
- Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period.
- Consultation for this EP commenced 6 months ago.
- In this context, Woodside allowed WAFIC a reasonable period for consultation in preparation of the EP as evidenced by WAFIC's response on 4 June 2026 and 11 August 2026..

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with WAFIC is appropriate and adapted to the nature of interests of WAFIC:

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- WAFIC provided feedback but no objections or claims in line with the intended outcome of consultation as set out in Section 5.2 and Regulations 24(b) and 34(g). Woodside has:
  - Responded to feedback from WAFIC.
  - Made no changes or inclusions to the EP as a result of consultation with WAFIC because appropriate measures are already included in the EP.
- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.

4.5.3 Mackerel Managed Fishery, Pilbara Line Fishery, Pilbara Trap Fishery and Pilbara Trawl Fishery

Summary of information provided and record of consultation for this EP:

- On 17 April 2026, WAFIC, on behalf of Woodside, emailed the Mackerel Managed Fishery, Pilbara Line Fishery, Pilbara Trap Fishery and Pilbara Trawl Fishery (State Fishery licence holders) advising of the proposed activity (Record of Consultation, reference 6.1.24), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure 'Consultation on offshore petroleum environment plans: Information for the com*munity'*.
- On 3 June 2026, Woodside emailed WAFIC to follow-up on feedback from state fishery licence holders. (SI Report A, reference 10.3)
- On 4 June 2026, WAFIC confirmed no comments or feedback were received regarding the CK4 and LH3 EP. (SI Report A, reference 10.4)
- On 5 June 2026, Woodside thanked WAFIC for its response and confirmed no comments or industry feedback were received for the EP. (SI Report A, reference, 10.5)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- On 23 July 2026, WAFIC, on behalf of Woodside, sent an Activity Update to State Fishery licence holders based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.28). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP was provided.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
No feedback, objections or claims about the adverse impact of the activity received despite follow-up.		Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	Woodside has assessed the potential for interaction with State managed commercial fisheries in Section 4.9.2 of the EP. No changes or additional measures are required.

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with State Fishery licence holders for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically:

Sufficient Information

Woodside has given State Fishery licence holders sufficient information to allow State Fishery licence holders to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. WAFIC, on behalf of Woodside gave this information to State Fishery licence holders on 17 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.
  - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.
  - A timeframe for consultation and the provision of feedback.
  - A link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
  - Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).
- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and WAFIC on behalf of Woodside sent the information to State Fishery licence holders. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Reasonable Period

Woodside allowed State Fishery licence holders a reasonable period for consultation in the preparation of the EP because:

- A consultation period was stated in the initial correspondence and in the Activity Update to State Fishery licence holders advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.
- Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period.
- Consultation for this EP commenced 6 months ago.
- In this context, Woodside allowed State Fishery licence holders a reasonable period for consultation in preparation of the EP.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with State Fishery licence holders is appropriate and adapted to the nature of interests of State Fishery licence holders:

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside participated in community events and shared EP information with Karratha community.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- No additional measures were considered as a result of consultation as State Fishery licence holders did not provide feedback for this EP.
- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.
- The measures and controls described in this EP address the potential impact from the proposed activity on State Fishery licence holders' functions, interests or activities.

4.6 Recreational marine users and peak representative bodies

4.6.1 Gascoyne Recreational Marine Users and Pilbara/Kimberley Recreational Marine Users

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed or mailed the Gascoyne Recreational Marine Users and Pilbara/Kimberley Recreational Marine Users (Recreational Marine Users) advising of the proposed activity (Record of Consultation, references 6.1.16 and 6.1.17), provided a Consultation Information Sheet, and a link or QR code to access NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
- On 7 May 2026, as no response had been received, Woodside proactively sent a follow-up email or letter (Record of Consultation, reference 6.2.1 and 6.3.4).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- On 23 July 2026, Woodside sent an Activity Update via email or letter to Recreational Marine Users based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, references 6.3.20 and 6.3.21). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP was provided.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
No feedback, objections or claims about the adverse impact of the activity received despite follow-up.		Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	No changes or additional measures are required.

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with Recreational Marine Users for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically:

Sufficient Information

Woodside has given Recreational Marine Users sufficient information to allow Recreational Marine Users to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside emailed or mailed this information to Recreational Marine Users on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.
  - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.
  - A timeframe for consultation and the provision of feedback.
  - A link or QR code to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
  - Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).
- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to Recreational Marine Users. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Reasonable Period

Woodside allowed Recreational Marine Users a reasonable period for consultation in the preparation of the EP because:

- A consultation period was stated in the initial correspondence and in the Activity Update to Recreational Marine Users advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.
- Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period.
- Consultation for this EP commenced 6 months ago.
- In this context, Woodside allowed Recreational Marine Users a reasonable period for consultation in preparation of the EP.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with Recreational Marine Users is appropriate and adapted to the nature of interests of Recreational Marine Users:

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.
- In the absence of feedback, Woodside sent a follow-up consultation email or letter on 7 May 2026, reminding Recreational Marine Users of the opportunity to provide feedback.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- No additional measures were considered as a result of consultation as Recreational Marine Users did not provide feedback for this EP.
- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.
- The measures and controls described in this EP address the potential impact from the proposed activity on Recreational Marine Users' functions, interests or activities.

4.6.2 Marine Tourism WA

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed Marine Tourism WA advising of the proposed activity (Record of Consultation, reference 6.1.7), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
- On 7 May 2026, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 23 July 2026, Woodside sent an Activity Update to Marine Tourism WA based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.11). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP was provided.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
No feedback, objections or claims about the adverse impact of the activity received despite follow-up.		Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	No changes or additional measures are required.

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with Marine Tourism WA for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically:

Sufficient Information

Woodside has given Marine Tourism WA sufficient information to allow Marine Tourism WA to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to Marine Tourism WA on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.
  - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.
  - A timeframe for consultation and the provision of feedback.
  - A link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
  - Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).
- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to Marine Tourism WA. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.

Reasonable Period

Woodside allowed Marine Tourism WA a reasonable period for consultation in the preparation of the EP because:

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- A consultation period was stated in the initial correspondence and in the Activity Update to Marine Tourism WA advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.
- Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period.
- Consultation for this EP commenced 6 months ago.
- In this context, Woodside allowed Marine Tourism WA a reasonable period for consultation in preparation of the EP.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with Marine Tourism WA is appropriate and adapted to the nature of interests of Marine Tourism WA:

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.
- In the absence of feedback, Woodside sent a follow-up consultation email on 7 May 2026, reminding Marine Tourism WA of the opportunity to provide feedback. In addition, Marine Tourism WA received the 23 July activity update which provided another opportunity to share feedback.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- No additional measures were considered as a result of consultation as Marine Tourism WA did not provide feedback for this EP.
- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.
- The measures and controls described in this EP address the potential impact from the proposed activity on Marine Tourism WA's functions, interests or activities.

4.6.3 Recfishwest

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed Recfishwest advising of the proposed activity (Record of Consultation, reference 6.1.7), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
- On 7 May 2026, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 19 May 2026, Recfishwest thanked Woodside, recapped key points of the planned activities (SI Report A, reference 27.1) and referenced points **(1)** and **(2).**
- On 20 May 2026, Woodside thanked Recfishwest, (SI Report A, reference 27.2) and confirmed points **(1)** and **(2)**.
- On 23 July 2026, Woodside sent an Activity Update to Recfishwest based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.11). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP was provided.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- On 28 August 2026, Recfishwest thanked Woodside for the update (SI Report A, reference 18.3) and confirmed no additional comments beyond those provided on 19 May 2026 which referred to points **(1)** and **(2).**
- On 31 August 2026, Woodside thanked Recfishwest for its review (SI Report A, reference 18.4) and confirmed A**ppendix F inclusion of** points **(1)** and **(2)**.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
(1) Recfishwest noted no concerns with the activities.	**(1)** Woodside understands Recfishwest has no concerns with the planned activities.	**(1)** Woodside noted Recfishwest had no concerns.	**(1)** No changes or additional measures are required.
(2) Given area is accessed by charter industry and recreational fishers, Recfishwest requests to be kept informed as Protect progresses/	**(2)** Woodside recognises the area is accessed by charter industry and recreational fishers and has consulted with associated groups as well, and will include Recfishwest in relevant activity notifications associated with this EP.	**(2)** Woodside confirmed understanding that area is accessed by charter industry and recreational fishers and that Woodside will provide activity notifications to Recfishwest.	**(2)** Woodside will provide notifications to Recfishwest as referenced as C 1.4 and set out in Section 7.10 of the EP. No changes or additional measures are required.
While feedback has been received, there were no objections or claims.	Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24.	Woodside engages in ongoing consultation throughout the life of an EP. Woodside notes that further feedback may be received as part of ongoing consultation. Should further feedback be received, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	No changes or additional measures are required.

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with Recfishwest for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically:

Sufficient Information

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Woodside has given Recfishwest sufficient information to allow Recfishwest to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to Recfishwest on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.
  - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.
  - A timeframe for consultation and the provision of feedback.
  - A link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
  - Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).
- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to Recfishwest. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.

Reasonable Period

Woodside allowed Recfishwest a reasonable period for consultation in the preparation of the EP because:

- A consultation period was stated in the initial correspondence and in the Activity Update to Recfishwest advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.
- Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period.
- Consultation for this EP commenced 6 months ago.
- In this context, Woodside allowed Recfishwest a reasonable period for consultation in preparation of the EP as evidenced by Recfishwest's response on 19 May 2026.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with Recfishwest is appropriate and adapted to the nature of interests of Recfishwest:

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.
- In the absence of feedback, Woodside sent a follow-up consultation email on 7 May 2026, reminding Recfishwest of the opportunity to provide feedback, which it delivered on 19 May 2026.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- Recfishwest provided feedback but no objections or claims in line with the intended outcome of consultation as set out in Section 5.2 and Regulations 24(b) and 34(g). Woodside has:
  - · Responded to feedback from Recfishwest.
  - Made no changes or inclusions to the EP as a result of consultation with Recfishwest because appropriate measures are already included in the EP.
- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.

4.6.4 WA Game Fishing Association

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed the WA Game Fishing Association advising of the proposed activity (Record of Consultation, reference 6.1.7), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
- On 7 May 2026, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 23 July 2026, Woodside sent an Activity Update to WA Game Fishing Association based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.11). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP was provided.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
No feedback, objections or claims about the adverse impact of the activity received despite follow-up.		Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	No changes or additional measures are required.

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with WA Game Fishing Association for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically:

Sufficient Information

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Woodside has given WA Game Fishing Association sufficient information to allow WA Game Fishing Association to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to WA Game Fishing Association on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.
  - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.
  - A timeframe for consultation and the provision of feedback.
  - A link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
  - Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).
- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to WA Game Fishing Association The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.

Reasonable Period

Woodside allowed WA Game Fishing Association a reasonable period for consultation in the preparation of the EP because:

- A consultation period was stated in the initial correspondence and in the Activity Update to WA Game Fishing Association advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.
- Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period.
- Consultation for this EP commenced 6 months ago.
- In this context, Woodside allowed WA Game Fishing Association a reasonable period for consultation in preparation of the EP.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with WA Game Fishing Association is appropriate and adapted to the nature of interests of WA Game Fishing Association:

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.
- In the absence of feedback, Woodside sent a follow-up consultation email on 7 May 2026, reminding WA Game Fishing Association of the opportunity to provide feedback. In addition, WA Game Fishing Association received the 23 July 2026 activity update for another opportunity to provide feedback.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- No additional measures were considered as a result of consultation as WA Game Fishing Association did not provide feedback for this EP.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.
- The measures and controls described in this EP address the potential impact from the proposed activity on WA Game Fishing Association's functions, interests or activities.

4.7 Titleholders and operators

4.7.1 Beagle No. 1, Carbon CQ, Carnarvon Energy Ltd, Exxon Mobil, Finder Energy, INPEX, JX Nippon, KATO Energy (WA), Kuwait Foreign Petroleum Exploration Company (KUFPEC), Kyushu Electric Wheatstone, Longreach Capital Investments, OMV Australia, OPIC Australia Pty Limited, PE Wheatstone, Pelsart Resources N.L., Shell, SK Earthon, Skye Resources Pty Ltd, Tanami Energy, Western Gas

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed Beagle No. 1, Carbon CQ, Carnarvon Energy Ltd, Exxon Mobil, Finder Energy, INPEX, JX Nippon, KATO Energy (WA), Kuwait Foreign Petroleum Exploration Company (KUFPEC), Kyushu Electric Wheatstone, Longreach Capital Investments, OMV Australia, OPIC Australia Pty Limited, PE Wheatstone, Pelsart Resources N.L., Shell, SK Earthon, Skye Resources Pty Ltd, Tanami Energy, Western Gas (titleholders and operators) advising of the proposed activity (Record of Consultation, reference 6.1.7), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure 'Consultation on offshore petroleum environment plans: Information for the community'.
- On 7 May 2026, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 23 July 2026, Woodside sent an Activity Update to titleholders and operators based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.11). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP was provided.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
No feedback, objections or claims about the adverse impact of the activity received despite follow-up.		Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	No changes or additional measures are required.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with titleholders and operators for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically:

Sufficient Information

Woodside has given titleholders and operators sufficient information to allow titleholders and operators to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to titleholders and operators on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.
  - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.
  - A timeframe for consultation and the provision of feedback.
  - A link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
  - Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).
- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to titleholders and operators. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.

Reasonable Period

Woodside allowed titleholders and operators a reasonable period for consultation in the preparation of the EP because:

- A consultation period was stated in the initial correspondence and in the Activity Update to titleholders and operators advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.
- Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period.
- Consultation for this EP commenced 6 months ago.
- In this context, Woodside allowed titleholders and operators a reasonable period for consultation in preparation of the EP.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with titleholders and operators is appropriate and adapted to the nature of interests of titleholders and operators:

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- In the absence of feedback, Woodside sent a follow-up consultation email on 7 May 2026, reminding titleholders and operators of the opportunity to provide feedback. In addition, titleholders and operators received the 23 July 2026 activity update which provided another opportunity to provide feedback.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- No additional measures were considered as a result of consultation as titleholders and operators did not provide feedback for this EP.
- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.
- The measures and controls described in this EP address the potential impact from the proposed activity on titleholders and operators' functions, interests or activities.

4.7.2 BP Australia

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed BP Australia advising of the proposed activity (Record of Consultation, reference 6.1.7), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
- On 29 April 2026, BP Australia thanked Woodside for information (SI Report A, reference 11.1) and noted point **(1).**
- On 30 April 2026, Woodside thanked BP Australia (SI Report A – reference 11.2) and responded to point **(1).**
- On 23 July 2026, Woodside sent an Activity Update to BP Australia based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.11). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP was provided.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
(1) BP Australia confirmed no objections or feedback as it considered that Woodside-identified impacts and risks would be managed under proposed measures.	**(1)** Woodside has identified impacts and risks of the activity will manage these under proposed management measures, and understands BP Australia has no objections or feedback because of this.	**(1)** Woodside confirmed that BP Australia had no objections or feedback on the EP.	**(1)** No changes or additional measures are required.
While feedback has been received, there were no objections or claims.	Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which	Woodside engages in ongoing consultation throughout the life of an EP. Woodside notes that further feedback may be received as part of ongoing	No changes or additional measures are required.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

	the EP relates, as required under Regulation 24.	consultation. Should further feedback be received, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with BP Australia for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically:

Sufficient Information

Woodside has given BP Australia sufficient information to allow BP Australia to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to BP Australia on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.
  - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.
  - A timeframe for consultation and the provision of feedback.
  - A link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
  - Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).
- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to BP Australia. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.

Reasonable Period

Woodside allowed BP Australia a reasonable period for consultation in the preparation of the EP because:

- A consultation period was stated in the initial correspondence and in the Activity Update to BP Australia advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.
- Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period.
- Consultation for this EP commenced 6 months ago.
- In this context, Woodside allowed BP Australia a reasonable period for consultation in preparation of the EP as evidenced by BP Australia's response on 29 April 2026.

Reasonable Opportunity

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with BP Australia is appropriate and adapted to the nature of interests of BP Australia:

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- BP Australia provided feedback but no objections or claims in line with the intended outcome of consultation as set out in Section 5.2 and Regulations 24(b) and 34(g). Woodside has:
  - Responded to feedback from BP Australia.
  - Made no changes or inclusions to the EP as a result of consultation with BP Australia because appropriate measures are already included in the EP.
- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.

4.7.3 Chevron Australia

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed Chevron Australia advising of the proposed activity (Record of Consultation, reference 6.1.22), provided a Consultation Information Sheet, GIS shapefiles and a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community'*.
- On 7 May 2026, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1)
- On 15 May 2026, Chevron Australia thanked Woodside for information (SI Report A, reference 25.1) and noted point **(1)**.
- On 15 May 2026, Woodside thanked Chevron Australia (SI Report A – reference 25.2) and responded to point **(1)**.
- On 23 July 2026, Woodside sent an Activity Update to Chevron Australia based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.26). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP was provided.
- On 13 August 2026, Chevron thanked Woodside for its consideration (SI Report A, reference 25.3) and confirmed point **(1)**
- On 14 August 2026, Woodside thanked Chevron for its response (SI Report A, reference 25.4) and noted point **(1)**.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

(1) Chevron Australia confirmed no concerns or feedback on proposed activities.	**(1)** Woodside understands Chevron Australia has no concerns or feedback.	**(1)** Woodside confirmed that Chevron Australia does not have concerns or feedback on the proposed activities.	**(1)** No changes or additional measures are required.
While feedback has been received, there were no objections or claims.	Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24.	Woodside engages in ongoing consultation throughout the life of an EP. Woodside notes that further feedback may be received as part of ongoing consultation. Should further feedback be received, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	No changes or additional measures are required.

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with Chevron Australia for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically:

Sufficient Information

Woodside has given Chevron Australia sufficient information to allow Chevron Australia to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to Chevron Australia on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.
  - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.
  - A timeframe for consultation and the provision of feedback.
  - A link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
  - Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).
- Chevron also received GIS shapefiles in addition to the Consultation Information Sheet.
- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to Chevron. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.

Reasonable Period

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Woodside allowed Chevron Australia a reasonable period for consultation in the preparation of the EP because:

- A consultation period was stated in the initial correspondence and in the Activity Update to Chevron Australia advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.
- Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period.
- Consultation for this EP commenced 6 months ago.
- In this context, Woodside allowed Chevron Australia a reasonable period for consultation in preparation of the EP as evidenced by Chevron Australia's response on 15 May 2026.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with Chevron Australia is appropriate and adapted to the nature of interests of Chevron Australia:

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- Chevron Australia provided feedback but no objections or claims in line with the intended outcome of consultation as set out in Section 5.2 and Regulations 24(b) and 34(g). Woodside has:
  - Responded to feedback from Chevron Australia.
  - Made no changes or inclusions to the EP as a result of consultation with Chevron Australia because appropriate measures are already included in the EP.
- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.

4.7.4 InCapture

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed InCapture advising of the proposed activity (Record of Consultation, reference 6.1.7), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community'*.
- On 16 April 2026, InCapture emailed Woodside and thanked Woodside for consultation information (SI Report A, reference 12.1) and noted point **(1)**.
- On 17 April 2026, Woodside responded to InCapture, thanked it for review of materials (SI Report A, reference 12.2) and responded to point **(1).**
- On 23 July 2026, Woodside sent an Activity Update to InCapture based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.11). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP was provided.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- On 23 July 2026, InCapture thanked Woodside for the activity update (SI Report A, reference 12.3) and noted point (1).
- On 24 July, 2026, Woodside thanked InCapture for review of the activity update (SI Report A, reference 12.4) and confirmed point (1).

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
(1) InCapture confirmed it had no objections to the activities.	**(1)** Woodside understands that InCapture has no objections to the planned activities.	**(1)** Woodside confirmed that InCapture had no objections to the planned activities.	**(1)** No changes or additional measures are required.
While feedback has been received, there were no objections or claims.	Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24.	Woodside engages in ongoing consultation throughout the life of an EP. Woodside notes that further feedback may be received as part of ongoing consultation. Should further feedback be received, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	No changes or additional measures are required.

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with InCapture for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically:

Sufficient Information

Woodside has given InCapture sufficient information to allow InCapture to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to InCapture on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.
  - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.
  - A timeframe for consultation and the provision of feedback.
  - A link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community'*.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).

- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to InCapture. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.
- On 16 April 2026 and 23 July 2026, InCapture shared its feedback, claims or objections regarding this activity, indicating the information provided was sufficient to enable InCapture to make an informed assessment of the possible consequences of the activity on its functions, interests or activities.

Reasonable Period

Woodside allowed InCapture a reasonable period for consultation in the preparation of the EP because:

- A consultation period was stated in the initial correspondence and in the Activity Update to InCapture advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.
- Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period.
- Consultation for this EP commenced 6 months ago.
- In this context, Woodside allowed InCapture a reasonable period for consultation in preparation of the EP as evidenced by InCapture's response on 16 April 2026 and on 23 July 2026.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with InCapture is appropriate and adapted to the nature of interests of InCapture:

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- InCapture provided feedback but no objections or claims in line with the intended outcome of consultation as set out in Section 5.2 and Regulations 24(b) and 34(g). Woodside has:
  - Responded to feedback from InCapture.
  - Made no changes or inclusions to the EP as a result of consultation with InCapture because appropriate measures are already included in the EP.
- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

4.7.5 KUFPEC

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed KUFPEC advising of the proposed activity (Record of Consultation, reference 6.1.7), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
- On 7 May 2026, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 8 May 2026, KUFPEC emailed Woodside (SI Report A, reference 19.1) and stated point **(1)**.
- On 8 May 2026, Woodside responded to KUFPEC (SI Report A, reference 19.2) and responded to point **(1).**
- On 23 July 2026, Woodside sent an Activity Update to KUFPEC based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.11). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP was provided.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
(1) KUFPEC confirmed it had no objections to the proposed activities.	**(1)** Woodside understands KUFPEC has no feedback for the proposed activities.	**(1)** Woodside confirmed that KUFPEC had no objections to the planned activities.	**(1)** No changes or additional measures are required.
While feedback has been received, there were no objections or claims.	Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24.	Woodside engages in ongoing consultation throughout the life of an EP. Woodside notes that further feedback may be received as part of ongoing consultation. Should further feedback be received, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	No changes or additional measures are required.
Summary Report – Consultation Complete			
Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with KUFPEC for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically: **Sufficient Information**			

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Woodside has given KUFPEC sufficient information to allow KUFPEC to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to KUFPEC on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.
  - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.
  - A timeframe for consultation and the provision of feedback.
  - A link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
  - Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).
- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to KUFPEC. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.
- On 8 May 2026, KUFPEC shared its feedback, claims or objections regarding this activity, indicating the information provided was sufficient to enable KUFPEC to make an informed assessment of the possible consequences of the activity on its functions, interests or activities.

Reasonable Period

Woodside allowed KUFPEC a reasonable period for consultation in the preparation of the EP because:

- A consultation period was stated in the initial correspondence and in the Activity Update to KUFPEC advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.
- Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period.
- Consultation for this EP commenced 6 months ago.
- In this context, Woodside allowed KUFPEC a reasonable period for consultation in preparation of the EP as evidenced by KUFPEC's response on 8 May 2026.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with KUFPEC is appropriate and adapted to the nature of interests of KUFPEC:

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.
- In the absence of feedback, Woodside sent a follow-up consultation email on 7 May 2026, reminding KUFPEC of the opportunity to provide feedback, which it provided on 8 May 2026.

Outcomes of Consultation

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- KUFPEC provided feedback but no objections or claims in line with the intended outcome of consultation as set out in Section 5.2 and Regulations 24(b) and 34(g). Woodside has:
  - Responded to feedback from KUFPEC.
  - Made no changes or inclusions to the EP as a result of consultation with KUFPEC because appropriate measures are already included in the EP.
- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.

4.7.6 Santos

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed Santos advising of the proposed activity (Record of Consultation, reference 6.1.7), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
- On 20 April 2026 Woodside emailed Santos to check on contact information of the JV Titleholder (SI Report A, reference 14.1).
- On1 May 2026, Santos emailed Woodside (SI Report A, reference 14.2) and confirmed point **(1).**
- On 4 May 2026 Woodside responded to Santos (SI Report A, reference 14.3) and noted point **(1).**
- On 23 July 2026, Woodside sent an Activity Update to Santos based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP was provided. (Record of Consultation, reference 6.3.11.
- On 10 August 2026, Santos thanked Woodside for the update (SI Report A, reference 14.4) and confirmed **(1).**
- On 11 August 2026, Woodside thanked Santos for its response (SI Report A, reference 14.5) and noted **(1)**.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
(1) Confirmed it had no objections or claims on the planned activities.	**(1)** Woodside understands Santos has no objections or claims on the EP's planned activities.	**(1)** Woodside thanked Santos for confirming it had no objections or claims on the planned activities.	**(1)** No changes or additional measures are required.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

While feedback has been received, there were no objections or claims.	Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24.	Woodside engages in ongoing consultation throughout the life of an EP. Woodside notes that further feedback may be received as part of ongoing consultation. Should further feedback be received, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	No changes or additional measures are required.

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with Santos for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically:

Sufficient Information

Woodside has given Santos sufficient information to allow Santos to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to Santos on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.
  - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.
  - A timeframe for consultation and the provision of feedback.
  - A link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community'*.
  - Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).
- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to Santos. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.
- On 1 May 2026and 10 August 2026, Santos shared its feedback, claims or objections regarding this activity, indicating the information provided was sufficient to enable Santos to make an informed assessment of the possible consequences of the activity on its functions, interests or activities.
-

Reasonable Period

Woodside allowed Santos a reasonable period for consultation in the preparation of the EP because:

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- A consultation period was stated in the initial correspondence and in the Activity Update to Santos advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.
- Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period.
- Consultation for this EP commenced 6 months ago.
- In this context, Woodside allowed Santos a reasonable period for consultation in preparation of the EP as evidenced by Santos' responses on 1 May 2026 and 10 August 2026.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with Santos is appropriate and adapted to the nature of interests of Santos.

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- Santos provided feedback but no objections or claims in line with the intended outcome of consultation as set out in Section 5.2 and Regulations 24(b) and 34(g). Woodside has:
  - Responded to feedback from Santos.
  - Made no changes or inclusions to the EP as a result of consultation with Santos because appropriate measures are already included in the EP.
- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.

4.8 Peak industry representative bodies

4.8.1 Australian Energy Producers (AEP)

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed AEP advising of the proposed activity (Record of Consultation, reference 6.1.7, provided a Consultation Information Sheet, and a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
- On 7 May 2026, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 23 July 2026, Woodside sent an Activity Update to AEP based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.11). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP was provided.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
No feedback, objections or claims about the adverse impact of the activity received despite follow-up.		Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	No changes or additional measures are required.

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with AEP for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically:

Sufficient Information

Woodside has given AEP sufficient information to allow AEP to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to AEP on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.
  - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.
  - A timeframe for consultation and the provision of feedback.
  - A link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
  - Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).
- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to AEP. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.

Reasonable Period

Woodside allowed AEP a reasonable period for consultation in the preparation of the EP because:

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- A consultation period was stated in the initial correspondence and in the Activity Update to AEP advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.
- Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period.
- Consultation for this EP commenced 6 months ago.
- In this context, Woodside allowed AEP a reasonable period for consultation in preparation of the EP.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with AEP is appropriate and adapted to the nature of interests of AEP:

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.
- In the absence of feedback, Woodside sent a follow-up consultation email on 7 May 2026, reminding AEP of the opportunity to provide feedback.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- No additional measures were considered as a result of consultation as AEP did not provide feedback for this EP.
- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.
- The measures and controls described in this EP address the potential impact from the proposed activity on AEP's functions, interests or activities.

4.9 Local government and elected parliamentary representatives, community groups or organisations

4.9.1 Broome Chamber of Commerce and Industry (Broome CCI)

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed the Broome CCI advising of the proposed activity (Record of Consultation, reference 6.1.7), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
- On 7 May 2026, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 23 July 2026, Woodside sent an Activity Update to Broome CCI based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.11). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP was provided.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
No feedback, objections or claims about the adverse impact of the activity received despite follow-up.		Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	No changes or additional measures are required.

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with Broome CCI for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically:

Sufficient Information

Woodside has given Broome CCI sufficient information to allow Broome CCI to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to Broome CCI on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.
  - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.
  - A timeframe for consultation and the provision of feedback.
  - A link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
  - Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).
- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to Broome CCI. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.

Reasonable Period

Woodside allowed Broome CCI a reasonable period for consultation in the preparation of the EP because:

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- A consultation period was stated in the initial correspondence and in the Activity Update to Broome CCI advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.
- Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period.
- Consultation for this EP commenced 6 months ago.
- In this context, Woodside allowed Broome CCI a reasonable period for consultation in preparation of the EP.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with Broome CCI is appropriate and adapted to the nature of interests of Broome CCI:

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.
- In the absence of feedback, Woodside sent a follow-up consultation email on 7 May 2026, reminding Broome CCI of the opportunity to provide feedback.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- No additional measures were considered as a result of consultation as Broome CCI did not provide feedback for this EP.
- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.
- The measures and controls described in this EP address the potential impact from the proposed activity on Broome CCI's functions, interests or activities.

4.9.2 Shire of Broome

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed the Shire of Broome advising of the proposed activity (Record of Consultation, reference 6.1.7), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
- On 7 May 2026, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 23 July 2026, Woodside sent an Activity Update to Shire of Broome based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.11). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP was provided.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim	Woodside's Statement of Response	Inclusion in Environment Plan

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

	about the adverse impact of the activity		
No feedback, objections or claims about the adverse impact of the activity received despite follow-up.		Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	No changes or additional measures are required.

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with Shire of Broome for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically:

Sufficient Information

Woodside has given Shire of Broome sufficient information to allow Shire of Broome to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to Shire of Broome on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.
  - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.
  - A timeframe for consultation and the provision of feedback.
  - A link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
  - Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).
- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to Shire of Broom. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.

Reasonable Period

Woodside allowed Shire of Broome a reasonable period for consultation in the preparation of the EP because:

- A consultation period was stated in the initial correspondence and in the Activity Update to Shire of Broome advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.
- Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- Consultation for this EP commenced 6 months ago.
- In this context, Woodside allowed Shire of Broome a reasonable period for consultation in preparation of the EP.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with Shire of Broome is appropriate and adapted to the nature of interests of Shire of Broome :

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.
- In the absence of feedback, Woodside sent a follow-up consultation email on 7 May 2026, reminding Shire of Broome of the opportunity to provide feedback.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- No additional measures were considered as a result of consultation as Shire of Broome did not provide feedback for this EP.
- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.
- The measures and controls described in this EP address the potential impact from the proposed activity on Shire of Broome's functions, interests or activities.

4.9.3 Exmouth Chamber of Commerce and Industry (CCI)

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed the Exmouth CCI advising of the proposed activity (Record of Consultation, reference 6.1.7), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure 'Consultation on offshore petroleum environment plans: Information for the community'.
- On 7 May 2026, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 23 July 2026, Woodside sent an Activity Update to Exmouth CCI based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.11). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP was provided.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
No feedback, objections or claims about the adverse impact of the activity received despite follow-up.		Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the	No changes or additional measures are required.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

		EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with Exmouth CCI for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically:

Sufficient Information

Woodside has given Exmouth CCI sufficient information to allow Exmouth CCI to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to Exmouth CCI on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.
  - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.
  - A timeframe for consultation and the provision of feedback.
  - A link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
  - Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).
- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to Exmouth CCI. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.

Reasonable Period

Woodside allowed Exmouth CCI a reasonable period for consultation in the preparation of the EP because:

- A consultation period was stated in the initial correspondence and in the Activity Update to Exmouth CCI advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.
- Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period.
- Consultation for this EP commenced 6 months ago.
- In this context, Woodside allowed Exmouth CCI a reasonable period for consultation in preparation of the EP.

Reasonable Opportunity

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with Exmouth CCI is appropriate and adapted to the nature of interests of Exmouth CCI:

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.
- In the absence of feedback, Woodside sent a follow-up consultation email on 7 May 2026, reminding Exmouth CCI of the opportunity to provide feedback.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- No additional measures were considered as a result of consultation as Exmouth CCI did not provide feedback for this EP.
- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.
- The measures and controls described in this EP address the potential impact from the proposed activity on Exmouth CCI's functions, interests or activities.

4.9.4 Shire of Exmouth

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed the Shire of Exmouth advising of the proposed activity (Record of Consultation, reference 6.1.7), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
- On 7 May 2026, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 23 July 2026, Woodside sent an Activity Update to Shire of Exmouth based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.11). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP was provided.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
No feedback, objections or claims about the adverse impact of the activity received despite follow-up.		Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of	No changes or additional measures are required.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

		Change and Revision process (see Section 7.8.1 of the EP).	

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with Shire of Exmouth for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically:

Sufficient Information

Woodside has given Shire of Exmouth sufficient information to allow Shire of Exmouth to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to Shire of Exmouth on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.
  - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.
  - A timeframe for consultation and the provision of feedback.
  - A link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
  - Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).
- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to Shire of Exmouth. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.

Reasonable Period

Woodside allowed Shire of Exmouth a reasonable period for consultation in the preparation of the EP because:

- A consultation period was stated in the initial correspondence and in the Activity Update to Shire of Exmouth advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.
- Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period.
- Consultation for this EP commenced 6 months ago.
- In this context, Woodside allowed Shire of Exmouth a reasonable period for consultation in preparation of the EP.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with Shire of Exmouth is appropriate and adapted to the nature of interests of Shire of Exmouth:

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.
- In the absence of feedback, Woodside sent a follow-up consultation email on 7 May 2026, reminding Shire of Exmouth of the opportunity to provide feedback.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- No additional measures were considered as a result of consultation as Shire of Exmouth did not provide feedback for this EP.
- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.
- The measures and controls described in this EP address the potential impact from the proposed activity on Shire of Exmouth's functions, interests or activities.

4.9.5 Exmouth Community Liaison Group (Exmouth CLG)

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed the Exmouth CLG advising of the proposed activity (Record of Consultation, reference 6.1.7), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
- On 7 May 2026, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 7 May 2026, Woodside presented to the Exmouth CLG on EP consultation requirements and Woodside activities, including activities for this EP (SI Report A, reference 20.1)
- Woodside presented slides on how it consults relevant persons in the course of preparing EPs and provided information on relevant persons and EMBAs and an overview of the CK4 and LH3 EP.
- The slides included a QR code and a URL for the Consultation Activities page of the Woodside website.
- 6 CLG members attended the meeting representing:
    - Shire of Exmouth
    - Gascoyne Development Commission
    - Exmouth Chamber of Commerce and Industry
    - Exmouth Volunteer Marine and Rescue
    - Exmouth Freight and Logistics
    - Terrafirma Offshore
- No feedback was provided for this EP.
- On 10 July 2026, Woodside's presentation was emailed to the CLG members, regardless of their attendance at the meeting.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- On 23 July 2026, Woodside sent an Activity Update to Exmouth CLG based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.11). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP was provided.

Summary of Feedback, Objection or Claim	Assessment of Merits of Feedback, Objection or Claim	Woodside's Response	Inclusion in Environment Plan
No feedback, objections or claims received despite follow-up.		Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	No changes or additional measures are required.

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with Exmouth CLG members for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically:

Sufficient Information

Woodside has given Exmouth CLG members sufficient information to allow Exmouth CLG members to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to Exmouth CLG members on 9 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.
  - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.
  - A timeframe for consultation and the provision of feedback.
  - A link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
  - Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).
- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to Exmouth CLG. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.

Reasonable Period

Woodside allowed Exmouth CLG members a reasonable period for consultation in the preparation of the EP because:

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- A consultation period was stated in the initial correspondence and in the Activity Update to Exmouth CLG members advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.
- Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period.
- Consultation for this EP commenced 6 months ago.
- In this context, Woodside allowed Exmouth CLG members a reasonable period for consultation in preparation of the EP.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with Exmouth CLG members is appropriate and adapted to the nature of interests of Exmouth CLG members:

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.
  - On 7 May 2026, Woodside hosted the Exmouth CLG Meeting.
  - In the absence of feedback, Woodside sent a follow-up consultation email on 7 May 2026, reminding Exmouth CLG members of the opportunity to provide feedback.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- No additional measures were considered as a result of consultation as Exmouth CLG members did not provide feedback for this EP.
- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.
- The measures and controls described in this EP address the potential impact from the proposed activity on Exmouth CLG's functions, interests or activities.

4.9.6 Karratha & Districts Chamber of Commerce and Industry (CCI)

4.9.7 Karratha Community Liaison Group (Karratha CLG)

Summary of information provided and record of consultation for this EP:

- On 1 April 2026, Woodside presented to the Karratha CLG on EP consultation requirements and Woodside activities, including activities for this EP (SI Report A, reference 20.1).
  - Woodside presented slides on how it consults relevant persons in the course of preparing EPs and provided information on relevant persons and EMBAs and an overview of the CK4 and LH3 EP.
    - The slides included a QR code and a URL for the Consultation Activities page of the Woodside website.
    - 5 CLG members attended the meeting representing:

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- Department of Education
- Dampier Community Association
- Karratha Central Healthcare
- Karratha & Districts Chamber of Commerce and Industry
- Bechtel

- No feedback was provided for this EP.

- On 16 April 2026, Woodside emailed Karratha CLG advising of the proposed activity (Record of Consultation, reference 6.1.20), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
- On 7 May 2026, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 21 May 2026, Woodside's April presentation summary pack to the CLG was emailed to the CLG members regardless of their attendance at the meeting.
- On 23 July 2026, Woodside sent an Activity Update to Karratha CLG based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.11). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP was provided.

Summary of Feedback, Objection or Claim	Assessment of Merits of Feedback, Objection or Claim	Woodside's Response	Inclusion in Environment Plan
No feedback, objections or claims received despite follow-up.		Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	No changes or additional measures are required.

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with Karratha CLG members for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically:

Sufficient Information

Woodside has given Karratha CLG members sufficient information to allow Karratha CLG members to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to Karratha CLG members on 9 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.
- A timeframe for consultation and the provision of feedback.
- A link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community'.*
- Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).

- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to Karratha CLG. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.

Reasonable Period

Woodside allowed Karratha CLG members a reasonable period for consultation in the preparation of the EP because:

- A consultation period was stated in the initial correspondence and in the Activity Update to Karratha CLG members advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.
- Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period.
- Consultation for this EP commenced 6 months ago.
- In this context, Woodside allowed Karratha CLG members a reasonable period for consultation in preparation of the EP.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with Karratha CLG members is appropriate and adapted to the nature of interests of Karratha CLG:

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.
- On 1 April 2026, Woodside hosted the Karratha CLG meeting which included an overview of this EP and participated in Karratha-based community events.
- In the absence of feedback, Woodside sent a follow-up consultation email on 7 May, reminding Karratha CLG members of the opportunity to provide feedback.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- No additional measures were considered as a result of consultation as Karratha CLG members did not provide feedback for this EP.
- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.
- The measures and controls described in this EP address the potential impact from the proposed activity on Karratha CLG members' functions, interests or activities.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

4.9.8 City of Karratha

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed City of Karratha advising of the proposed activity (Record of Consultation, reference 6.1.7), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
- On 7 May 2026, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 13 May 2026, City of Karratha emailed Woodside (SI Report A, reference 23.1) and stated point **(1)**
- On13 May 2026, Woodside responded to City of Karratha (SI Report A, reference 23.2) and responded to point **(1)**.
- On 23 July 2026, Woodside sent an Activity Update to City of Karratha based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.11). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP was provided.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
(1) City of Karratha confirmed no concerns or comments.	**(1)** Woodside accepts that the City of Karratha has no concerns or comments.	**(1)** Woodside confirmed that the City of Karratha had no concerns or comments.	**(1)** No changes or additional measures are required.
While feedback has been received, there were no objections or claims.	Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24.	Woodside engages in ongoing consultation throughout the life of an EP. Woodside notes that further feedback may be received as part of ongoing consultation. Should further feedback be received, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	No changes or additional measures are required.

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with City of Karratha for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically:

Sufficient Information

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Woodside has given City of Karratha sufficient information to allow City of Karratha to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to City of Karratha on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.
  - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.
  - A timeframe for consultation and the provision of feedback.
  - A link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
  - Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).
- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to City of Karratha. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.

Reasonable Period

Woodside allowed City of Karratha a reasonable period for consultation in the preparation of the EP because:

- A consultation period was stated in the initial correspondence and in the Activity Update to City of Karratha advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.
- Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period.
- Consultation for this EP commenced 6 months ago.
- In this context, Woodside allowed City of Karratha a reasonable period for consultation in preparation of the EP as evidenced by City of Karratha's response on (dates)..

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with City of Karratha is appropriate and adapted to the nature of interests of City of Karratha:

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.
- On 1 April 2026, Woodside hosted the Karratha CLG meeting which included an overview of this EP and participated in Karratha-based community events.
- In the absence of feedback, Woodside sent a follow-up consultation email on 7 May 2026, reminding City of Karratha of the opportunity to provide feedback which it provided on the 13 May 2026.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- City of Karratha provided feedback but no objections or claims in line with the intended outcome of consultation as set out in Section 5.2 and Regulations 24(b) and 34(g). Woodside has:
  - Responded to feedback from City of Karratha.
  - Made no changes or inclusions to the EP as a result of consultation with City of Karratha because appropriate measures are already included in the EP.
- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.

4.9.9 Shire of Ashburton

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed the Shire of Ashburton advising of the proposed activity (Record of Consultation, reference 6.1.21), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
- On 7 May 2026, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 23 July 2026, Woodside sent an Activity Update to Shire of Ashburton based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.25). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP was provided.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
No feedback, objections or claims about the adverse impact of the activity received despite follow-up.		Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	No changes or additional measures are required.

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with Shire of Ashburton for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically:

Sufficient Information

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Woodside has given Shire of Ashburton sufficient information to allow Shire of Ashburton to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to Shire of Ashburton on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.
  - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.
  - A timeframe for consultation and the provision of feedback.
  - A link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
  - Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).
- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to Shire of Ashburton. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.

Reasonable Period

Woodside allowed Shire of Ashburton a reasonable period for consultation in the preparation of the EP because:

- A consultation period was stated in the initial correspondence and in the Activity Update to Shire of Ashburton advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.
- Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period.
- Consultation for this EP commenced 6 months ago.
- In this context, Woodside allowed Shire of Ashburton a reasonable period for consultation in preparation of the EP.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with Shire of Ashburton is appropriate and adapted to the nature of interests of Shire of Ashburton:

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.
- In the absence of feedback, Woodside sent a follow-up consultation email on 7 May 2026, reminding Shire of Ashburton of the opportunity to provide feedback.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- No additional measures were considered as a result of consultation as Shire of Ashburton did not provide feedback for this EP.
- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- The measures and controls described in this EP address the potential impact from the proposed activity on Shire of Ashburton's functions, interests or activities.

4.10 Other non-government groups or organisations (NGOs) or individuals

4.10.1 Telstra

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed the Telstra advising of the proposed activity (Record of Consultation, reference 6.1.9, provided a Consultation Information Sheet, Submarine Communication Cables Map, and a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
- On 7 May 2026, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 23 July 2026, Woodside sent an Activity Update to Telstra based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.13). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP was provided.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
No feedback, objections or claims about the adverse impact of the activity received despite follow-up.		Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	No additional measures or controls are required.

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with Telstra for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically:

Sufficient Information

Woodside has given Telstra sufficient information to allow Telstra to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to Telstra on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.
  - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.
  - A timeframe for consultation and the provision of feedback.
  - A link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
  - Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).
- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to Telstra. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.

Reasonable Period

Woodside allowed Telstra a reasonable period for consultation in the preparation of the EP because:

- A consultation period was stated in the initial correspondence and in the Activity Update to Telstra advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.
- Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period.
- Consultation for this EP commenced 6 months ago.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with Telstra is appropriate and adapted to the nature of interests of Telstra:

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- No additional measures were considered as a result of consultation as Telstra did not provide feedback for this EP.
- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.
- The measures and controls described in this EP address the potential impact from the proposed activity on Telstra's functions, interests or activities.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

4.10.2 Vocus

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed Vocus advising of the proposed activity (Record of Consultation, reference 6.1.9), provided a Consultation Information Sheet, Submarine Communication Cables Map, and a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community'*.
- On 16 April 2026, Vocus emailed Woodside, noted nearest point of Highclere Cable System (SI Report A, reference 17.1) and affirmed point **(1).**
- On 16 April 2026, Woodside responded to Vocus emailed Woodside (SI Report A, reference 17.2):and confirmed point **(1)**.
- On 23 July 2026, Woodside sent an Activity Update to Vocus based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.13). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP was provided.
- On 23 July 2026, Vocus thanked Woodside for the activity update (SI Report A, reference 17.3) and noted point related to point **(1).**
- On 24 July 2026, Woodside thanked Vocus for review of the activity update (SI Report A, reference 17.4) and confirmed point **(1)**.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
(1) Confirmed Vocus had no feedback for the EP or associated conditions given >20 km distance of the cable system to the proposed activity area.	**(1)** Woodside understands the proposed activity area is not in the vicinity of Vocus cables and that Vocus has no feedback for the EP or associated conditions.	**(1)** Woodside confirmed with Vocus that it had no feedback for the EP or associated conditions.	**(1)** No additional controls or measures are required.
While feedback has been received, there were no objections or claims.	Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24.	Woodside engages in ongoing consultation throughout the life of an EP. Woodside notes that further feedback may be received as part of ongoing consultation. Should further feedback be received, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	No additional controls or measures are required.
Summary Report – Consultation Complete			

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with Vocus for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically:

Sufficient Information

Woodside has given Vocus sufficient information to allow Vocus to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to Vocus on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.
  - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.
  - A timeframe for consultation and the provision of feedback.
  - A link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
  - Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).
- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to Vocus. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.
- On 16 April 2026 and 23 July 2026, Vocus shared its feedback, claims or objections regarding this activity, indicating the information provided was sufficient to enable Vocus to make an informed assessment of the possible consequences of the activity on its functions, interests or activities.

Reasonable Period

Woodside allowed Vocus a reasonable period for consultation in the preparation of the EP because:

- A consultation period was stated in the initial correspondence and in the Activity Update to Vocus advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.
- Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period.
- Consultation for this EP commenced 6 months ago.
- In this context, Woodside allowed Vocus a reasonable period for consultation in preparation of the EP as evidenced by Vocus's response on 16 April 2026 and 23 July 2026.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with Vocus is appropriate and adapted to the nature of interests of Vocus:

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- Vocus provided feedback but no objections or claims in line with the intended outcome of consultation as set out in Section 5.2 and Regulations 24(b) and 34(g). Woodside has:
  - Responded to feedback from Vocus.
  - Made no changes or inclusions to the EP as a result of consultation with Vocus because appropriate measures are already included in the EP.
- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.

4.10.3 Research institutes and local conservation groups or organisations

4.10.4 Cape Conservation Group (CCG)

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed the CCG advising of the proposed activity (Record of Consultation, reference 6.1.7), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
- On 7 May 2026, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 23 July 2026, Woodside sent an Activity Update to CCG based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.10). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP was provided.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
No feedback, objections or claims about the adverse impact of the activity received despite follow-up.		Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	No changes or additional measures are required.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Summary Report – Consultation Complete
Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with CCG for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically: **Sufficient Information** Woodside has given CCG sufficient information to allow CCG to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because: • The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to CCG on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included: - The purpose of consultation and set out what was being sought through consultation. - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures. - A timeframe for consultation and the provision of feedback. - A link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'. - Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations). • A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to CCG. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time. **Reasonable Period** Woodside allowed CCG a reasonable period for consultation in the preparation of the EP because: • A consultation period was stated in the initial correspondence and in the Activity Update to CCG advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission. • Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period. • Consultation for this EP commenced 6 months ago. • In this context, Woodside allowed CCG a reasonable period for consultation in preparation of the EP. **Reasonable Opportunity** A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with CCG is appropriate and adapted to the nature of interests of CCG: • Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation. • Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation. • In the absence of feedback, Woodside sent a follow-up consultation email on 7 May 2026, reminding CCG of the opportunity to provide feedback.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- No additional measures were considered as a result of consultation as CCG did not provide feedback for this EP.
- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.
- The measures and controls described in this EP address the potential impact from the proposed activity on CCG's functions, interests or activities.

4.10.5 Protect Ningaloo

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed the Protect Ningaloo advising of the proposed activity (Record of Consultation, reference 6.1.7), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure 'Consultation on offshore petroleum environment plans: Information for the community'.
- On 7 May 2026, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 23 July 2026, Woodside sent an Activity Update to Protect Ningaloo based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.11). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP was provided.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
No feedback, objections or claims about the adverse impact of the activity received despite follow-up.		Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	No changes or additional measures are required.

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with Protect Ningaloo for the purpose of regulation 25 complete. Sufficient information, a reasonable period and a reasonable opportunity have been provided, as described in Section 5.4 of the EP and further summarised in the Consultation Approach above. Specifically:

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Sufficient Information

Woodside has given Protect Ningaloo sufficient information to allow Protect Ningaloo to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since April 2026. Woodside gave this information to Protect Ningaloo on 16 April 2026, marking the commencement of consultation on this EP. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.
  - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the Petroleum Activities Program, and proposed mitigation and management measures.
  - A timeframe for consultation and the provision of feedback.
  - A link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community'*.
  - Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).
- A second consultation period was initiated on 23 July 2026 to provide an Activity Update on the EP and Woodside sent the information to Protect Ningaloo. The updated Consultation Information Sheet for the Okha LWI EP has been publicly available on the Woodside website since that time.

Reasonable Period

Woodside allowed Protect Ningaloo a reasonable period for consultation in the preparation of the EP because:

- A consultation period was stated in the initial correspondence and in the Activity Update to Protect Ningaloo advising of consultation as well as when consultation closed for the purposes of the preparation of the EP. This enabled Woodside to assess feedback before EP submission.
- Woodside's methodology allows a 30-day consultation period. Woodside allowed 30 days for consultation and also provided an additional 30-day period.
- Consultation for this EP commenced Protect Ningaloo months ago.
- In this context, Woodside allowed Protect Ningaloo a reasonable period for consultation in preparation of the EP.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with Protect Ningaloo is appropriate and adapted to the nature of interests of Protect Ningaloo:

- Woodside published advertisements in 8 national, state, and relevant local newspapers. This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaigns. This allowed for broad awareness of the activity under the EP and also of consultation.
- In the absence of feedback, Woodside sent a follow-up consultation email on 7 May 2026, reminding Protect Ningaloo of the opportunity to provide feedback.

Outcomes of Consultation

Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24. The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- No additional measures were considered as a result of consultation as Protect Ningaloo did not provide feedback for this EP.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- Woodside will continue to accept and assess feedback throughout the life of the EP and apply its Management of Change and Revision process when applicable.
- The measures and controls described in this EP address the potential impact from the proposed activity on Protect Ningaloo's functions, interests or activities.

4.11 Traditional custodians and nominated representative corporations

4.11.1 Buurabalayji Thalanyji Aboriginal Corporation (BTAC)

BTAC is established under the *Native Title Act 1993* (Cth) by the Thalanyji people to represent the Thalanyji people (defined broadly by reference to descent from the set of ancestors who were known to have a continuous and unbroken connection as the Traditional Custodians at the time of European colonisation) and represent their communal interests including, among other things, management and protection of cultural values.

Through conversations with BTAC outside of EP consultation, Woodside was advised of additional contacts within BTAC to forward EP information. Woodside forwarded this information to these contacts. This context and process demonstrates that Woodside's consultation approach with BTAC is appropriate and adapted to the nature and interests of BTAC.

Summary of information provided and record of consultation for this EP:

- On 13 April 2026, Woodside emailed BTAC (via legal representative) advising of the proposed activity (Record of Consultation, reference 6.1.27). The email included:
  - A Summary Information Sheet.
  - A link to the Consultation Information Sheet.
  - An overview of the proposed activity.
  - Links to the NOPSEMA Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information and contact details.
  - **(1)** Information on the cultural values related to the group that Woodside considers relevant to the activity.
  - **(1)** A request from Woodside that the group confirm if there were any changes or additional information regarding cultural values that Woodside should consider in the preparation for this EP.
  - A request for information on the group's preferred ways to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
  - A request for feedback by 12 May 2026 for the purposes of preparation of the EP.
  - Advice that feedback can continue to be provided to Woodside during the life of an EP, including after consultation for the EP has closed, during EP assessment, and after an EP has been accepted by NOPSEMA.
  - Woodside's commitment to managing gender-restricted or other culturally sensitive information.
  - A request for the group to provide information about the proposed activity to other individuals as required.
  - Acknowledgement that discussions relating to a consultation framework agreement with Woodside has been ongoing and that these discussions will progress in parallel with consultation for the proposed activity's EP.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- On 14 April 2026, Woodside forwarded BTAC (via legal representative) the original consultation email to further contacts within BTAC. Woodside also shared an overview of upcoming EPs (SI Report B, reference 1.1.1).
- On 30 April 2026, Woodside emailed BTAC (via legal representative) a reminder about the proposed activity (SI Report B, reference 1.1.2). The email included:
  - A reference to the original consultation email for this EP sent on 13 April 2026, which included a Summary Information Sheet and a link to the Consultation Information Sheet.
  - A reminder that consultation for the preparation of the EP closes on 12 May 2026.
  - A request for information on the group's preferred ways to engage with Woodside about the proposed activity, including the opportunity to meet face to face.
  - Woodside's commitment to managing gender-restricted or other culturally sensitive information.
  - Advice that feedback can continue to be provided to Woodside during the life of an EP, including after consultation for the EP has closed, during EP assessment, and after an EP has been accepted by NOPSEMA.
- On 28 July 2026, Woodside emailed BTAC (via legal representative) an activity update about the proposed activity (SI Report B, reference 1.1.3). The email included:
  - A reference to the original consultation email for this EP sent to the group on 13 April 2026.
  - A Summary Information Sheet and a link to the Consultation Information Sheet.
  - A request to provide any additional feedback by 26 August 2026 so that it can be considered in the preparation of the EP.
  - **(1)** Information on the cultural values that Woodside consider relevant to the activity.
  - **(1)** A request from Woodside that the group confirm if there were any changes or additional information regarding cultural values that Woodside should consider in the preparation for this EP

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse Impact of the activity	Woodside's Response	Inclusion in Environment Plan
(1) Cultural value Sea Country – connection to, access to and transfer of knowledge: • Enduring deep connection north of Onslow, extending out to Islands off the Pilbara coast including the Montebello, Barrow and Mackerel Islands.	**(1)** This value has been identified through Woodside's data collection processes (consultation and reviews of publicly available literature).	**(1)** At the beginning of consultation for this EP, Woodside provided a list of the cultural values known to Woodside that it believed relevant to the group and invited it to make changes or provide additional information (See Record of Consultation, 6.1.27). No changes were requested.	**(1)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate included controls in Sections 6.6, 6.7 and 6.9.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

• Cultural obligation to care for environment and values of Sea Country. • Resources including fish, shellfish, crabs, crustaceans, sea urchins, eggs, turtles, dugongs, flora and fauna associated with mangrove communities. • Artefacts and burials in coastal sand dunes. • Archaeological sites on Barrow and Montebello Islands. • Archaeological evidence of use of resources including fish, turtles, marine mammals, crocodiles, crabs and sea urchins. • Ceremonial sites (Thalu) for the increase of turtle, shark, ray, fish, squid, octopus, hill kangaroo and emu.			
No feedback, objections or claims about the adverse impact of the activity received despite follow-up.	Although no feedback, objections or claims were provided for this EP, historical cultural values considered relevant have been identified and included based on consultation and publicly available literature.	Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8 of the EP).	No additional measures or controls are required
Summary Report – Consultation Complete			
Woodside has discharged its obligations for consultation under regulation 25 of the Environmental Regulations and consultation for the purpose of regulation 25 is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.4 of the EP. Specifically: **Sufficient Information** Sufficient information has been provided because: • On 13 April 2026, Woodside made the Consultation Information Sheet available on the Woodside website.			

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- Woodside provided information on 13 April 2026 when consultation commenced. Woodside provided:
  - A Summary Information Sheet developed specifically for Traditional Custodian groups and reviewed by a member of the Indigenous Affairs team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, a summary of the potential risks and impacts of the activity, diagrams and details about how to provide feedback.
  - Links to the NOPSEMA Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information, and contact details.
  - Confirmation of the purpose of consultation, what was being sought by Woodside through consultation including understanding the nature of their interests and how the activity could impact those interests.
  - A request for the consultation information to be distributed to members and individuals as required.
  - An offer to provide more specific information, maps and images if required.
  - Woodside provided contact information for Woodside and NOPSEMA.
  - Woodside provided updated information which included:
  - A reference to the original consultation email for this EP sent 13 April 2026.
  - An updated Summary Information Sheet and link to the updated Consultation Information Sheet noting the EP changes made.
  - An invitation to provide further feedback by 26 August 2026, for the purpose of preparation for this EP.

Reasonable Period

A reasonable period for consultation in the preparation of the EP has been provided because:

- Woodside commenced consultation on this EP on 13 April 2026 and requested feedback by 12 May 2026 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.
- Woodside provided an activity update on this EP 28 July 2026 and requested feedback by 26 August 2026.
- Woodside has provided an opportunity to address and respond to feedback for over six months, demonstrating a "reasonable period" of consultation.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided and Woodside's approach to consultation is appropriate and adapted because:

- Woodside sought direction on the preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Traditional Custodian groups.
- Woodside has made information on this EP publicly available for more than six months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (22 April 2026) and National Indigenous Times (28 April 2026) advising of the proposed activities and requesting comments or feedback.
- Woodside's initial email about this EP on 13 April 2026:
  - Included a general email address and telephone number for Woodside, as well as a direct email and telephone number for a dedicated focal person from Woodside's Indigenous Affairs Engagement team. Woodside also provided contact details for NOPSEMA.
  - Offered for Woodside to speak with members as well as the Board.
  - Asked to advise how the group would like Woodside to engage and whether further information is required.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- Woodside offered to meet on a number of occasions.

Outcomes of Consultation

- The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:
- No feedback or information was provided during consultation for this EP.
- During the past six months no objections or claims about the adverse impact of the activity to which this EP relates have been raised.

Woodside engages in ongoing consultation once an EP has been submitted for assessment as well as throughout the life of an EP. Should feedback be received after the EP has been accepted (including relevant new information relating to cultural values), it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8 of the EP).

4.11.2 Karajarri Traditional Lands Association (KTLA) (Aboriginal Corporation)

KTLA is established under the *Native Title Act 1993 (Cth)* by the Karajarri people to represent the Karajarri people (defined broadly by reference to descent from the set of ancestors who were known to have a continuous and unbroken connection as the Traditional Custodians at the time of European colonisation) and represent their communal interests including, among other things, management and protection of cultural values.

Summary of information provided and record of consultation for this EP:

- On 13 April 2026, Woodside emailed KTLA advising of the proposed activity (Record of Consultation, reference 6.1.28) The email included:
  - A Summary Information Sheet.
  - A link to the Consultation Information Sheet.
  - An overview of the proposed activity.
  - Links to the NOPSEMA Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information and contact details.
  - A request for information on the group's preferred ways to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
  - A request for feedback by 12 May 2026 for the purposes of preparation of the EP.
  - Advice that feedback can continue to be provided to Woodside during the life of an EP, including after consultation for the EP has closed, during EP assessment, and after an EP has been accepted by NOPSEMA.
  - Woodside's commitment to managing gender-restricted or other culturally sensitive information.
  - A request for the group to provide information about the proposed activity to other individuals as required.
- On 30 April 2026, Woodside emailed KTLA a reminder about the proposed activity (SI Report B, reference 1.2.1). The email included:
  - A reference to the original consultation email for this EP sent on 13 April 2026, which included a Summary Information Sheet and a link to the Consultation Information Sheet.
  - A reminder that consultation for the preparation of the EP closes on 12 May 2026.
  - A request for information on the group's preferred ways to engage with Woodside about the proposed activity, including the opportunity to meet face to face.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- Woodside's commitment to managing gender-restricted or other culturally sensitive information.
- Advice that feedback can continue to be provided to Woodside during the life of an EP, including after consultation for the EP has closed, during EP assessment, and after an EP has been accepted by NOPSEMA.

- On 28 July 2026, Woodside emailed KTLA an activity update about the proposed activity (SI Report B, reference 1.2.2). The email included:
  - A reference to the original consultation email for this EP sent to the group on 13 April 2026.
  - A Summary Information Sheet and a link to the Consultation Information Sheet.
  - A request to provide any additional feedback by 26 August 2026 so that it can be considered in the preparation of the EP.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the Adverse Impact of the Activity	Woodside's Response	Inclusion in Environment Plan
No feedback, objections or claims about the adverse impact of the activity received despite follow-up.	Woodside engages in ongoing consultation throughout the life of an EP	Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8 of the EP).	No additional measure or controls are required.

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environmental Regulations and consultation for the purpose of regulation 25 is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.4 of the EP. Specifically:

Sufficient Information

Sufficient information has been provided because:

- On 13 April 2026, Woodside made the Consultation Information Sheet available on the Woodside website.
- Woodside provided information on 13 April 2026 when consultation commenced. Woodside provided:
  - A Summary Information Sheet developed specifically for Traditional Custodian groups and reviewed by a member of the Indigenous Affairs team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, a summary of the potential risks and impacts of the activity, diagrams and details about how to provide feedback.
  - Links to the NOPSEMA Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information, and contact details.
  - Confirmation of the purpose of consultation, what was being sought by Woodside through consultation including understanding the nature of their interests and how the activity could impact those interests.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- A request for the consultation information to be distributed to members and individuals as required.
- An offer to provide more specific information, maps and images if required.

- Woodside provided contact information for Woodside and NOPSEMA.
- Woodside provided updated information which included:
  - A reference to the original consultation email for this EP sent on 13 April 2026.
  - An updated Summary Information Sheet and link to the updated Consultation Information Sheet noting the EP changes made.
  - An invitation to provide further feedback by 26 August 2026 for the purpose of preparation for this EP.

Reasonable Period

A reasonable period for consultation in the preparation of the EP has been provided because:

- Woodside commenced consultation on this EP on 13 April 2026 and requested feedback by 12 May 2026 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.
- Woodside provided an activity update on this EP 28 July 2026 and requested feedback by 26 August 2026.
- Woodside has provided an opportunity to address and respond to feedback for over six months, demonstrating a "reasonable period" of consultation.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided and Woodside's approach to consultation is appropriate and adapted because:

- Woodside sought direction on the preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Traditional Custodian groups.
- Woodside has made information on this EP publicly available for over six months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (22 April 2026) and National Indigenous Times (28 April 2026) advising of the proposed activities and requesting comments or feedback.
- Woodside's initial email about this EP on 13 April 2026:
  - Included a general email address and telephone number for Woodside, as well as a direct email and telephone number for a dedicated focal person from Woodside's Indigenous Affairs Engagement team. Woodside also provided contact details for NOPSEMA.
  - Offered for Woodside to speak with members as well as the Board.
  - Asked to advise how the group would like Woodside to engage and whether further information is required.
- Woodside offered to meet on a number of occasions.

Outcomes of Consultation

- The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:
- During the past six months, no objections or claims about the adverse impact of the activity to which this EP relates have been raised.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Woodside engages in ongoing consultation once an EP has been submitted for assessment as well as throughout the life of an EP. Should feedback be received after the EP has been accepted (including relevant new information relating to cultural values), it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8 of the EP).

4.11.3 Kariyarra Aboriginal Corporation (KAC)

Kariyarra is established under the *Native Title Act 1993* (Cth) by Kariyarra people to represent the Kariyarra people (defined broadly by reference to descent from the set of ancestors who were known to have a continuous and unbroken connection as the Traditional Custodians at the time of European colonisation) and represent their communal interests including, among other things, management and protection of cultural values.

At the start of consultation, Woodside provided KAC a table of cultural values previously identified through consultation and reviews of publicly available literature. Woodside invited KAC to make changes or provide additional information about these cultural values. During a consultation meeting for this EP, KAC clarified the wording of a cultural value. Woodside has updated its records to reflect this. This context and engagement in this process demonstrates that Woodside's consultation approach with KAC is appropriate and adapted to the nature and interests of KAC.

Summary of information provided and record of consultation for this EP:

- On 13 April 2026, Woodside emailed KAC advising of the proposed activity (Record of Consultation, reference 6.1.29). The email included:
  - A Summary Information Sheet.
  - A link to the Consultation Information Sheet.
  - An overview of the proposed activity.
  - Links to the NOPSEMA Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information and contact details.
  - **(1-9)** Information on the cultural values related to the group that Woodside considers relevant to the activity.
  - **(1-9)** A request from Woodside that the group confirm if there were any changes or additional information regarding cultural values that Woodside should consider in the preparation for this EP.
  - A request for information on the group's preferred ways to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
  - A request for feedback by 12 May 2026 for the purposes of preparation of the EP.
  - Advice that feedback can continue to be provided to Woodside during the life of an EP, including after consultation for the EP has closed, during EP assessment, and after an EP has been accepted by NOPSEMA.
  - Woodside's commitment to managing gender-restricted or other culturally sensitive information.
  - A request for the group to provide information about the proposed activity to other individuals as required.
  - Acknowledgement that discussions relating to a consultation framework agreement with Woodside has been ongoing and that these discussions will progress in parallel with consultation for the proposed activity's EP.
- On 13 April 2026, KAC emailed Woodside confirming dates to consult for the EP (SI Report B, reference 1.3.1).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- On 14 April 2026, Woodside replied to KAC noting the consultation dates for this and another EP. Woodside also welcomed the opportunity to meet to consult (SI Report B, reference 1.3.2).
- Between 14 April 2026 and 7 May 2026, KAC and Woodside emailed to organise a consultation meeting, discuss meeting details, costs and KAC's Meeting Policy for the upcoming consultation meeting for this and another EP (SI Report B, reference 1.3.3- 1.3.22).
- On 8 May 2026, Woodside met with KAC to discuss this and another EP (SI Report B, reference 1.3.23). Relevant matters include:
  - Overview of the EP consultation process.
  - An activity overview of this and another EP including details of planned and unplanned activities.
  - **(10-13)** Feedback raised by the group for consideration within the EP.
  - **(10-13)** Response from Woodside to address feedback.
- On 28 July 2026, Woodside emailed KAC an activity update about the proposed activity (SI Report B, reference 1.3.24). The email included:
  - A reference to the original consultation email for this EP sent to the group on 13 April 2026.
  - A Summary Information Sheet and a link to the Consultation Information Sheet.
  - A request to provide any additional feedback by 26 August 2026 so that it can be considered in the preparation of the EP.
  - **(1-9)** Information on the cultural values that Woodside consider relevant to the activity.
  - **(1-9)** A request from Woodside that the group confirm if there were any changes or additional information regarding cultural values that Woodside should consider in the preparation for this EP.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the Adverse Impact of the Activity	Woodside's Response	Inclusion in Environment Plan
(1) Cultural Value Marine Animals: • Management of sea turtle nesting. • Impacts to whale migration (whales are connected to Songlines). • Shellfish • Cockles • Oysters • Clam shells • Concha Shells (Nanku) • Mullets (fish)	**(1)** This value has been identified through Woodside's data collection processes (consultation).	**(1)** At the beginning of consultation for this EP, Woodside provided a list of the cultural values known to Woodside that it believed relevant to the group and invited it to make changes or provide additional information (See Record of Consultation, 6.1.29). During consultation for this EP, KAC clarified the wording for Concha Shells (Nanku) during the consultation meeting. Woodside updated its records to reflect this.	**(1)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate included controls in Sections 6.6, 6.7 and 6.9.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

• Sea cow (dugong).			
(2) Cultural Value Sea Country: • Cultural obligations to care for Country. • Secret habitat totems. • Access required for fishing, trapping, crabbing, catching turtle, hunting dugong, using stingray barbs for spears, collecting shellfish and visiting offshore islands at low tide.	**(2)** This value has been identified through Woodside's data collection processes (consultation and reviews of publicly available literature).	**(2)** At the beginning of consultation for this EP, Woodside provided a list of the cultural values known to Woodside that it believed relevant to the group and invited it to make changes or provide additional information (See Record of Consultation, 6.1.29). No changes were requested.	**(2)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate included controls in Sections 6.6, 6.7 and 6.9.
(3) Cultural Value • Yinta: • Significant cultural/spiritual sites often a water source but possibly other features such as hills. • Cultural rights to land to determine who can use or speak for an area.	**(3)** This value has been identified through Woodside's data collection processes (consultation and reviews of publicly available literature).	**(3)** At the beginning of consultation for this EP, Woodside provided a list of the cultural values known to Woodside that it believed relevant to the group and invited it to make changes or provide additional information (See Record of Consultation, 6.1.29). No changes were requested.	**(3)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate included controls in Sections 6.6, 6.7 and 6.9.
(4) Cultural Value Marine species as resources: • Marine mammals • Fish • Molluscs including bivalves, gastropods and cephalopods. • Shellfish, cockles, oysters, clam shells, concha shells (Nanku). •	**(4)** This value has been identified through Woodside's data collection processes (consultation).	**(4)** At the beginning of consultation for this EP, Woodside provided a list of the cultural values known to Woodside that it believed relevant to the group and invited it to make changes or provide additional information (See Record of Consultation, 6.1.29). No changes were requested.	**(4)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate included controls in Sections 6.6, 6.7 and 6.9.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

(5) Cultural Value • Potential impacts on coastal landforms and vegetation.	**(5)** This value has been identified through Woodside's data collection processes (consultation).	**(5)** At the beginning of consultation for this EP, Woodside provided a list of the cultural values known to Woodside that it believed relevant to the group and invited it to make changes or provide additional information (See Record of Consultation, 6.1.29). No changes were requested.	**(5)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate included controls in Sections 6.6, 6.7 and 6.9.
(6) Cultural Value Heritage sites associated with the coast and ocean including the presence of mythical snakes: • Traditional knowledge recalls that a saltwater serpent lives in the sea and brings fish to shore.	**(6)** This value has been identified through Woodside's data collection processes (consultation and reviews of publicly available literature).	**(6)** At the beginning of consultation for this EP, Woodside provided a list of the cultural values known to Woodside that it believed relevant to the group and invited it to make changes or provide additional information (See Record of Consultation, 6.1.29). No changes were requested.	**(6)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate included controls in Sections 6.6, 6.7 and 6.9.
(7) Cultural Value Transfer of knowledge to future generations: • Impacts of species reduction. • Temporary exclusion to areas in the case of an oil spill etc.	**(7)** This value has been identified through Woodside's data collection processes (consultation).	**(7)** At the beginning of consultation for this EP, Woodside provided a list of the cultural values known to Woodside that it believed relevant to the group and invited it to make changes or provide additional information (See Record of Consultation, 6.1.29). No changes were requested.	**(7)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate included controls in Sections 6.6, 6.7 and 6.9. Refer to section 7.11 of the EP relating to notification following relevant environmental incidents in line with Appendix G – Oil Pollution First Strike Plan.
(8) Cultural value • Islands off the coast of Port Hedland are extremely important to KAC	**(8)** This value has been identified through Woodside's data collection processes (consultation).	**(8)** At the beginning of consultation for this EP, Woodside provided a list of the cultural values known to Woodside that it believed relevant to the group and invited it to make changes or provide	**(8)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

(Little Turtle, North Turtle and Bedout).		additional information (See Record of Consultation, 6.1.29). No changes were requested.	included controls in Sections 6.6, 6.7 and 6.9.
(9) Cultural Value • Importance of river systems as food chains	**(9)** This value has been identified through Woodside's data collection processes (consultation).	**(9)** At the beginning of consultation for this EP, Woodside provided a list of the cultural values known to Woodside that it believed relevant to the group and invited it to make changes or provide additional information (See Record of Consultation, 6.1.29). No changes were requested.	**(9)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate included controls in Sections 6.6, 6.7 and 6.9.
(10) KAC noted that engagement on EPs should not be limited to meeting with the CEO; Directors should also be engaged.	**(10)** Woodside acknowledges KAC's preference for consultation to involve Directors.	**(10)** Woodside considers that its consultation approach provides an opportunity for consultation information to be shared with KAC Directors, the Board, Elders, office holders and other interested parties as outlined in the Record of Consultation.	**(10)** No action required.
(11) KAC asked how common small, unplanned spills are and what is the threshold for action.	**(11)** Woodside takes a robust and systematic approach to environmental management of petroleum activities.	**(11)** Woodside explained that small, unplanned spills are more likely to occur compared with larger well blowouts or vessel collisions. These spills of chemicals and hydrocarbons are typically small volumes and are required to be submitted to NOPSEMA through monthly incident reporting regardless of volume	**(11)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate included controls in Sections 6.6, 6.7 and 6.9. Refer to section 7.11 of the EP relating to notification following relevant environmental incidents in line with Appendix G – Oil Pollution First Strike Plan
(12)	**(12)** Woodside has controls in place to manage planned discharges in	**(12)** Woodside explained that discharge levels vary due to personnel numbers	**(12)** Planned discharges are described and assessed in Section 6.7 of the EP.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

KAC asked what a planned discharge look like (e.g., sewage) and what are the actual levels?	accordance with its regulatory obligations.	onboard and operational activity and are managed to be as low as reasonably practicable (ALARP).	
(13) KAC asked if vessels/platforms have weather tracking systems.	**(13)** Weather conditions can influence offshore operations and emergency response activities. Woodside considers that the use of weather forecasting and monitoring information forms part of standard operational and risk management processes for offshore activities.	**(13)** Woodside noted that vessels/platforms typically have oil spill tracker buoys onboard that can be activated/deployed to move with waves and provide raw swell movement data.	**(13)** No action required
While feedback has been received, there were no objections or claims.	Although no feedback, objections or claims were provided for this EP, historical cultural values considered relevant have been identified and included based on consultation and publicly available literature.	Woodside engages in ongoing consultation throughout the life of an EP. Should further feedback be received, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8 of the EP).	Based on the engagement to date, no additional measures or controls required.

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environmental Regulations and consultation for the purpose of regulation 25 is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.4 of the EP. Specifically:

Sufficient Information

Sufficient information has been provided because:

- On 13 April 2026, Woodside made the Consultation Information Sheet available on the Woodside website.
- Woodside provided information on 13 April 2026 when consultation commenced. Woodside provided:
  - A Summary Information Sheet developed specifically for Traditional Custodian groups and reviewed by a member of the Indigenous Affairs team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, a summary of the potential risks and impacts of the activity, diagrams and details about how to provide feedback.
  - Links to the NOPSEMA Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information, and contact details.
  - Confirmation of the purpose of consultation, what was being sought by Woodside through consultation including understanding the nature of their interests and how the activity could impact those interests.
  - A request for the consultation information to be distributed to members and individuals as required.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- An offer to provide more specific information, maps and images if required.

- Woodside provided contact information for Woodside and NOPSEMA.
- Woodside provided updated information which included:
  - A reference to the original consultation email for this EP sent on 13 April 2026.
  - An updated Summary Information Sheet and link to the updated Consultation Information Sheet noting the EP changes made.
  - An invitation to provide further feedback by 26 August 2026 for the purpose of preparation for this EP.

Reasonable Period

A reasonable period for consultation in the preparation of the EP has been provided because:

- Woodside commenced consultation on this EP on 13 April 2026 and requested feedback by 12 May 2026 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.
- Woodside provided an activity update on this EP 28 July 2026 and requested feedback by 26 August 2026.
- Woodside has provided an opportunity to address and respond to feedback for over six months, demonstrating a "reasonable period" of consultation.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided and Woodside's approach to consultation is appropriate and adapted because:

- Woodside sought direction on the preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Traditional Custodian groups.
- Woodside has made information on this EP publicly available for over six months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (22 April 2026) and National Indigenous Times (28 April 2026) advising of the proposed activities and requesting comments or feedback.
- Woodside's initial email about this EP on 13 April 2026:
  - Included a general email address and telephone number for Woodside, as well as a direct email and telephone number for a dedicated focal person from Woodside's Indigenous Affairs Engagement team. Woodside also provided contact details for NOPSEMA.
  - Offered for Woodside to speak with members as well as the Board.
  - Asked to advise how the group would like Woodside to engage and whether further information is required.
- Woodside offered to meet on a number of occasions and met with KAC on 8 May 2026 to consult on this EP.
- Throughout the consultation period, Woodside has had direct contact lines during the consultation period. This included multiple emails and phone calls.

Outcomes of Consultation

The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- Feedback was provided during consultation for this EP relating to cultural values, in addition to cultural values obtained throughout consultation for other activities. Woodside has incorporated the groups interests and cultural values in Section 4.9.
- During the past six months, the group provided feedback but no objections or claims about the adverse impact of the activity to which this EP relates.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Woodside engages in ongoing consultation once an EP has been submitted for assessment as well as throughout the life of an EP. Should feedback be received after the EP has been accepted (including relevant new information relating to cultural values), it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8 of the EP).

4.11.4 Murujuga Aboriginal Corporation (MAC)

MAC is established under the Burrup and Maitland Industrial Estates Agreement and is the representative body for the Traditional Custodians for Murujuga being the Ngarluma, the Mardudhunera, the Yaburara, the Yindjibarndi, and the Wong-Goo-Tt-Oo peoples (collectively Ngarda-Ngarli). MAC is the cultural authority for Murujuga and is responsible for the management and protection of its cultural values. At the start of consultation, Woodside provided MAC a table of cultural values previously identified for MAC through consultation and reviews of publicly available literature. Woodside invited MAC to make changes or provide additional information about these cultural values. During consultation for this EP, MAC wrote to Woodside to provide feedback on this EP and provide additional context on the cultural values shared by Woodside. Woodside has updated the EP to reflect this, and if relevant, potential impacts assessed and controls applied. This context and process demonstrates that Woodside's consultation approach with MAC is appropriate and adapted to the nature and interests of MAC.

Summary of information provided and record of consultation for this EP:

- On 13 April 2026, Woodside emailed MAC advising of the proposed activity (Record of Consultation, reference 6.1.30). The email included:
  - A Summary Information Sheet.
  - A link to the Consultation Information Sheet.
  - An overview of the proposed activity.
  - Links to the NOPSEMA Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information and contact details.
  - **(1-8)** Information on the cultural values related to the group that Woodside considers relevant to the activity.
  - **(1-8)** A request from Woodside that the group confirm if there were any changes or additional information regarding cultural values that Woodside should consider in the preparation for this EP.
  - A request for information on the group's preferred ways to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
  - A request for feedback by 12 May 2026 for the purposes of preparation of the EP.
  - Advice that feedback can continue to be provided to Woodside during the life of an EP, including after consultation for the EP has closed, during EP assessment, and after an EP has been accepted by NOPSEMA.
  - Woodside's commitment to managing gender-restricted or other culturally sensitive information.
  - A request for the group to provide information about the proposed activity to other individuals as required.
- On 30 April 2026, Woodside emailed MAC a reminder about the proposed activity (SI Report B, reference 1.4.1). The email included:
  - A reference to the original consultation email for this EP sent on 13 April 2026, which included a Summary Information Sheet and a link to the Consultation Information Sheet.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- A reminder that consultation for the preparation of the EP closes on 12 May 2026.
- A request for information on the group's preferred ways to engage with Woodside about the proposed activity, including the opportunity to meet face to face.
- Woodside's commitment to managing gender-restricted or other culturally sensitive information.
- Advice that feedback can continue to be provided to Woodside during the life of an EP, including after consultation for the EP has closed, during EP assessment, and after an EP has been accepted by NOPSEMA.

- On 12 May 2026, MAC emailed Woodside a letter relating to this and another EP (SI Report B, reference 1.4.2). Relevant items include:
  - **(9-13)** Feedback for consideration within the EP.
- On 15 June 2026, Woodside emailed MAC to address feedback from the letter dated 12 May 2026 (SI Report B, reference 1.4.3). Relevant items include:
  - **(9-13)** Woodside responded to and addressed feedback from the group.
- On 28 July 2026, Woodside emailed MAC an activity update about the proposed activity (Record of Consultation, reference 1.4.4). The email included:
  - A reference to the original consultation email for this EP sent to the group on 13 April 2026.
  - A Summary Information Sheet and a link to the Consultation Information Sheet.
  - A request to provide any additional feedback by 26 August 2026 so that it can be considered in the preparation of the EP.
  - **(1-8)** Information on the cultural values that Woodside consider relevant to the activity.
  - **(1-8)** A request from Woodside that the group confirm if there were any changes or additional information regarding cultural values that Woodside should consider in the preparation of this EP.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the Adverse Impact of the Activity	Woodside's Response	Inclusion in Environment Plan
(1) Cultural value • The ecosystem and health of Mermaid Sound.	**(1)** This value has been identified through Woodside's data collection processes (publicly available literature).	**(1)** At the beginning of consultation for this EP, Woodside provided a list of the cultural values known to Woodside that it believed relevant to the group and invited it to make changes or provide additional information (See Record of Consultation, 6.1.30). No changes were requested.	**(1)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate included controls in Sections 6.6, 6.7 and 6.9.
(2) Cultural value Marine species: • Whales – totemic importance	**(2)** This value has been identified through Woodside's data collection processes (consultation and publicly available literature).	**(2)** At the beginning of consultation for this EP, Woodside provided a list of the cultural values known to Woodside that it believed relevant to the group and	**(2)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

• Dolphins – cultural ceremonies • Dugongs – food source • Fish – cultural ceremonies • Sea snakes – culturally important • Turtles – Songlines • Coral – attract fish and other species • Seagrass – provide protection for animals. Locations include Conzinc Island and between Angel and Gidley Islands. • Stingrays • Sharks • Crustaceans • Octopus • Sea stars • Sea urchins • Sponges • Molluscs		invited it to make changes or provide additional information (See Record of Consultation, 6.1.30). No changes were requested.	included controls in Sections 6.6, 6.7 and 6.9.
(3) Cultural value Marine eco-systems: • Mangroves: would have provided shelter, crabbing, digging for shellfish and could be turtle nurseries. Locations include Conzinc Bay north end, Flying Foam Passage, Searipple Passage, North-East Bay of West Lewis Island. • Macroalgal (seaweed) communities: important habitats and food sources.	**(3)** This value has been identified through Woodside's data collection processes (consultation and publicly available literature).	**(3)** At the beginning of consultation for this EP, Woodside provided a list of the cultural values known to Woodside that it believed relevant to the group and invited it to make changes or provide additional information (See Record of Consultation, 6.1.30). No changes were requested.	**(3)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate included controls in Sections 6.6, 6.7 and 6.9.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

• Subtidal soft bottom communities (ocean bottom): support invertebrate diversity. • Intertidal sand and mudflat communities: support invertebrate diversity and provide food for shorebirds. • Rocky shores: habitats for plants/animals and provide food for shorebirds.			
(4) Cultural value • Fish traps in Conzinc Bay and Angel and Gidley Islands.	**(4)** This value has been identified through Woodside's data collection processes (consultation and publicly available literature).	**(4)** At the beginning of consultation for this EP, Woodside provided a list of the cultural values known to Woodside that it believed relevant to the group and invited it to make changes or provide additional information (See Record of Consultation, 6.1.30) No changes were requested.	**(4)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate included controls in Sections 6.6, 6.7 and 6.9.
(5) Cultural value • Harvesting squid around Conzinc Bay.	**(5)** This value has been identified through Woodside's data collection processes (publicly available literature).	**(5)** At the beginning of consultation for this EP, Woodside provided a list of the cultural values known to Woodside that it believed relevant to the group and invited it to make changes or provide additional information (See Record of Consultation, 6.1.30). No changes were requested.	**(5)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate included controls in Sections 6.6, 6.7 and 6.9.
(6) Cultural value MAC is the appropriate cultural authority for Murujuga.	**(6)** This value has been identified through Woodside's data collection processes (consultation).	**(6)** At the beginning of consultation for this EP, Woodside provided a list of the cultural values known to Woodside that it believed relevant to the group and invited it to make changes or provide	**(6)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

		additional information (See Record of Consultation, 6.1.30). No changes were requested.	included controls in Sections 6.6, 6.7 and 6.9.
(7) Cultural value Submerged landscape: • Potential impact on Jinna (Songlines). • Potential impact to Aboriginal heritage due to the submerged coastline at initial occupation of the region, landscape features that would have defined the first travel routes used to move through Country.	**(7)** This value has been identified through Woodside's data collection processes (consultation).	**(7)** At the beginning of consultation for this EP, Woodside provided a list of the cultural values known to Woodside that it believed relevant to the group and invited it to make changes or provide additional information (See Record of Consultation, 6.1.30). No changes were requested.	**(7)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate included controls in Sections 6.6, 6.7 and 6.9.
(8) Cultural value Murujuga seasonal calendar: • Any change to the feeding, breeding or migratory behaviour of culturally significant species would impact significantly on subsistence, cultural and ceremonial activities.	**(8)** This value has been identified through Woodside's data collection processes (consultation).	**(8)** At the beginning of consultation for this EP, Woodside provided a list of the cultural values known to Woodside that it believed relevant to the group and invited it to make changes or provide additional information (See Record of Consultation, 6.1.30). No changes were requested.	**(8)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate included controls in Sections 6.6, 6.7 and 6.9.
(9) MAC advised that the cultural values attachment does not appear to be a comprehensive assessment of values and the attachment remains limited. MAC requested that Woodside clearly identify within the EPs what efforts have gone into identify cultural values that may be impacted by their proposed works and how these have been	**(9)** Woodside notes that the cultural values attachment is not intended to be a comprehensive assessment of cultural values and welcomes groups to provide additional information. Cultural information provided through consultation, together with desktop studies, is considered in the assessment of impacts and development of	**(9)** Woodside responded to MAC and noted that Attachment A reflects information previously shared by MAC, as well as information stated as explicitly relevant to MAC sourced through reviews of publicly available literature. The attachment is not intended to represent a comprehensive or final assessment of cultural values. Woodside advised the purpose of EP consultation is to	**(9)** Cultural values identified through consultation and desktop studies, and the assessment of potential impacts and controls, are described in Sections 4.9 of the EP.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

incorporated into specific management actions.	management measures, where relevant to the activity. The potential risks and impacts associated with the proposed activities are described in the Consultation Information Sheet. A link to this document was provided to MAC via Woodside's initial consultation email for the EPs dated 13 April 2026.	understand how the proposed activities in the EPs could potentially impact cultural values, functions, interests, and activities. This allows Woodside, in the course of developing the EPs, to assess feedback, and where relevant to the activity, consider appropriate control measures to include in the EPs.	
(10) MAC advised that any development that could potentially affect the natural movement, migration and/or other behaviour of marine species may have an impact on the cultural interpretation of the seasonal landscape and seascape and associated cultural behaviours. MAC also advised that any impact to the ocean floor should be considered in terms of its potential impact to submerged landscapes and the preservation of earliest human occupation of the region.	**(10)** This value has already been identified through Woodside's data collection processes (consultation). However, the added contextual information provided by MAC will be considered alongside the current assessment of information where relevant.	**(10)** Woodside advised that this information is already recorded Attachment A. Woodside noted that updated contextual information will be included so it is considered alongside the current assessment of information where relevant. Woodside invite MAC to continue to identify the potential impacts to cultural heritage and cultural values by the proposed activities under consideration in EPs through ongoing consultation and engagement with Woodside. Woodside will continue to provide the cultural values document in future EP consultation with MAC to support ongoing review and accuracy.	**(10)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate included controls in Sections 6.6, 6.7 and 6.9.
(11) MAC advised that whilst the protection of environmental values is a significant aspect of protecting cultural values, the nature and threshold of impact must be assessed separately.	**(11)** Woodside undertakes assessments for both environmental and cultural values. These are considered individually and collaboratively.	**(11)** Woodside advised potential impacts to cultural heritage and cultural values are considered through Woodside's established cultural heritage management and consultation processes, which recognise that cultural values are not always fully captured through environmental or scientific assessment alone. Consultation seeks to understand the cultural, social and	**(11)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate included controls in Sections 6.6, 6.7 and 6.9.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

		spiritual significance of places, species and seasonal indicators, and how changes to environmental conditions may have associated potential cultural impacts. Information provided through consultation informs the identification of potential cultural heritage impacts and if relevant, supports the consideration and where appropriate the adoption of management and mitigation measures, in addition to broader environmental controls. Where group-specific cultural information is shared, this is considered alongside environmental risk assessment to support culturally informed decision-making and ongoing management.	
(12) MAC requested that Woodside notify MAC in advance of any extended or non-routine offshore operations in the vicinity of the Dampier Archipelago, including unplanned extensions to activities in this area.	**(12)** Woodside acknowledges MAC's request regarding notification of extended or non-routine offshore operational activities in the vicinity of the Dampier Archipelago relevant to MAC's air quality monitoring programs. Woodside is supportive of the Murujuga Rock Art Monitoring Program (MRAMP) where the main focus is on sources in and around the Murujuga airshed, which in terms of Woodside activities include the Karratha Gas Plant (KGP) and Pluto LNG Plant. Activities covered by this EP are not anticipated to influence MAC's monitoring programs and relevant notification arrangements are managed through separate approval processes where applicable.	**(12)** Woodside advised MAC that offshore operational activities undertaken in Commonwealth Waters are relevant to direct emissions which occur from the facility or associated vessels. Direct emissions from the proposed activities identified in the EP, even in the event of extended or non-routine activities, are not anticipated to influence monitoring results, data interpretation, and reporting for MRAMP. The associated onshore emissions which are relevant to the scope of MRAMP occur at KGP, as a result of processing gas produced and transported onshore from Goodwyn Alpha Facility (and other offshore facilities). Woodside confirmed notifications to MAC in the context of onshore activities and associated emissions are more appropriately	**(12)** No action required.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

		managed by the primary and secondary approvals for KGP, including but not limited to various onshore management plans (such as the Air Quality of Cultural Heritage Management Plan) required under Ministerial Statement 1233 for ongoing operations at KGP.	
(13) MAC advised that in the event of an environmental incident whereby Murujuga falls within the possible impact zone, MAC must be contacted for comment and a review of management actions.	**(13)** Woodside has incident response and notification procedures in place, consistent with regulatory requirements, that include notification of relevant cultural authorities in the event of an environmental incident. Should an incident occur over Murujuga Sea Country, MAC would be contacted as part of this process.	**(13)** Woodside advised that should an incident occur over Murujuga Sea Country, MAC would be contacted.	**(13)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate included controls in Sections 6.6, 6.7 and 6.9. Refer to section 7.11 of the EP relating to notification following relevant environmental incidents in line with Appendix G – Oil Pollution First Strike Plan
While feedback has been received, there were no objections or claims.	Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24.	Woodside engages in ongoing consultation throughout the life of an EP. Should further feedback be received, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8 of the EP).	Based on the engagement to date, no additional measures or controls are required.
Summary Report – Consultation Complete			
Woodside has discharged its obligations for consultation under regulation 25 of the Environmental Regulations and consultation for the purpose of regulation 25 is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.4 of the EP. Specifically: **Sufficient Information** Sufficient information has been provided because: • On 13 April 2026, Woodside made the Consultation Information Sheet available on the Woodside website. • Woodside provided information on 13 April 2026 when consultation commenced. Woodside provided:			

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- A Summary Information Sheet developed specifically for Traditional Custodian groups and reviewed by a member of the Indigenous Affairs team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, a summary of the potential risks and impacts of the activity, diagrams and details about how to provide feedback.
- Links to the NOPSEMA Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information, and contact details.
- Confirmation of the purpose of consultation, what was being sought by Woodside through consultation including understanding the nature of their interests and how the activity could impact those interests.
- A request for the consultation and information sheets to be distributed to members and individuals as required.
- An offer to provide more specific information, maps and images if required.

- Woodside provided contact information for Woodside and NOPSEMA.
- Woodside provided updated information which included:
  - A reference to the original consultation email for this EP sent on 13 April 2026.
  - An updated Summary Information Sheet and link to the updated Consultation Information Sheet noting the EP changes made.
  - An invitation to provide further feedback by 26 August 2026 for the purpose of preparation for this EP.

Reasonable Period

A reasonable period for consultation in the preparation of the EP has been provided because:

- Woodside commenced consultation on this EP on 13 April 2026 and requested feedback by 12 May 2026 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.
- Woodside provided an activity update on this EP 28 July 2026 and requested feedback by 26 August 2026.
- Woodside has provided an opportunity to address and respond to feedback for over six months, demonstrating a "reasonable period" of consultation.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided and Woodside's approach to consultation is appropriate and adapted because:

- Woodside sought direction on the preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Traditional Custodian groups.
- Woodside has made information on this EP publicly available for over six months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (22 April 2026) and National Indigenous Times (28 April 2026) advising of the proposed activities and requesting comments or feedback.
- Woodside's initial email about this EP on 13 April 2026:
  - Included a general email address and telephone number for Woodside, as well as a direct email and telephone number for a dedicated focal person from Woodside's Indigenous Affairs Engagement team. Woodside also provided contact details for NOPSEMA.
  - Offered for Woodside to speak with members as well as the Board.
  - Asked to advise how the group would like Woodside to engage and whether further information is required.
- Woodside offered to meet on a number of occasions.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Outcomes of Consultation

The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- Additional contextual information was provided during consultation for this EP relating to cultural values, in addition to cultural values obtained throughout consultation for other activities and publicly available literature. Woodside has incorporated the groups interests and cultural values in Section 4.9.
- During the past 6 months, the group provided feedback but no objections or claims about the adverse impact of the activity to which this EP relates.

Woodside engages in ongoing consultation once an EP has been submitted for assessment as well as throughout the life of an EP. Should feedback be received after the EP has been accepted (including relevant new information relating to cultural values), it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8 of the EP).

4.11.5 Nganhurra Thanardi Garrbu Aboriginal Corporation (NTGAC)

NTGAC is established under the Native Title Act 1993 (Cth) by the Baiyungu people to represent the Baiyungu people (defined broadly by reference to descent from the set of ancestors who were known to have a continuous and unbroken connection as the Traditional Custodians at the time of European colonisation) and represent their communal interests including, among other things, management and protection of cultural values. NTGAC is represented by YMAC.

Summary of information provided and record of consultation for this EP:

- On 13 April 2026, Woodside emailed NTGAC (via YMAC) advising of the proposed activity (Record of Consultation, reference 6.1.31). The email included:
  - A Summary Information Sheet.
  - A link to the Consultation Information Sheet.
  - An overview of the proposed activity.
  - Links to the NOPSEMA Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information and contact details.
  - **(1)** Information on the cultural values related to the group that Woodside considers relevant to the activity.
  - **(1)** A request from Woodside that the group confirm if there were any changes or additional information regarding cultural values that Woodside should consider in the preparation for this EP
  - A request for information on the group's preferred ways to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
  - A request for feedback by 12 May 2026 for the purposes of preparation of the EP.
  - Advice that feedback can continue to be provided to Woodside during the life of an EP, including after consultation for the EP has closed, during EP assessment, and after an EP has been accepted by NOPSEMA.
  - Woodside's commitment to managing gender-restricted or other culturally sensitive information.
  - A request for the group to provide information about the proposed activity to other individuals as required.
- On 30 April 2026, Woodside emailed NTGAC (via YMAC) a reminder about the proposed activity (SI Report B, reference 1.5.1). The email included:

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- A reference to the original consultation email for this EP sent on 13 April 2026, which included a Summary Information Sheet and a link to the Consultation Information Sheet.
- A reminder that consultation for the purposes of preparation of the EP closes on 12 May 2026.
- A request for information on the group's preferred ways to engage with Woodside about the proposed activity, including the opportunity to meet face to face.
- Woodside's commitment to managing gender-restricted or other culturally sensitive information.
- Advice that feedback can continue to be provided to Woodside during the life of an EP, including after consultation for the EP has closed, during EP assessment, and after an EP has been accepted by NOPSEMA.

- On 28 July 2026, Woodside emailed NTGAC (via YMAC) an activity update about the proposed activity (Record of Consultation, reference 1.5.2). The email included:
  - A reference to the original consultation email for this EP sent to NTGAC (via YMAC) on 13 April 2026.
  - A Summary Information Sheet and a link to the Consultation Information Sheet.
  - A request to provide any additional feedback by 26 August 2026 so that it can be considered in the preparation of the EP.
  - **(1)** Information on the cultural values that Woodside consider relevant to the activity.
  - **(1)** A request from Woodside that NTGAC (via YMAC) confirm if there were any changes or additional information regarding cultural values that Woodside should consider in the preparation for this EP

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the Adverse Impact of the Activity	Woodside's Response	Inclusion in Environment Plan
(1) Cultural value Marine ecosystems and species: • Interest in invasive marine species • Interest in chemicals released into water – ballast water discharge • Marine parks – Risks • Whales • Whale Sharks	**(1)** This value has been identified through Woodside's data collection processes (consultation).	**(1)** At the beginning of consultation for this EP, Woodside provided a list of the cultural values known to Woodside that it believed relevant to the group and invited it to make changes or provide additional information (See Record of Consultation, 6.1.31). No changes were requested.	**(1)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate included controls in Sections 6.6, 6.7 and 6.9.
No feedback, objections or claims about the adverse impact of the activity received despite follow-up.	Although no feedback, objections or claims were provided for this EP, historical cultural values considered relevant have been identified and included based on consultation.	Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of	No additional measures or controls are required.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

		Change and Revision process (see Section 7.8 of the EP).	

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environmental Regulations and consultation for the purpose of regulation 25 is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.4 of the EP. Specifically:

Sufficient Information

Sufficient information has been provided because:

- On 13 April 2026, Woodside made the Consultation Information Sheet available on the Woodside website.
- Woodside provided information on 13 April 2026 when consultation commenced. Woodside provided:
  - A Summary Information Sheet developed specifically for Traditional Custodian groups and reviewed by a member of the Indigenous Affairs team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, a summary of the potential risks and impacts of the activity, diagrams and details about how to provide feedback.
  - Links to the NOPSEMA Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information, and contact details.
  - Confirmation of the purpose of consultation, what was being sought by Woodside through consultation including understanding the nature of their interests and how the activity could impact those interests.
  - A request for the consultation and information sheets to be distributed to members and individuals as required.
  - An offer to provide more specific information, maps and images if required.
- Woodside provided contact information for Woodside and NOPSEMA.
- Woodside provided updated information which included:
  - A reference to the original consultation email for this EP sent on 13 April 2026.
  - An updated Summary Information Sheet and link to the updated Consultation Information Sheet noting the EP changes made.
  - An invitation to provide further feedback by 26 August 2026 for the purpose of preparation for this EP

Reasonable Period

A reasonable period for consultation in the preparation of the EP has been provided because:

- Woodside commenced consultation on this EP on 13 April 2026 and requested feedback by 12 May 2026 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.
- Woodside provided an activity update on this EP 28 July 2026 and requested feedback by 26 August 2026.
- Woodside has provided an opportunity to address and respond to feedback for over six months, demonstrating a "reasonable period" of consultation.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided and Woodside's approach to consultation is appropriate and adapted because:

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- Woodside sought direction on the preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Traditional Custodian groups.
- Woodside has made information on this EP publicly available for over six months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (22 April 2026) and National Indigenous Times (28 April 2026) advising of the proposed activities and requesting comments or feedback.
- Woodside's initial email about this EP on 13 April 2026:
  - Included a general email address and telephone number for Woodside, as well as a direct email and telephone number for a dedicated focal person from Woodside's Indigenous Affairs Engagement team. Woodside also provided contact details for NOPSEMA.
  - Offered for Woodside to speak with members as well as the Board.
  - Asked to advise how the group would like Woodside to engage and whether further information is required.
- Woodside offered to meet on a number of occasions.

Outcomes of Consultation

The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- No feedback or information was provided during consultation for this EP.
- During the past six months, no objections or claims about the adverse impact of the activity to which this EP relates have been raised.

Woodside engages in ongoing consultation once an EP has been submitted for assessment as well as throughout the life of an EP. Should feedback be received after the EP has been accepted (including relevant new information relating to cultural values), it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8 of the EP).

4.11.6 Ngarluma Aboriginal Corporation (NAC)

NAC is established under the Native Title Act 1993 (Cth) by the Ngarluma people to represent the Ngarluma people (defined broadly by reference to descent from the set of ancestors who were known to have a continuous and unbroken connection as the Traditional Custodians at the time of European colonisation) and represent their communal interests including, among other things, management and protection of cultural values.

Summary of information provided and record of consultation for this EP:

- On 13 April 2026, Woodside emailed NAC advising of the proposed activity (Record of Consultation, reference 6.1.32). The email included:
  - A Summary Information Sheet.
  - A link to the Consultation Information Sheet.
  - An overview of the proposed activity.
  - Links to the NOPSEMA Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information and contact details.
  - **(1,2,3)** Information on the cultural values related to the group that Woodside considers relevant to the activity.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- **(1,2,3)** A request from Woodside that NAC confirm if there were any changes or additional information regarding cultural values that Woodside should consider in the preparation for this EP.
- A request for information on the group's preferred ways to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
- A request for feedback by 12 May 2026 for the purposes of preparation of the EP.
- Advice that feedback can continue to be provided to Woodside during the life of an EP, including after consultation for the EP has closed, during EP assessment, and after an EP has been accepted by NOPSEMA.
- Woodside's commitment to managing gender-restricted or other culturally sensitive information.
- A request for the group to provide information about the proposed activity to other individuals as required.
- Acknowledgement that discussions relating to a consultation framework agreement with Woodside has been ongoing and that these discussions will progress in parallel with consultation for the proposed activity's EP.

- On 30 April 2026, Woodside emailed NAC a reminder about the proposed activity (SI Report B, reference 1.6.1). The email included:
  - A reference to the original consultation email for this EP sent on 13 April 2026, which included a Summary Information Sheet and a link to the Consultation Information Sheet.
  - A reminder that consultation for the preparation of the EP closes on 12 May 2026.
  - A request for information on the group's preferred ways to engage with Woodside about the proposed activity, including the opportunity to meet face to face.
  - Woodside's commitment to managing gender-restricted or other culturally sensitive information.
  - Advice that feedback can continue to be provided to Woodside during the life of an EP, including after consultation for the EP has closed, during EP assessment, and after an EP has been accepted by NOPSEMA.
- On 3 June 2026, NAC, WAC and Wong-Goo-Tt-Oo attended a Quarterly Heritage Meeting in Karratha (SI Report B, reference 5.1). Matters discussed included:
  - A video explaining environmental impact assessments.
  - Upcoming EP dates.
- On 28 July 2026, Woodside emailed NAC an activity update about the proposed activity (Record of Consultation, reference 1.6.2). The email included:
  - A reference to the original consultation email for this EP sent to the group on 13 April 2026.
  - A Summary Information Sheet and a link to the Consultation Information Sheet.
  - A request to provide any additional feedback by 26 August 2026 so that it can be considered in the preparation of the EP.
  - **(1,2,3)** Information on the cultural values that Woodside consider relevant to the activity.
  - **(1,2,3)** A request from Woodside that NAC confirm if there were any changes or additional information regarding cultural values that Woodside should consider in the preparation of this EP.
- On 2 September 2026, NAC and WAC attended a Quarterly Heritage Meeting in Karratha (SI Report B, reference 5.2). During the meeting Woodside reminded attendees that feedback can be provided during the life of an EP.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the Adverse Impact of the Activity	Woodside's Response	Inclusion in Environment Plan
(1) Cultural value • Onshore Heritage – interest in management of heritage sites.	**(1)** This value has been identified through Woodside's data collection processes (consultation).	**(1)** At the beginning of consultation for this EP, Woodside provided a list of the cultural values known to Woodside that it believed relevant to the group and invited it to make changes or provide additional information (See Record of Consultation, 6.1.32). No changes were requested.	**(1)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate included controls in Sections 6.6, 6.7 and 6.9.
(2) Cultural value • Potential submerged heritage	**(2)** This value has been identified through Woodside's data collection processes (consultation).	**(2)** At the beginning of consultation for this EP, Woodside provided a list of the cultural values known to Woodside that it believed relevant to the group and invited it to make changes or provide additional information (See Record of Consultation,6.1.32). No changes were requested.	**(2)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate included controls in Sections 6.6, 6.7 and 6.9.
(3) Cultural value • Manggan (Creative beings) used supernatural force to shape the hills, rivers, seas and landform.	**(3)** This value has been identified through Woodside's data collection processes (publicly available literature).	**(3)** At the beginning of consultation for this EP, Woodside provided a list of the cultural values known to Woodside that it believed relevant to the group and invited it to make changes or provide additional information (See Record of Consultation, 6.1.32). No changes were requested.	**(3)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate included controls in Sections 6.6, 6.7 and 6.9.
No feedback, objections or claims about the adverse impact of the activity received despite follow-up.	Although no feedback, objections or claims were provided for this EP, historical cultural values considered relevant have been identified and	Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted, it will be	No additional measures or controls are required.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

	included based on consultation and publicly available literature.	assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8 of the EP).	

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environmental Regulations and consultation for the purpose of regulation 25 is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.4 of the EP. Specifically:

Sufficient Information

Sufficient information has been provided because:

- On 13 April 2026, Woodside made the Consultation Information Sheet available on the Woodside website.
- Woodside provided information on 13 April 2026 when consultation commenced. Woodside provided:
  - A Summary Information Sheet developed specifically for Traditional Custodian groups and reviewed by a member of the Indigenous Affairs team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, a summary of the potential risks and impacts of the activity, diagrams and details about how to provide feedback.
  - Links to the NOPSEMA Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information, and contact details.
  - Confirmation of the purpose of consultation, what was being sought by Woodside through consultation including understanding the nature of their interests and how the activity could impact those interests.
  - A request for the consultation and information sheets to be distributed to members and individuals as required.
  - An offer to provide more specific information, maps and images if required.
- Woodside provided contact information for Woodside and NOPSEMA.
- Woodside provided updated information which included:
  - A reference to the original consultation email for this EP sent on 13 April 2026.
  - An updated Summary Information Sheet and link to the updated Consultation Information Sheet noting the EP changes made.
  - An invitation to provide further feedback by 26 August 2026 for the purpose of preparation for this EP.

Reasonable Period

A reasonable period for consultation in the preparation of the EP has been provided because:

- Woodside commenced consultation on this EP on 13 April 2026 and requested feedback by 12 May 2026 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.
- Woodside provided an activity update on this EP 28 July 2026 and requested feedback by 26 August 2026.
- Woodside has provided an opportunity to address and respond to feedback for over 6 months, demonstrating a "reasonable period" of consultation.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided and Woodside's approach to consultation is appropriate and adapted because:

- Woodside sought direction on the preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Traditional Custodian groups.
- Woodside has made information on this EP publicly available for over 6 months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (22 April 2026) and National Indigenous Times (28 April 2026) advising of the proposed activities and requesting comments or feedback.
- Woodside's initial email about this EP on 13 April 2026:
  - Included a general email address and telephone number for Woodside, as well as a direct email and telephone number for a dedicated focal person from Woodside's Indigenous Affairs Engagement team. Woodside also provided contact details for NOPSEMA.
  - Offered for Woodside to speak with members as well as the Board.
  - Asked to advise how the group would like Woodside to engage and whether further information is required.
- Woodside offered to meet on a number of occasions.
- Woodside hosts Community Heritage Meetings.

Outcomes of Consultation

The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- No feedback or information was provided during consultation for this EP.
- During the past 6 months, no objections or claims about the adverse impact of the activity to which this EP relates have been raised.

Woodside engages in ongoing consultation once an EP has been submitted for assessment as well as throughout the life of an EP. Should feedback be received after the EP has been accepted (including relevant new information relating to cultural values), it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8 of the EP).

4.11.7 Nhuwala Claim Group (Nhuwala)

The Nhuwala Claim Group Native Title claim is in Western Australia's Pilbara region within the Shire of Ashburton. The application area covers around 3,475 square kilometres near the town of Onslow. Nhuwala is represented by YMAC.

Summary of information provided and record of consultation for this EP:

- On 13 April 2026, Woodside emailed Nhuwala (via YMAC) advising of the proposed activity (Record of Consultation, reference 6.1.33). The email included:
  - A Summary Information Sheet.
  - A link to the Consultation Information Sheet.
  - An overview of the proposed activity.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- Links to the NOPSEMA Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information and contact details.
- A request for information on the group's preferred ways to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
- A request for feedback by 12 May 2026 for the purposes of preparation of the EP.
- Advice that feedback can continue to be provided to Woodside during the life of an EP, including after consultation for the EP has closed, during EP assessment, and after an EP has been accepted by NOPSEMA.
- Woodside's commitment to managing gender-restricted or other culturally sensitive information.
- A request for the group to provide information about the proposed activity to other individuals as required.

- On 30 April 2026, Woodside emailed Nhuwala (via YMAC) a reminder about the proposed activity (SI Report B, reference 1.7.1). The email included:
  - A reference to the original consultation email for this EP sent on 13 April 2026, which included a Summary Information Sheet and a link to the Consultation Information Sheet.
  - A reminder that consultation for the preparation of the EP closes on 12 May 2026.
  - A request for information on the group's preferred ways to engage with Woodside about the proposed activity, including the opportunity to meet face to face.
  - Woodside's commitment to managing gender-restricted or other culturally sensitive information.
  - Advice that feedback can continue to be provided to Woodside during the life of an EP, including after consultation for the EP has closed, during EP assessment, and after an EP has been accepted by NOPSEMA.
- On 28 July 2026, Woodside emailed Nhuwala (via YMAC) an activity update about the proposed activity (Record of Consultation, reference 1.7.2). The email included:
  - A reference to the original consultation email for this EP sent to the group on 13 April 2026.
  - A Summary Information Sheet and a link to the Consultation Information Sheet.
  - A request to provide any additional feedback by 26 August 2026 so that it can be considered in the preparation of the EP.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the Adverse Impact of the Activity	Woodside's Response	Inclusion in Environment Plan
No feedback, objections or claims about the adverse impact of the activity received despite follow-up.	Woodside engages in ongoing consultation throughout the life of an EP.	Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8 of the EP).	No additional measures or controls are required.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Summary Report – Consultation Complete
Woodside has discharged its obligations for consultation under regulation 25 of the Environmental Regulations and consultation for the purpose of regulation 25 is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.4 of the EP. Specifically: **Sufficient Information** Sufficient information has been provided because: • On 13 April 2026, Woodside made the Consultation Information Sheet available on the Woodside website. • Woodside provided information on 13 April 2026 when consultation commenced. Woodside provided: - A Summary Information Sheet developed specifically for Traditional Custodian groups and reviewed by a member of the Indigenous Affairs team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, a summary of the potential risks and impacts of the activity, diagrams and details about how to provide feedback. - Links to the NOPSEMA Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information, and contact details. - Confirmation of the purpose of consultation, what was being sought by Woodside through consultation including understanding the nature of their interests and how the activity could impact those interests. - A request for the consultation information to be distributed to members and individuals as required. - An offer to provide more specific information, maps and images if required. • Woodside provided contact information for Woodside and NOPSEMA. • Woodside provided updated information which included: - A reference to the original consultation email for this EP sent on 13 April 2026. - An updated Summary Information Sheet and link to the updated Consultation Information Sheet noting the EP changes made. - An invitation to provide further feedback by 26 August 2026 for the purpose of preparation for this EP. **Reasonable Period** A reasonable period for consultation in the preparation of the EP has been provided because: • Woodside commenced consultation on this EP on 13 April 2026 and requested feedback by 12 May 2026 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation. • Woodside provided an activity update on this EP 28 July 2026 and requested feedback by 26 August 2026. • Woodside has provided an opportunity to address and respond to feedback for over 6 months, demonstrating a "reasonable period" of consultation. **Reasonable Opportunity** A reasonable opportunity to provide feedback has been provided and Woodside's approach to consultation is appropriate and adapted because: • Woodside sought direction on the preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Traditional Custodian groups.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- Woodside has made information on this EP publicly available for over 6 months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (22 April 2026) and National Indigenous Times (28 April 2026) advising of the proposed activities and requesting comments or feedback.
- Woodside's initial email about this EP on 13 April 2026:
  - Included a general email address and telephone number for Woodside, as well as a direct email and telephone number for a dedicated focal person from Woodside's Indigenous Affairs Engagement team. Woodside also provided contact details for NOPSEMA.
  - Offered for Woodside to speak with members as well as the Board.
  - Asked to advise how the group would like Woodside to engage and whether further information is required.
- Woodside offered to meet on a number of occasions.

Outcomes of Consultation

The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- During the past six months, no objections or claims about the adverse impact of the activity to which this EP relates have been raised.

Woodside engages in ongoing consultation once an EP has been submitted for assessment as well as throughout the life of an EP. Should feedback be received after the EP has been accepted (including relevant new information relating to cultural values), it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8 of the EP).

4.11.8 Nhuwala / Thalanyji People (Nhuwala / Thalanyji)

The Thalanyji / Nhuwala People Native Title claim is in Western Australia's Pilbara region within the Shire of Ashburton. The application area consists of multiple parts with a total combined area of around 2,058 square kilometres in an area surrounding Onslow. The Thalanyji / Nhuwala People have legal representation and are associated with BTAC. Woodside has consulted with the Thalanyji / Nhuwala People via BTAC.

Summary of information provided and record of consultation for this EP:

- On 13 April 2026, Woodside emailed Nhuwala / Thalanyji (via BTAC) advising of the proposed activity (Record of Consultation, reference 6.1.34). The email included:
  - A Summary Information Sheet.
  - A link to the Consultation Information Sheet.
  - An overview of the proposed activity.
  - Links to the NOPSEMA Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information and contact details.
  - A request for information on the group's preferred ways to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
  - A request for feedback by 12 May 2026 for the purposes of preparation of the EP.
  - Advice that feedback can continue to be provided to Woodside during the life of an EP, including after consultation for the EP has closed, during EP assessment, and after an EP has been accepted by NOPSEMA.
  - Woodside's commitment to managing gender-restricted or other culturally sensitive information.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- A request for the group to provide information about the proposed activity to other individuals as required.

- On 30 April 2026, Woodside emailed Nhuwala / Thalanyji (via BTAC) a reminder about the proposed activity (SI Report B, reference 1.8.1). The email included:
  - A reference to the original consultation email for this EP sent on 13 April 2026, which included a Summary Information Sheet and a link to the Consultation Information Sheet.
  - A reminder that consultation for the preparation of the EP closes on 12 May 2026.
  - A request for information on the group's preferred ways to engage with Woodside about the proposed activity, including the opportunity to meet face to face.
  - Woodside's commitment to managing gender-restricted or other culturally sensitive information.
  - Advice that feedback can continue to be provided to Woodside during the life of an EP, including after consultation for the EP has closed, during EP assessment, and after an EP has been accepted by NOPSEMA.
- On 28 July 2026, Woodside emailed Nhuwala / Thalanyji (via BTAC) an activity update about the proposed activity (Record of Consultation, reference 1.8.2). The email included:
  - A reference to the original consultation email for this EP sent to the group on 13 April 2026.
  - A Summary Information Sheet and a link to the Consultation Information Sheet.
  - A request to provide any additional feedback by 26 August 2026 so that it can be considered in the preparation of the EP.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the Adverse Impact of the Activity	Woodside's Response	Inclusion in Environment Plan
No feedback, objections or claims about the adverse impact of the activity received despite follow-up.	Woodside engages in ongoing consultation throughout the life of an EP.	Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8 of the EP).	No additional measures or controls are required.

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environmental Regulations and consultation for the purpose of regulation 25 is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.4 of the EP. Specifically:

Sufficient Information

Sufficient information has been provided because:

- On 13 April 2026, Woodside made the Consultation Information Sheet available on the Woodside website.
- Woodside provided information on 13 April 2026 when consultation commenced. Woodside provided:

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- A Summary Information Sheet developed specifically for Traditional Custodian groups and reviewed by a member of the Indigenous Affairs team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, a summary of the potential risks and impacts of the activity, diagrams and details about how to provide feedback.
- Links to the NOPSEMA Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information, and contact details.
- Confirmation of the purpose of consultation, what was being sought by Woodside through consultation including understanding the nature of their interests and how the activity could impact those interests.
- A request for the consultation information to be distributed to members and individuals as required.
- An offer to provide more specific information, maps and images if required.

- Woodside provided contact information for Woodside and NOPSEMA.
- Woodside provided updated information which included:
  - A reference to the original consultation email for this EP sent on 13 April 2026.
  - An updated Summary Information Sheet and link to the updated Consultation Information Sheet noting the EP changes made.
  - An invitation to provide further feedback by 26 August 2026 for the purpose of preparation for this EP

Reasonable Period

A reasonable period for consultation in the preparation of the EP has been provided because:

- Woodside commenced consultation on this EP on 13 April 2026 and requested feedback by 12 May 2026 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.
- Woodside provided an activity update on this EP 28 July 2026 and requested feedback by 26 August 2026.
- Woodside has provided an opportunity to address and respond to feedback for over 6 months, demonstrating a "reasonable period" of consultation.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided and Woodside's approach to consultation is appropriate and adapted because:

- Woodside sought direction on the preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Traditional Custodian groups.
- Woodside has made information on this EP publicly available for over 6 months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (22 April 2026) and National Indigenous Times (28 April 2026) advising of the proposed activities and requesting comments or feedback.
- Woodside's initial email about this EP on 13 April 2026:
  - Included a general email address and telephone number for Woodside, as well as a direct email and telephone number for a dedicated focal person from Woodside's Indigenous Affairs Engagement team. Woodside also provided contact details for NOPSEMA.
  - Offered for Woodside to speak with members as well as the Board.
  - Asked to advise how Nhuwala / Thalanyji would like Woodside to engage and whether further information is required.
- Woodside offered to meet on a number of occasions.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Outcomes of Consultation

The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- During the past six months, no objections or claims about the adverse impact of the activity to which this EP relates have been raised.

Woodside engages in ongoing consultation once an EP has been submitted for assessment as well as throughout the life of an EP. Should feedback be received after the EP has been accepted (including relevant new information relating to cultural values), it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8 of the EP).

4.11.9 Nyangumarta Karajarri Aboriginal Corporation (NKAC)

NKAC is established under the Native Title Act 1993 by the Nyangumarta and Karajarri people to represent the Nyangumarta and Karajarri people (defined broadly by reference to descent from the set of ancestors who were known to have a continuous and unbroken connection as the Traditional Custodians at the time of European colonisation) and represent their communal interests including, among other things, management and protection of cultural values. KLC is the Native Title Representative Body for NKAC.

Summary of information provided and record of consultation for this EP:

- On 13 April 2026, Woodside emailed NKAC (via KLC) advising of the proposed activity (Record of Consultation, reference 6.1.35). The email included:
  - A Summary Information Sheet.
  - A link to the Consultation Information Sheet.
  - An overview of the proposed activity.
  - Links to the NOPSEMA Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information and contact details.
  - A request for information on the group's preferred ways to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
  - A request for feedback by 12 May 2026 for the purposes of preparation of the EP.
  - Advice that feedback can continue to be provided to Woodside during the life of an EP, including after consultation for the EP has closed, during EP assessment, and after an EP has been accepted by NOPSEMA.
  - Woodside's commitment to managing gender-restricted or other culturally sensitive information.
  - A request for the group to provide information about the proposed activity to other individuals as required.
- On 30 April 2026, Woodside emailed NKAC (via KLC) a reminder about the proposed activity (SI Report B, reference 1.9.1). The email included:
  - A reference to the original consultation email for this EP sent on 13 April 2026, which included a Summary Information Sheet and a link to the Consultation Information Sheet.
  - A reminder that consultation for the preparation of the EP closes on 12 May 2026.
  - A request for information on the group's preferred ways to engage with Woodside about the proposed activity, including the opportunity to meet face to face.
  - Woodside's commitment to managing gender-restricted or other culturally sensitive information.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- Advice that feedback can continue to be provided to Woodside during the life of an EP, including after consultation for the EP has closed, during EP assessment, and after an EP has been accepted by NOPSEMA.

- On 28 July 2026, Woodside emailed NKAC (via KLC) an activity update about the proposed activity (SI Report B, reference 1.9.2). The email included:
  - A reference to the original consultation email for this EP sent to the group on 13 April 2026.
  - A Summary Information Sheet and a link to the Consultation Information Sheet.
  - A request to provide any additional feedback by 26 August 2026 so that it can be considered in the preparation of the EP.
- On 3 September 2026, NKAC (via KLC) emailed Woodside advising that the activity update had been received and forwarded to their lawyer (SI Report B, reference 1.9.3).

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the Adverse Impact of the Activity	Woodside's Response	Inclusion in Environment Plan
No feedback, objections or claims about the adverse impact of the activity received despite follow-up.	Woodside engages in ongoing consultation throughout the life of an EP.	Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8 of the EP).	No additional measures or controls are required.

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environmental Regulations and consultation for the purpose of regulation 25 is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.4 of the EP. Specifically:

Sufficient Information

Sufficient information has been provided because:

- On 13 April 2026, Woodside made the Consultation Information Sheet available on the Woodside website.
- Woodside provided information on 13 April 2026 when consultation commenced. Woodside provided:
  - A Summary Information Sheet developed specifically for Traditional Custodian groups and reviewed by a member of the Indigenous Affairs team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, a summary of the potential risks and impacts of the activity, diagrams and details about how to provide feedback.
  - Links to the NOPSEMA Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information, and contact details.
  - Confirmation of the purpose of consultation, what was being sought by Woodside through consultation including understanding the nature of their interests and how the activity could impact those interests.
  - A request for the consultation information to be distributed to members and individuals as required.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- An offer to provide more specific information, maps and images if required.

- Woodside provided contact information for Woodside and NOPSEMA.
- Woodside provided updated information which included:
  - A reference to the original consultation email for this EP sent on 13 April 2026.
  - An updated Summary Information Sheet and link to the updated Consultation Information Sheet noting the EP changes made.
  - An invitation to provide further feedback by 26 August 2026 for the purpose of preparation for this EP

Reasonable Period

A reasonable period for consultation in the preparation of the EP has been provided because:

- Woodside commenced consultation on this EP on 13 April 2026 and requested feedback by 12 May 2026 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.
- Woodside provided an activity update on this EP 28 July 2026 and requested feedback by 26 August 2026.
- Woodside has provided an opportunity to address and respond to feedback for over six months, demonstrating a "reasonable period" of consultation.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided and Woodside's approach to consultation is appropriate and adapted because:

- Woodside sought direction on the preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Traditional Custodian groups.
- Woodside has made information on this EP publicly available for over six months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (22 April 2026) and National Indigenous Times (28 April 2026) advising of the proposed activities and requesting comments or feedback.
- Woodside's initial email about this EP on 13 April 2026:
  - Included a general email address and telephone number for Woodside, as well as a direct email and telephone number for a dedicated focal person from Woodside's Indigenous Affairs Engagement team. Woodside also provided contact details for NOPSEMA.
  - Offered for Woodside to speak with members as well as the Board.
  - Asked to advise how the group would like Woodside to engage and whether further information is required.
- Woodside offered to meet on a number of occasions.

Outcomes of Consultation

The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- No feedback or information was provided during consultation for this EP.
- During the past six months, no objections or claims about the adverse impact of the activity to which this EP relates have been raised.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Woodside engages in ongoing consultation once an EP has been submitted for assessment as well as throughout the life of an EP. Should feedback be received after the EP has been accepted (including relevant new information relating to cultural values), it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8 of the EP).

4.11.10 Nyangumarta Warrarn Aboriginal Corporation (NWAC)

NWAC is established under the Native Title Act 1993 (Cth) by the Nyangumarta people to represent the Nyangumarta people (defined broadly by reference to descent from the set of ancestors who were known to have a continuous and unbroken connection as the Traditional Custodians at the time of European colonisation) and represent their communal interests including, among other things, management and protection of cultural values.

Summary of information provided and record of consultation for this EP:

- On 13 April 2026, Woodside emailed NWAC advising of the proposed activity (Record of Consultation, reference 6.1.36). The email included:
  - A Summary Information Sheet.
  - A link to the Consultation Information Sheet.
  - An overview of the proposed activity.
  - Links to the NOPSEMA Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information and contact details.
  - **(1,2)** Information on the cultural values related to the group that Woodside considers relevant to the activity.
  - **(1,2)** A request from Woodside that the group confirm if there were any changes or additional information regarding cultural values that Woodside should consider in the preparation for this EP.
  - A request for information on the group's preferred ways to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
  - A request for feedback by 12 May 2026 for the purposes of preparation of the EP.
  - Advice that feedback can continue to be provided to Woodside during the life of an EP, including after consultation for the EP has closed, during EP assessment, and after an EP has been accepted by NOPSEMA.
  - Woodside's commitment to managing gender-restricted or other culturally sensitive information.
  - A request for the group to provide information about the proposed activity to other individuals as required.
- On 30 April 2026, Woodside emailed NWAC a reminder about the proposed activity (SI Report B, reference 1.10.1). The email included:
  - A reference to the original consultation email for this EP sent on 13 April 2026, which included a Summary Information Sheet and a link to the Consultation Information Sheet.
  - A reminder that consultation for the preparation of the EP closes on 12 May 2026.
  - A request for information on the group's preferred ways to engage with Woodside about the proposed activity, including the opportunity to meet face to face.
  - Woodside's commitment to managing gender-restricted or other culturally sensitive information.
  - Advice that feedback can continue to be provided to Woodside during the life of an EP, including after consultation for the EP has closed, during EP assessment, and after an EP has been accepted by NOPSEMA.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- On 28 July 2026, Woodside emailed NWAC an activity update about the proposed activity (SI Report B, reference 1.10.2). The email included:
  - A reference to the original consultation email for this EP sent to the group on 13 April 2026.
  - A Summary Information Sheet and a link to the Consultation Information Sheet.
  - A request to provide any additional feedback by 26 August 2026 so that it can be considered in the preparation of the EP.
  - **(1,2)** Information on the cultural values that Woodside consider relevant to the activity.
  - **(1,2)** A request from Woodside that the group confirm if there were any changes or additional information regarding cultural values that Woodside should consider in the preparation for this EP.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the Adverse Impact of the Activity	Woodside's Response	Inclusion in Environment Plan
(1) Cultural value • Eighty Mile Beach has cultural and ecological value to the Nyangumarta Custodians	**(1)** This value has been identified through Woodside's data collection processes (consultation).	**(1)** At the beginning of consultation for this EP, Woodside provided a list of the cultural values known to Woodside that it believed relevant to the group and invited it to make changes or provide additional information (See Record of Consultation, 6.1.36). No changes were requested.	**(1)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate included controls in Sections 6.6, 6.7 and 6.9.
(2) Cultural value Resource Collection: • Impacts to migrating birds, whales, turtles and vegetation.	**(2)** This value has been identified through Woodside's data collection processes (consultation).	**(2)** At the beginning of consultation for this EP, Woodside provided a list of the cultural values known to Woodside that it believed relevant to the group and invited it to make changes or provide additional information (See Record of Consultation, 6.1.36). No changes were requested.	**(2)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate included controls in Sections 6.6, 6.7 and 6.9.
No feedback, objections or claims about the adverse impact of the activity received despite follow-up.	Although no feedback, objections or claims were provided for this EP, historical cultural values considered relevant have been identified and included based on consultation.	Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of	No additional measures or controls are required.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

		Change and Revision process (see Section 7.8 of the EP).	

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environmental Regulations and consultation for the purpose of regulation 25 is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.4 of the EP. Specifically:

Sufficient Information

Sufficient information has been provided because:

- On 13 April 2026, Woodside made the Consultation Information Sheet available on the Woodside website.
- Woodside provided information on 13 April 2026 when consultation commenced. Woodside provided:
  - A Summary Information Sheet developed specifically for Traditional Custodian groups and reviewed by a member of the Indigenous Affairs team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, a summary of the potential risks and impacts of the activity, diagrams and details about how to provide feedback.
  - Links to the NOPSEMA Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information, and contact details.
  - Confirmation of the purpose of consultation, what was being sought by Woodside through consultation including understanding the nature of their interests and how the activity could impact those interests.
  - A request for the consultation information to be distributed to members and individuals as required.
  - An offer to provide more specific information, maps and images if required.
- Woodside provided contact information for Woodside and NOPSEMA.
- Woodside provided updated information which included:
  - A reference to the original consultation email for this EP sent on 13 April 2026.
  - An updated Summary Information Sheet and link to the updated Consultation Information Sheet noting the EP changes made.
  - An invitation to provide further feedback by 26 August 2026 for the purpose of preparation for this EP

Reasonable Period

A reasonable period for consultation in the preparation of the EP has been provided because:

- Woodside commenced consultation on this EP on 13 April 2026 and requested feedback by 12 May 2026 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.
- Woodside provided an activity update on this EP 28 July 2026 and requested feedback by 26 August 2026.
- Woodside has provided an opportunity to address and respond to feedback for over six months, demonstrating a "reasonable period" of consultation.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided and Woodside's approach to consultation is appropriate and adapted because:

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- Woodside sought direction on the preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Traditional Custodian groups.
- Woodside has made information on this EP publicly available for over six months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (22 April 2026) and National Indigenous Times (28 April 2026) advising of the proposed activities and requesting comments or feedback.
- Woodside's initial email about this EP on 13 April 2026:
  - Included a general email address and telephone number for Woodside, as well as a direct email and telephone number for a dedicated focal person from Woodside's Indigenous Affairs Engagement team. Woodside also provided contact details for NOPSEMA.
  - Offered for Woodside to speak with members as well as the Board.
  - Asked to advise how the group would like Woodside to engage and whether further information is required.
- Woodside offered to meet on a number of occasions.

Outcomes of Consultation

The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- No feedback or information was provided during consultation for this EP.
- During the past six months, no objections or claims about the adverse impact of the activity to which this EP relates have been raised.

Woodside engages in ongoing consultation once an EP has been submitted for assessment as well as throughout the life of an EP. Should feedback be received after the EP has been accepted (including relevant new information relating to cultural values), it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8 of the EP).

4.11.11 Robe River Kuruma Aboriginal Corporation (RRKAC)

RRKAC is established under the Native Title Act 1993 (Cth) by the Rober River Kuruma people to represent the Robe River Kuruma people (defined broadly by reference to descent from the set of ancestors who were known to have a continuous and unbroken connection as the Traditional Custodians at the time of European colonisation) and represent their communal interests including, among other things, management and protection of cultural values.

Summary of information provided and record of consultation for this EP:

- On 13 April 2026, Woodside emailed RRKAC advising of the proposed activity (Record of Consultation, reference 6.1.37). The email included:
  - A Summary Information Sheet.
  - A link to the Consultation Information Sheet.
  - An overview of the proposed activity.
  - Links to the NOPSEMA Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information and contact details.
  - **(1,2)** Information on the cultural values related to the group that Woodside considers relevant to the activity.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- **(1,2)** A request from Woodside that the group confirm if there were any changes or additional information regarding cultural values that Woodside should consider in the preparation for this EP.
- A request for information on the group's preferred ways to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
- A request for feedback by 12 May 2026 for the purposes of preparation of the EP.
- Advice that feedback can continue to be provided to Woodside during the life of an EP, including after consultation for the EP has closed, during EP assessment, and after an EP has been accepted by NOPSEMA.
- Woodside's commitment to managing gender-restricted or other culturally sensitive information.
- A request for the group to provide information about the proposed activity to other individuals as required.

- On 30 April 2026, Woodside emailed RRKAC a reminder about the proposed activity (SI Report B, reference 1.11.1). The email included:
  - A reference to the original consultation email for this EP sent on 13 April 2026, which included a Summary Information Sheet and a link to the Consultation Information Sheet.
  - A reminder that consultation for the preparation of the EP closes on 12 May 2026.
  - A request for information on the group's preferred ways to engage with Woodside about the proposed activity, including the opportunity to meet face to face.
  - Woodside's commitment to managing gender-restricted or other culturally sensitive information.
  - Advice that feedback can continue to be provided to Woodside during the life of an EP, including after consultation for the EP has closed, during EP assessment, and after an EP has been accepted by NOPSEMA.
- On 28 July 2026, Woodside emailed RRKAC an activity update about the proposed activity (Record of Consultation, reference 1.11.2). The email included:
  - A reference to the original consultation email for this EP sent to the group on 13 April 2026.
  - A Summary Information Sheet and a link to the Consultation Information Sheet.
  - A request to provide any additional feedback by 26 August 2026 so that it can be considered in the preparation of the EP.
  - **(1,2)** Information on the cultural values that Woodside consider relevant to the activity.
  - **(1,2)** A request from Woodside that the group confirm if there were any changes or additional information regarding cultural values that Woodside should consider in the preparation of this EP.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the Adverse Impact of the Activity	Woodside's Response	Inclusion in Environment Plan
(1) Cultural value • Concerns about underwater heritage – impacts at shoreline.	**(1)** This value has been identified through Woodside's data collection processes (consultation).	**(1)** At the beginning of consultation for this EP, Woodside provided a list of the cultural values known to Woodside that it believed relevant to the group and	**(1)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

		invited it to make changes or provide additional information (See Record of Consultation, 6.1.37). No changes were requested.	included controls in Sections 6.6, 6.7 and 6.9.
(2) Cultural value • Coastline	**(2)** This value has been identified through Woodside's data collection processes (consultation).	**(2)** At the beginning of consultation for this EP, Woodside provided a list of the cultural values known to Woodside that it believed relevant to the group and invited it to make changes or provide additional information (See Record of Consultation, 6.1.37). No changes were requested.	**(2)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate included controls in Sections 6.6, 6.7 and 6.9.
No feedback, objections or claims about the adverse impact of the activity received despite follow-up.	Although no feedback, objections or claims were provided for this EP, historical cultural values considered relevant have been identified and included based on consultation.	Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8 of the EP).	No additional measures or controls are required.

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environmental Regulations and consultation for the purpose of regulation 25 is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.4 of the EP. Specifically:

Sufficient Information

Sufficient information has been provided because:

- On 13 April 2026, Woodside made the Consultation Information Sheet available on the Woodside website.
- Woodside provided information on 13 April 2026 when consultation commenced. Woodside provided:
  - A Summary Information Sheet developed specifically for Traditional Custodian groups and reviewed by a member of the Indigenous Affairs team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, a summary of the potential risks and impacts of the activity, diagrams and details about how to provide feedback.
  - Links to the NOPSEMA Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information, and contact details.
  - Confirmation of the purpose of consultation, what was being sought by Woodside through consultation including understanding the nature of their interests and how the activity could impact those interests.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- A request for the consultation information to be distributed to members and individuals as required.
- An offer to provide more specific information, maps and images if required.

- Woodside provided contact information for Woodside and NOPSEMA.
- Woodside provided updated information which included:
  - A reference to the original consultation email for this EP sent on 13 April 2026.
  - An updated Summary Information Sheet and link to the updated Consultation Information Sheet noting the EP changes made.
  - An invitation to provide further feedback by 26 August 2026 for the purpose of preparation for this EP

Reasonable Period

A reasonable period for consultation in the preparation of the EP has been provided because:

- Woodside commenced consultation on this EP on 13 April 2026 and requested feedback by 12 May 2026 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.
- Woodside provided an activity update on this EP 28 July 2026 and requested feedback by 26 August 2026.
- Woodside has provided an opportunity to address and respond to feedback for over six months, demonstrating a "reasonable period" of consultation.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided and Woodside's approach to consultation is appropriate and adapted because:

- Woodside sought direction on the preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Traditional Custodian groups.
- Woodside has made information on this EP publicly available for over six months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (22 April 2026) and National Indigenous Times (28 April 2026) advising of the proposed activities and requesting comments or feedback.
- Woodside's initial email about this EP on 13 April 2026:
  - Included a general email address and telephone number for Woodside, as well as a direct email and telephone number for a dedicated focal person from Woodside's Indigenous Affairs Engagement team. Woodside also provided contact details for NOPSEMA.
  - Offered for Woodside to speak with members as well as the Board.
  - Asked to advise how the group would like Woodside to engage and whether further information is required.
- Woodside offered to meet on a number of occasions.

Outcomes of Consultation

The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- No feedback or information was provided during consultation for this EP.
- During the past six months, no objections or claims about the adverse impact of the activity to which this EP relates have been raised.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Woodside engages in ongoing consultation once an EP has been submitted for assessment as well as throughout the life of an EP. Should feedback be received after the EP has been accepted (including relevant new information relating to cultural values), it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8 of the EP).

4.11.12 Wanparta Aboriginal Corporation (Wanparta)

Wanparta is established under the Native Title Act 1993 (Cth) by the Ngarla people to represent the Ngarla people (defined broadly by reference to descent from the set of ancestors who were known to have a continuous and unbroken connection as the Traditional Custodians at the time of European colonisation) and represent their communal interests including, among other things, management and protection of cultural values. Wanparta are represented by a law firm, therefore Woodside consult Wanparta through a legal representative.

At the start of consultation, Woodside provided Wanparta a table of cultural values previously identified through consultation and reviews of publicly available literature. Woodside invited the group to make changes or provide additional information about these cultural values. During consultation for this EP, Wanparta requested a consultation meeting. During this meeting Wanparta shared additional information with Woodside. We understand this new information to also be relevant to the activities described within this EP and have updated the EP to reflect this, with potential impacts assessed and relevant controls applied. This context and process demonstrates that Woodside's consultation approach with Wanparta is appropriate and adapted to the nature and interests of Wanparta.

Summary of information provided and record of consultation for this EP:

- On 13 April 2026, Woodside emailed Wanparta (via legal representative) advising of the proposed activity (Record of Consultation, reference 6.1.38). The email included:
  - A Summary Information Sheet.
  - A link to the Consultation Information Sheet.
  - An overview of the proposed activity.
  - Links to the NOPSEMA Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information and contact details.
  - **(1- 4)** Information on the cultural values related to the group that Woodside considers relevant to the activity.
  - **(1-4)** A request from Woodside that the group confirm if there were any changes or additional information regarding cultural values that Woodside should consider in the preparation for this EP.
  - A request for information on the group's preferred ways to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
  - A request for feedback by 12 May 2026 for the purposes of preparation of the EP.
  - Advice that feedback can continue to be provided to Woodside during the life of an EP, including after consultation for the EP has closed, during EP assessment, and after an EP has been accepted by NOPSEMA.
  - Woodside's commitment to managing gender-restricted or other culturally sensitive information.
  - A request for the group to provide information about the proposed activity to other individuals as required.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- On 30 April 2026, Woodside emailed Wanparta (via legal representative) a reminder about the proposed activity (SI Report B, reference 1.12.1). The email included:
  - A reference to the original consultation email for this EP sent on 13 April 2026, which included a Summary Information Sheet and a link to the Consultation Information Sheet.
  - A reminder that consultation for the preparation of the EP closes on 12 May 2026.
  - A request for information on the group's preferred ways to engage with Woodside about the proposed activity, including the opportunity to meet face to face.
  - Woodside's commitment to managing gender-restricted or other culturally sensitive information.
  - Advice that feedback can continue to be provided to Woodside during the life of an EP, including after consultation for the EP has closed, during EP assessment, and after an EP has been accepted by NOPSEMA.
- On 8 May 2026, Wanparta (via legal representative) emailed Woodside, requesting a date to meet and consult on this EP (SI Report B, reference 1.12.2).
- On 11 May 2026, Woodside emailed Wanparta (via legal representative) to confirm the consultation meeting date (SI Report B, reference 1.12.3).
- Between 11 May 2026 and 8 June 2026, Woodside and Wanparta (via legal representative) emailed to discuss meeting details, the agenda and the consultation cost (SI Report B, reference 1.12.4 – 1.12.9).
- On 3 June 2026, NAC, WAC and Wong-Goo-Tt-Oo attended a Quarterly Heritage Meeting in Karratha (SI Report B, reference 5.1). Matters discussed included:
  - A video explaining environmental impact assessments.
  - Upcoming EP dates.
- On 9 June 2026, Wanparta (via legal representative) emailed Woodside advising that several directors would not be able to attend the upcoming consultation meeting in person (SI Report B, reference 1.12.10)
- On 9 June 2026, Woodside met with Wanparta to discuss this and another EP (SI Report B, reference 1.12.11). Relevant matters include:
  - Overview of the EP consultation process.
  - An activity overview of this and another EP including details of planned and unplanned activities.
  - **(1-17)** Feedback for consideration within the EP from Wanparta.
  - **(1-17)** Woodside response to feedback.
- **(14)** On 10 June 2026, Woodside emailed Wanparta (via legal representative) thanking them for the consultation meeting and provided information pertaining to the National Energy Training Scheme (NETTS) (SI Report B, reference 1.12.12).
- On 15 June 2026, Wanparta (via legal representative) emailed Woodside to thank them for the NETTS information (SI Report B, reference 1.12.13).
- On 1 July 2026, Woodside emailed Wanparta (via legal representative) to confirm if an invoice for the meeting had been sent (SI Report B, reference 1.12.14).
- On 2 July 2026, Wanparta emailed Woodside a letter relating to this EP (SI Report B, reference 1.12.15). Relevant items include:
  - **(1,8,10,17** Feedback for consideration within the EP.
- On 3 July 2026, Wanparta emailed Woodside advising they had not yet submitted an invoice for the consultation meeting (SI Report B, reference 1.12.16)
- On 3 July 2026, Woodside responded acknowledging the email (SI Report B, reference 1.12.17)
- On 6 July 2026, Wanparta (via legal representative) emailed Woodside to confirm if its 2 July 2026 letter had been received (SI Report B, reference 1.12.18).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- On 7 July 2026, Woodside emailed Wanparta (via legal representative) to confirm it had received the letter (SI Report B, reference 1.12.19).
- On 28 July 2026, Woodside emailed Wanparta (via legal representative) a letter relating to this EP (SI Report B, reference 1.12.20).
  - **(1,8,10,17)** Woodside responded to and addressed feedback from the group.
- On 28 July 2026, Woodside emailed Wanparta (via legal representative) an activity update about the proposed activity (SI Report B, reference 1.12.21). The email included:
  - A reference to the original consultation email for this EP sent to the group on 13 April 2026.
  - A Summary Information Sheet and a link to the Consultation Information Sheet.
  - A request to provide any additional feedback by 26 August 2026 so that it can be considered in the preparation of the EP.
  - **(1-4)** Information on the cultural values that Woodside consider relevant to the activity.
  - **(1-4)** A request from Woodside that the group confirm if there were any changes or additional information regarding cultural values that Woodside should consider in the preparation for this EP.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the Adverse Impact of the Activity	Woodside's Response	Inclusion in Environment Plan
(1) Cultural value Sea Country: • Spiritual connection. • Cultural obligation to look after Sea Country. • A healthy Sea Country leads to healthy marine life and healthy Ngarla People. • Importance of fish stocks. • During consultation for this EP, Wanparta raised further cultural values relating to Sea Country: • Best way to protect Sea Country is through engagement with Ngarla rangers.	**(1)** This value has been identified through Woodside's data collection processes (consultation).	**(1)** At the beginning of consultation for this EP, Woodside provided a list of the cultural values known to Woodside that it believed relevant to the group and invited it to make changes or provide additional information (See Record of Consultation, 6.1.38). On 9 June 2026 and within a follow up letter dated 2 July 2026, Wanparta raised further cultural records relating to Sea Country. Woodside has updated its records.	**(1)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate included controls in Sections 6.6, 6.7 and 6.9.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

• Coastline – spiritually and as a way of living. • Ngarla are responsible for caring for now and into the future. • By caring for Ngarla Country, the spirits look after Ngarla people.			
(2) Cultural value Dreamtime stories connected to nearshore islands particularly Solitary Island / Jarrkunpungu: • Dreaming stories through the interconnecting islands. • Dreamtime stories through the nearshore islands. • There is ethnohistorical evidence of Ngarla occupation on these islands.	**(2)** This value has been identified through Woodside's data collection processes (consultation).	**(2)** At the beginning of consultation for this EP, Woodside provided a list of the cultural values known to Woodside that it believed relevant to the group and invited it to make changes or provide additional information (See Record of Consultation, 6.1.38). No changes were requested.	**(2)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate included controls in Sections 6.6, 6.7 and 6.9.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

(3) • Cultural Value: Sea (fresh and salt water): • Dreaming stories. • A responsibility to look after the ocean (law and culture).	**(3)** This value has been identified through Woodside's data collection processes (consultation	**(3)** At the beginning of consultation for this EP, Woodside provided a list of the cultural values known to Woodside that it believed relevant to the group and invited it to make changes or provide additional information (See Record of Consultation, 6.1.38). No changes were requested.	**(3)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate included controls in Sections 6.6, 6.7 and 6.9.
(4) Cultural value Totemic species: • Kestrel. • Octopus. • Spiny brim. • Sting ray.	**(4)** This value has been identified through Woodside's data collection processes (consultation).	**(4)** At the beginning of consultation for this EP, Woodside provided a list of the cultural values known to Woodside that it believed relevant to the group and invited it to make changes or provide additional information (See Record of Consultation, 6.1.38). No changes were requested.	**(4)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate included controls in Sections 6.6, 6.7 and 6.9.
(5) Wanparta asked where grey water goes when on a facility.	**(5)** Grey water is treated onboard the facility and support vessels through approved Sewage Treatment Plants and discharged offshore in accordance with regulatory requirements.	**(5)** Woodside advised during the consultation meeting on 9 June 2026 that grey water is treated onboard the facility and support vessels through approved Sewage Treatment Plants and discharged offshore in accordance with regulatory requirements.	**(5)** Planned discharges are described and assessed in Section 6.7 of the EP.
(6) Wanparta asked what colour the oil is collected by Woodside.	**(6)** Hydrocarbon appearance varies depending on the product type, with condensate generally lighter in colour and heavier crude oils darker in colour.	**(6)** Woodside advised during the consultation meeting on 9 June 2026 that hydrocarbon appearance varies depending on the product type, with condensate generally lighter in colour and heavier crude oils darker in colour.	**(6)** No action required.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

(7) Wanparta asked if there is an incident at CK4, how is the oil removed?	**(7)** Refer to Section 7.11 of the EP relating to notification following relevant environmental incidents in line with Appendix G – Oil Pollution First Stike Plan.	**(7)** Woodside advised during the consultation meeting on 9 June 2026 that in the highly unlikely event of an oil spill, waste would be managed in accordance with Woodside's Oil Spill Response Waste Management Plan and disposed of at appropriately licensed facilities in accordance with regulatory requirements.	**(7)** No action required.
(8) Wanparta asked if there was a hydrocarbon release, how is the oil removed and how is disposal of recovered oil on land managed.	**(8)** In the highly unlikely event of an unplanned hydrocarbon release, waste management procedures are identified in Appendix G - Oil Pollution First Stike Plan.	**(8)** Woodside explained during the consultation meeting on 9 June 2026 that in the highly unlikely event of an oil spill, waste would be managed in accordance with Woodside's Oil Spill Response Waste Management Plan and disposed of at appropriately licensed facilities in accordance with regulatory requirements.	**(8)** The EP includes an Oil Spill Response Management Plan Assessment which outlines response strategies and management measures for hydrocarbon releases in Appendix G.
(9) Wanparta asked how rock art and submerged cultural heritage influences how Woodside carries out its activities.	**(9)** Indirect impacts are considered and assessed and managed to acceptable levels which is outlined in the EP. Submerged cultural heritage assessments are also undertaken to understand the location of underwater features, which informs mitigation strategies where relevant.	**(9)** Woodside advised that indirect impacts (such as emissions) are considered and assessed and managed to acceptable levels. Woodside also supports and participates in ongoing research and maintains regular engagement with Murujuga Aboriginal Corporation to better understand potential impacts and inform management approaches. Submerged cultural heritage assessments are undertaken to understand the location of underwater features, which informs mitigation strategies where relevant.	**(9)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate included controls in Sections 6.6, 6.7 and 6.9.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

(10) Wanparta asked how many incidents Woodside has responded to since the last meeting.	**(10)** Unplanned environmental events are investigated in accordance with Woodside's Health, Safety and Environment management system and reported to NOPSEMA in accordance with the EP.	**(10)** Woodside provided information regarding unplanned environmental events that occurred since the previous consultation meeting and advised that environmental incidents are investigated and reported in accordance with Woodside's Health, Safety and Environment management system and regulatory requirements.	**(10)** No action required.
(11) Wanparta asked if Woodside burns off extra gas	**(11)** Woodside assesses environmental impacts associated with atmospheric emissions, including flaring, and implements appropriate management measures where required.	**(11)** Woodside advised that flaring is used as a safety mechanism to release pressure and prevent gas build-up and may occur during offshore and onshore operations.	**(11)** No action required.
(12) Wanparta asked what maintenance activities are planned for CK4 and LH3?	**(12)** Woodside engages in ongoing consultation throughout the life of an EP	**(12)** Woodside advised activities include Christmas tree replacement and subsea valve remediation.	**(12)** No action required.
(13) Wanparta asked how the Christmas tree is removed during the well intervention?	**(13)** Woodside notes Wanparta's request for information on Christmas tree removal during well intervention	**(13)** Woodside advised during the meeting on 9 June 2026 that would take the question on notice. On 28 July 2026, Woodside responded via letter to Wanparta and explained that a subsea Christmas tree is equipment that sits on top of a subsea well and controls the flow of hydrocarbons from the well to the production flowline. Prior to Christmas tree removal, a specialist vessel (Light Well Intervention Vessel) suspends the well with temporary plugs which are tested to confirm the well is isolated, making it safe to conduct Christmas tree changeout. Lifting	**(13)** No action required.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

		equipment and remotely operated vehicles (ROVs) are used to disconnect and recover the Christmas tree before installing and testing the replacement unit.	
(14) Wanparta asked if their employment or traineeship opportunities available?	**(14)** Woodside notes Wanparta's request for information on training and employment opportunities.	**(14)** On 10 June 2026, Woodside emailed Wanparta to provide information on the NETTS.	**(14)** No action required.
(15) Wanparta asked if rangers are involved in oil spill response and planning.	**(15)** In the highly unlikely event of a spill, Woodside would enact its First Strike Plan, which includes contacting the regulator, NOPSEMA and any relevant cultural authorities that may be affected	**(15)** Woodside advised that it recognises the value of ranger participation in shoreline assessment and oil spill response activities and that opportunities for involvement continue to be explored. Woodside also advised that rangers have previously participated in cross-industry oil spill response exercises.	**(15)** No action required.
(16) Wanparta asked if there is potentially an oil spill on Wanparta Country, is Woodside open to completing Cultural Awareness Training before coming on Country.	**(16)** Cultural awareness is incorporated into onboarding and workforce training.	**(16)** During the consultation meeting on 9 June 2026, Woodside explained that cultural awareness is incorporated into onboarding and workforce training. This includes information relevant to working respectfully on Country and recognising Aboriginal cultural values.	**(16)** No action required.
(17) Wanparta requested that Woodside attends at least one Board meeting per calendar year.	**(17)** Woodside appreciates Wanparta's invitation to attend at least one annual Board meeting.	**(17)** Woodside advised that it appreciates Wanparta's invitation to attend at least one annual Board meeting per calendar year and remains open to additional engagement opportunities in the future	**(17)** No action required.
While feedback has been received, there were no objections or claims.	Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which	Woodside engages in ongoing consultation throughout the life of an EP. Should further feedback be received, it	Based on the engagement to date, no additional measures or controls are required.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

	the EP relates, as required under Regulation 24.	will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8 of the EP).	

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environmental Regulations and consultation for the purpose of regulation 25 is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.4 of the EP. Specifically:

Sufficient Information

Sufficient information has been provided because:

- On 13 April 2026, Woodside made the Consultation Information Sheet available on the Woodside website.
- Woodside provided information on 13 April 2026 when consultation commenced. Woodside provided:
  - A Summary Information Sheet developed specifically for Traditional Custodian groups and reviewed by a member of the Indigenous Affairs team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, a summary of the potential risks and impacts of the activity, diagrams and details about how to provide feedback.
  - Links to the NOPSEMA *Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information*, and contact details.
  - Confirmation of the purpose of consultation, what was being sought by Woodside through consultation including understanding the nature of their interests and how the activity could impact those interests.
  - A request for the consultation information to be distributed to members and individuals as required.
  - An offer to provide more specific information, maps and images if required.
- Woodside provided contact information for Woodside and NOPSEMA.
- Woodside provided updated information which included:
  - A reference to the original consultation email for this EP sent on 13 April 2026.
  - An updated Summary Information Sheet and link to the updated Consultation Information Sheet noting the EP changes made.
  - An invitation to provide further feedback by 26 August 2026 for the purpose of preparation for this EP

Reasonable Period

A reasonable period for consultation in the preparation of the EP has been provided because:

- Woodside commenced consultation on this EP on 13 April 2026 and requested feedback by 12 May 2026 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.
- Woodside provided an activity update on this EP 28 July 2026 and requested feedback by 26 August 2026.
- Woodside has provided an opportunity to address and respond to feedback for more than six months, demonstrating a "reasonable period" of consultation.

Reasonable Opportunity

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

A reasonable opportunity to provide feedback has been provided and Woodside's approach to consultation is appropriate and adapted because:

- Woodside sought direction on the preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Traditional Custodian groups.
- Woodside has made information on this EP publicly available for more than six months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (22 April 2026) and National Indigenous Times (28 April 2026) advising of the proposed activities and requesting comments or feedback.
- Woodside's initial email about this EP on 13 April 2026:
  - Included a general email address and telephone number for Woodside, as well as a direct email and telephone number for a dedicated focal person from Woodside's Indigenous Affairs Engagement team. Woodside also provided contact details for NOPSEMA.
  - Offered for Woodside to speak with members as well as the Board.
  - Asked to advise how the group would like Woodside to engage and whether further information is required.
- Woodside offered to meet on a number of occasions and met on 9 June 2026 to discuss the proposed activity.
- Throughout the consultation period, Woodside has had direct contact lines during the consultation period. This included multiple emails, meetings and letters.

Outcomes of Consultation

The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- Feedback was provided during consultation for this EP relating to cultural values, in addition to cultural values obtained throughout consultation for other activities. Woodside has incorporated the groups interests and cultural values in Section 4.9.
- During the past six months, the group provided feedback but no objections or claims about the adverse impact of the activity to which this EP relates.

Woodside engages in ongoing consultation once an EP has been submitted for assessment as well as throughout the life of an EP. Should feedback be received after the EP has been accepted (including relevant new information relating to cultural values), it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8 of the EP).

4.11.13 Wirrawandi Aboriginal Corporation (WAC)

WAC is established under the Native Title Act 1993 (Cth) by the Mardudhunera and Yaburara people to represent the Mardudhunera and Yaburara people (defined broadly by reference to descent from the set of ancestors who were known to have a continuous and unbroken connection as the Traditional Custodians at the time of European colonisation) and represent their communal interests including, among other things, management and protection of cultural values.

Summary of information provided and record of consultation for this EP:

- On 13 April 2026, Woodside emailed WAC advising of the proposed activity (Record of Consultation, reference 6.1.39). The email included:
  - A Summary Information Sheet.
  - A link to the Consultation Information Sheet.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- An overview of the proposed activity.
- Links to the NOPSEMA Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information and contact details.
- **(1-4)** Information on the cultural values related to the group that Woodside considers relevant to the activity.
- (1-4) A request from Woodside that the group confirm if there were any changes or additional information regarding cultural values that Woodside should consider in the preparation of this EP.
- A request for information on the group's preferred ways to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
- A request for feedback by 12 May 2026 for the purposes of preparation of the EP.
- Advice that feedback can continue to be provided to Woodside during the life of an EP, including after consultation for the EP has closed, during EP assessment, and after an EP has been accepted by NOPSEMA.
- Woodside's commitment to managing gender-restricted or other culturally sensitive information.
- A request for the group to provide information about the proposed activity to other individuals as required.

- On 30 April 2026, Woodside emailed WAC a reminder about the proposed activity (SI Report B, reference 1.13.1). The email included:
  - A reference to the original consultation email for this EP sent on 13 April 2026, which included a Summary Information Sheet and a link to the Consultation Information Sheet.
  - A reminder that consultation for the preparation of the EP closes on 12 May 2026.
  - A request for information on the group's preferred ways to engage with Woodside about the proposed activity, including the opportunity to meet face to face.
  - Woodside's commitment to managing gender-restricted or other culturally sensitive information.
  - Advice that feedback can continue to be provided to Woodside during the life of an EP, including after consultation for the EP has closed, during EP assessment, and after an EP has been accepted by NOPSEMA.
- On 3 June 2026, NAC, WAC and Wong-Goo-Tt-Oo attended a Quarterly Heritage Meeting in Karratha (SI Report B, reference 5.1). Matters discussed included:
  - A video explaining environmental impact assessments.
  - Upcoming EP dates.
- On 28 July 2026, Woodside emailed WAC an activity update about the proposed activity (SI Report B, reference 1.13.2). The email included:
  - A reference to the original consultation email for this EP sent to the group on 13 April 2026.
  - A Summary Information Sheet and a link to the Consultation Information Sheet.
  - A request to provide any additional feedback by 26 August 2026 so that it can be considered in the preparation of the EP.
  - **(1- 4)** Information on the cultural values that Woodside consider relevant to the activity.
  - (1-4) A request from Woodside that the group confirm if there were any changes or additional information regarding cultural values that Woodside should consider in the preparation for this EP
- On 2 September 2026, NAC and WAC attended a Quarterly Heritage Meeting in Karratha (SI Report B, reference 5.2). During the meeting Woodside reminded attendees that feedback can be provided during the life of an EP.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the Adverse Impact of the Activity	Woodside's Response	Inclusion in Environment Plan
(1) Cultural value Marine species: • Whales – migration and potential impact of noise on whale communication. • Turtles – general interest around management and monitoring.	**(1)** This value has been identified through Woodside's data collection processes (consultation).	**(1)** At the beginning of consultation for this EP, Woodside provided a list of the cultural values known to Woodside that it believed relevant to the group and invited it to make changes or provide additional information (See Record of Consultation, 6.1.39). No changes were requested.	**(1)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate included controls in Sections 6.6, 6.7 and 6.9.
(2) Cultural value Rock art: • Potential impact of emissions from activities.	**(2)** This value has been identified through Woodside's data collection processes (consultation).	**(2)** At the beginning of consultation for this EP, Woodside provided a list of the cultural values known to Woodside that it believed relevant to the group and invited it to make changes or provide additional information (See Record of Consultation, 6.1.39). No changes were requested.	**(2)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate included controls in Sections 6.6, 6.7 and 6.9.
(3) Cultural value Underwater heritage: • Impacts particularly given recent finding of artefacts.	**(3)** This value has been identified through Woodside's data collection processes (consultation).	**(3)** At the beginning of consultation for this EP, Woodside provided a list of the cultural values known to Woodside that it believed relevant to the group and invited it to make changes or provide additional information (See Record of Consultation, 6.1.39). No changes were requested.	**(3)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate included controls in Sections 6.6, 6.7 and 6.9.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

(4) Cultural value Onshore heritage: • Management of sites.	**(4)** This value has been identified through Woodside's data collection processes (consultation).	**(4)** At the beginning of consultation for this EP, Woodside provided a list of the cultural values known to Woodside that it believed relevant to the group and invited it to make changes or provide additional information (See Record of Consultation, 6.1.39). No changes were requested.	**(4)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate included controls in Sections 6.6, 6.7 and 6.9.
No feedback, objections or claims about the adverse impact of the activity received despite follow-up.	Although no feedback, objections or claims were provided for this EP, historical cultural values considered relevant have been identified and included based on consultation.	Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8 of the EP).	No additional measures or controls are required.

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environmental Regulations and consultation for the purpose of regulation 25 is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.4 of the EP. Specifically:

Sufficient Information

Sufficient information has been provided because:

- On 13 April 2026, Woodside made the Consultation Information Sheet available on the Woodside website.
- Woodside provided information on 13 April 2026 when consultation commenced. Woodside provided:
  - A Summary Information Sheet developed specifically for Traditional Custodian groups and reviewed by a member of the Indigenous Affairs team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, a summary of the potential risks and impacts of the activity, diagrams and details about how to provide feedback.
  - Links to the NOPSEMA Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information, and contact details.
  - Confirmation of the purpose of consultation, what was being sought by Woodside through consultation including understanding the nature of their interests and how the activity could impact those interests.
  - A request for the consultation information to be distributed to members and individuals as required.
  - An offer to provide more specific information, maps and images if required.
- Woodside provided contact information for Woodside and NOPSEMA.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- Woodside provided updated information which included:
  - A reference to the original consultation email for this EP sent on 13 April 2026.
  - An updated Summary Information Sheet and link to the updated Consultation Information Sheet noting the EP changes made.
  - An invitation to provide further feedback by 26 August 2026 for the purpose of preparation for this EP

Reasonable Period

A reasonable period for consultation in the preparation of the EP has been provided because:

- Woodside commenced consultation on this EP on 13 April 2026 and requested feedback by 12 May 2026 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.
- Woodside provided an activity update on this EP 28 July 2026 and requested feedback by 26 August 2026.
- Woodside has provided an opportunity to address and respond to feedback for over six months, demonstrating a "reasonable period" of consultation.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided and Woodside's approach to consultation is appropriate and adapted because:

- Woodside sought direction on the preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Traditional Custodian groups.
- Woodside has made information on this EP publicly available for over six months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (22 April 2026) and National Indigenous Times (28 April 2026) advising of the proposed activities and requesting comments or feedback.
- Woodside's initial email about this EP on 13 April 2026:
  - Included a general email address and telephone number for Woodside, as well as a direct email and telephone number for a dedicated focal person from Woodside's Indigenous Affairs Engagement team. Woodside also provided contact details for NOPSEMA.
  - Offered for Woodside to speak with members as well as the Board.
  - Asked to advise how WAC would like Woodside to engage and whether further information is required.
- Woodside offered to meet on a number of occasions.
- Woodside hosts Heritage Meetings.

Outcomes of Consultation

The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- No feedback or information was provided during consultation for this EP.
- During the past six months, no objections or claims about the adverse impact of the activity to which this EP relates have been raised.

Woodside engages in ongoing consultation once an EP has been submitted for assessment as well as throughout the life of an EP. Should feedback be received after the EP has been accepted (including relevant new information relating to cultural values), it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8 of the EP).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

4.11.14 Wong-Goo-Tt-Oo

Wong-Goo-Tt-Oo is part of the Ngarda Ngarli, the collective term for the five Traditional Owner groups of Murujuga. These groups are represented by the Murujuga Aboriginal Corporation (MAC). Wong-Goo-Tt-Oo has self-identified for all EPs relevant to Murujuga and requested to be consulted directly.

Summary of information provided and record of consultation for this EP:

- On 24 April 2026, Woodside emailed Wong-Goo-Tt-Oo advising of the proposed activity (Record of Consultation, reference 6.1.40). The email included:
  - A Summary Information Sheet.
  - A link to the Consultation Information Sheet.
  - An overview of the proposed activity.
  - Links to the NOPSEMA Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information and contact details.
  - A request for information on the group's preferred ways to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
  - A request for feedback by 25 May 2026 for the purposes of preparation of the EP.
  - Advice that feedback can continue to be provided to Woodside during the life of an EP, including after consultation for the EP has closed, during EP assessment, and after an EP has been accepted by NOPSEMA.
  - Woodside's commitment to managing gender-restricted or other culturally sensitive information.
  - A request for the group to provide information about the proposed activity to other individuals as required.
- On 6 May 2026, Woodside emailed Wong-Goo-Tt-Oo a reminder about the proposed activity (SI Report B, reference 1.14.1). The email included:
  - A reference to the original consultation email for this EP sent on 24 April 2026, which included a Summary Information Sheet and a link to the Consultation Information Sheet.
  - A reminder that consultation for the preparation of the EP closes on 25 May 2026.
  - A request for information on the group's preferred ways to engage with Woodside about the proposed activity, including the opportunity to meet face to face.
  - Woodside's commitment to managing gender-restricted or other culturally sensitive information.
  - Advice that feedback can continue to be provided to Woodside during the life of an EP, including after consultation for the EP has closed, during EP assessment, and after an EP has been accepted by NOPSEMA.
  - On 3 June 2026, NAC, WAC and Wong-Goo-Tt-Oo attended a Quarterly Heritage Meeting in Karratha (SI Report B, reference 5.1). Matters discussed included:
  - A video explaining environmental impact assessments.
  - Upcoming EP dates.
- On 28 July 2026, Woodside emailed Wong-Goo-Tt-Oo an activity update about the proposed activity (Record of Consultation, reference 1.14.2). The email included:
  - A reference to the original consultation email for this EP sent to the group on 24 April 2026.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- A Summary Information Sheet and a link to the Consultation Information Sheet.
- A request to provide any additional feedback by 26 August 2026 so that it can be considered in the preparation of the EP.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Response	Inclusion in Environment Plan
No feedback, objections or claims about the adverse impact of the activity received despite follow-up.	Woodside engages in ongoing consultation throughout the life of an EP.	Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8 of the EP).	No additional measures or controls are required.

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environmental Regulations and consultation for the purpose of regulation 25 is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.4 of the EP. Specifically:

Sufficient Information

Sufficient information has been provided because:

- On 13 April 2026, Woodside made the Consultation Information Sheet available on the Woodside website.
- Woodside provided information on 24 April 2026 when consultation commenced. Woodside provided:
  - A Summary Information Sheet developed specifically for Traditional Custodian groups and reviewed by a member of the Indigenous Affairs team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, a summary of the potential risks and impacts of the activity, diagrams and details about how to provide feedback.
  - Links to the NOPSEMA *Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information*, and contact details.
  - Confirmation of the purpose of consultation, what was being sought by Woodside through consultation including understanding the nature of their interests and how the activity could impact those interests.
  - A request for the consultation information to be distributed to members and individuals as required.
  - An offer to provide more specific information, maps and images if required.
- Woodside provided contact information for Woodside and NOPSEMA.
- Woodside provided updated information which included:
  - A reference to the original consultation email for this EP sent on 24 April 2026.
  - An updated Summary Information Sheet and link to the updated Consultation Information Sheet noting the EP changes made.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- An invitation to provide further feedback by 26 August 2026 for the purpose of preparation for this EP

Reasonable Period

A reasonable period for consultation in the preparation of the EP has been provided because:

- Woodside commenced consultation on this EP on 13 April 2026 and requested feedback by 12 May 2026 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.
- Woodside provided an activity update on this EP 28 July 2026 and requested feedback by 26 August 2026.
- Woodside has provided an opportunity to address and respond to feedback for more than six months, demonstrating a "reasonable period" of consultation.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided and Woodside's approach to consultation is appropriate and adapted because:

- Woodside sought direction on the preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Traditional Custodian groups.
- Woodside has made information on this EP publicly available for more than six months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (22 April 2026) and National Indigenous Times (28 April 2026) advising of the proposed activities and requesting comments or feedback.
- Woodside's initial email about this EP on 24 April 2026:
  - Included a general email address and telephone number for Woodside, as well as a direct email and telephone number for a dedicated focal person from Woodside's Indigenous Affairs Engagement team. Woodside also provided contact details for NOPSEMA.
  - Offered for Woodside to speak with members as well as the Board.
  - Asked to advise how the group would like Woodside to engage and whether further information is required.
- Woodside offered to meet on a number of occasions.

Outcomes of Consultation

The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- During the past six months, no objections or claims about the adverse impact of the activity to which this EP relates have been raised.

Woodside engages in ongoing consultation once an EP has been submitted for assessment as well as throughout the life of an EP. Should feedback be received after the EP has been accepted (including relevant new information relating to cultural values), it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8 of the EP).

4.11.15 Yindjibarndi Aboriginal Corporation (Yindjibarndi)

Yindjibarndi is established under the Native Title Act 1993 (Cth) by the Yindjibarndi people to represent the Yindjibarndi people (defined broadly by reference to descent from the set of ancestors who were known to have a continuous and unbroken connection as the Traditional Custodians at the time of European colonisation) and represent their communal interests including, among other things, management and protection of cultural values. Yindjibarndi has formally notified Woodside that all oil and gas matters relating to Yindjibarndi are to be directed to NYFL, which is Yindjibarndi's Native Title Representative Body.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Summary of information provided and record of consultation for this EP:

- On 13 April 2026, Woodside emailed Yindjibarndi (Via NYFL) advising of the proposed activity (Record of Consultation, reference 6.1.41). The email included:
  - A Summary Information Sheet.
  - A link to the Consultation Information Sheet.
  - An overview of the proposed activity.
  - Links to the NOPSEMA Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information and contact details.
  - A request for information on the group's preferred ways to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
  - A request for feedback by 12 May 2026 for the purposes of preparation of the EP.
  - Advice that feedback can continue to be provided to Woodside during the life of an EP, including after consultation for the EP has closed, during EP assessment, and after an EP has been accepted by NOPSEMA.
  - Woodside's commitment to managing gender-restricted or other culturally sensitive information.
  - A request for the group to provide information about the proposed activity to other individuals as required.
  - Acknowledgement that discussions relating to a consultation framework agreement with Woodside has been ongoing and that these discussions will progress in parallel with consultation for the proposed activity's EP.
- On 30 April 2026, Woodside emailed Yindjibarndi (Via NYFL) a reminder about the proposed activity (SI Report B, reference 1.15.1). The email included:
  - A reference to the original consultation email for this EP sent on 13 April 2026, which included a Summary Information Sheet and a link to the Consultation Information Sheet.
  - A reminder that consultation for the preparation of the EP closes on 12 May 2026.
  - A request for information on the group's preferred ways to engage with Woodside about the proposed activity, including the opportunity to meet face to face.
  - Woodside's commitment to managing gender-restricted or other culturally sensitive information.
  - Advice that feedback can continue to be provided to Woodside during the life of an EP, including after consultation for the EP has closed, during EP assessment, and after an EP has been accepted by NOPSEMA.
- On 28 July 2026, Woodside emailed Yindjibarndi (Via NYFL) an activity update about the proposed activity (SI Report B, reference 1.15.2). The email included:
  - A reference to the original consultation email for this EP sent to the Group on 13 April 2026.
  - A Summary Information Sheet and a link to the Consultation Information Sheet.
  - A request to provide any additional feedback by 26 August 2026 so that it can be considered in the preparation of the EP.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the Adverse Impact of the Activity	Woodside's Response	Inclusion in Environment Plan
No feedback, objections or claims about the adverse impact of the activity received despite follow-up.	Woodside engages in ongoing consultation throughout the life of an EP.	Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8 of the EP).	No additional measures or controls are required.

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environmental Regulations and consultation for the purpose of regulation 25 is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.4 of the EP. Specifically:

Sufficient Information

Sufficient information has been provided because:

- On 13 April 2026, Woodside made the Consultation Information Sheet available on the Woodside website.
- Woodside provided information on 13 April 2026 when consultation commenced. Woodside provided:
  - A Summary Information Sheet developed specifically for Traditional Custodian groups and reviewed by a member of the Indigenous Affairs team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, a summary of the potential risks and impacts of the activity, diagrams and details about how to provide feedback.
  - Links to the NOPSEMA Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information, and contact details.
  - Confirmation of the purpose of consultation, what was being sought by Woodside through consultation including understanding the nature of their interests and how the activity could impact those interests.
  - A request for the consultation information to be distributed to members and individuals as required.
  - An offer to provide more specific information, maps and images if required.
- Woodside provided contact information for Woodside and NOPSEMA.
- Woodside provided updated information which included:
  - A reference to the original consultation email for this EP sent on 13 April 2026.
  - An updated Summary Information Sheet and link to the updated Consultation Information Sheet noting the EP changes made.
  - An invitation to provide further feedback by 26 August 2026 for the purpose of preparation for this EP

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Reasonable Period

A reasonable period for consultation in the preparation of the EP has been provided because:

- Woodside commenced consultation on this EP on 13 April 2026 and requested feedback by 12 May 2026 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.
- Woodside provided an activity update on this EP 28 July 2026 and requested feedback by 26 August 2026.
- Woodside has provided an opportunity to address and respond to feedback for over six months, demonstrating a "reasonable period" of consultation.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided and Woodside's approach to consultation is appropriate and adapted because:

- Woodside sought direction on the preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Traditional Custodian groups.
- Woodside has made information on this EP publicly available for over six months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (22 April 2026) and National Indigenous Times (28 April 2026) advising of the proposed activities and requesting comments or feedback.
- Woodside's initial email about this EP on 13 April 2026:
  - Included a general email address and telephone number for Woodside, as well as a direct email and telephone number for a dedicated focal person from Woodside's Indigenous Affairs Engagement team. Woodside also provided contact details for NOPSEMA.
  - Offered for Woodside to speak with members as well as the Board.
  - Asked to advise how the group would like Woodside to engage and whether further information is required.
- Woodside offered to meet on a number of occasions.

Outcomes of Consultation

The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- During the past six months, no objections or claims about the adverse impact of the activity to which this EP relates have been raised.

Woodside engages in ongoing consultation once an EP has been submitted for assessment as well as throughout the life of an EP. Should feedback be received after the EP has been accepted (including relevant new information relating to cultural values), it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8 of the EP).

4.11.16 Yinggarda Aboriginal Corporation (YAC)

YAC is established under the *Native Title Act 1993* (Cth) by the Yinggarda people to represent the Yinggarda people (defined broadly by reference to descent from the set of ancestors who were known to have a continuous and unbroken connection as the Traditional Custodians at the time of European colonisation) and represent their communal interests including, among other things, management and protection of cultural values.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Summary of information provided and record of consultation for this EP:

- On 13 April 2026, Woodside emailed YAC advising of the proposed activity (Record of Consultation, reference 6.1.42). The email included:
  - A Summary Information Sheet.
  - A link to the Consultation Information Sheet.
  - An overview of the proposed activity.
  - Links to the NOPSEMA Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information and contact details.
  - **(1-4)** Information on the cultural values related to the group that Woodside considers relevant to the activity.
  - **(1-4)** A request from Woodside that the group confirm if there were any changes or additional information regarding cultural values that Woodside should consider in the preparation for this EP.
  - A request for information on the group's preferred ways to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
  - A request for feedback by 12 May 2026 for the purposes of preparation of the EP.
  - Advice that feedback can continue to be provided to Woodside during the life of an EP, including after consultation for the EP has closed, during EP assessment, and after an EP has been accepted by NOPSEMA.
  - Woodside's commitment to managing gender-restricted or other culturally sensitive information.
  - A request for the group to provide information about the proposed activity to other individuals as required.
- On 30 April 2026, Woodside emailed YAC a reminder about the proposed activity (SI Report B, reference 1.16.1). The email included:
  - A reference to the original consultation email for this EP sent on 13 April 2026, which included a Summary Information Sheet and a link to the Consultation Information Sheet.
  - A reminder that consultation for the preparation of the EP closes on 12 May 2026.
  - A request for information on the group's preferred ways to engage with Woodside about the proposed activity, including the opportunity to meet face to face.
  - Woodside's commitment to managing gender-restricted or other culturally sensitive information.
  - Advice that feedback can continue to be provided to Woodside during the life of an EP, including after consultation for the EP has closed, during EP assessment, and after an EP has been accepted by NOPSEMA.
- On 28 July 2026, Woodside emailed YAC an activity update about the proposed activity (SI Report B, reference 1.16.2). The email included:
  - A reference to the original consultation email for this EP sent to the group on 13 April 2026.
  - A Summary Information Sheet and a link to the Consultation Information Sheet.
  - A request to provide any additional feedback by 26 August 2026 so that it can be considered in the preparation of the EP.
  - **(1-4)** Information on the cultural values that Woodside consider relevant to the activity.
  - **(1-4)** A request from Woodside that the group confirm if there were any changes or additional information regarding cultural values that Woodside should consider in the preparation of this EP.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the Adverse Impact of the Activity	Woodside's Response	Inclusion in Environment Plan
(1) Cultural value • Right and responsibility to speak and care for Country.	**(1)** This value has been identified through Woodside's data collection processes (publicly available literature).	**(1)** At the beginning of consultation for this EP, Woodside provided a list of the cultural values known to Woodside that it believed relevant to the group and invited it to make changes or provide additional information (See Record of Consultation, 6.1.42). No changes were requested.	**(1)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate included controls in Sections 6.6, 6.7 and 6.9.
(2) Cultural value • Contemporary use of Country for cultural activities: • Fishing including for Shark Bay mullet. • Camping. • Hunting and gathering.	**(2)** This value has been identified through Woodside's data collection processes (consultation and publicly available literature).	**(2)** At the beginning of consultation for this EP, Woodside provided a list of the cultural values known to Woodside that it believed relevant to the group and invited it to make changes or provide additional information (See Record of Consultation, 6.1.42). No changes were requested.	**(2)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate included controls in Sections 6.6, 6.7 and 6.9.
(3) Cultural value Ecosystem health • Plants and animals and the environment are inexorably linked to culture. • Seagrass is an important food. source for dugongs.	**(3)** This value has been identified through Woodside's data collection processes (consultation).	**(3)** At the beginning of consultation for this EP, Woodside provided a list of the cultural values known to Woodside that it believed relevant to the group and invited it to make changes or provide additional information (See Record of Consultation, 6.1.42). No changes were requested.	**(3)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate included controls in Sections 6.6, 6.7 and 6.9.
(4) Cultural value Marine mammals:	**(4)**	**(4)** At the beginning of consultation for this EP, Woodside provided a list of the	**(4)** Woodside has updated Section 4.9 to record these interests and cultural

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

• Dugongs. • Whales (potential impact to migration patterns and potential collisions with vessels).	This value has been identified through Woodside's data collection processes (consultation).	cultural values known to Woodside that it believed relevant to the group and invited it to make changes or provide additional information (See Record of Consultation, 6.1.42). No changes were requested.	values and assessed the potential impacts on these and where appropriate included controls in Sections 6.6, 6.7 and 6.9.
No feedback, objections or claims about the adverse impact of the activity received despite follow-up.	Although no feedback, objections or claims were provided for this EP, historical cultural values considered relevant have been identified and included based on consultation and / or literature review.	Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8 of the EP).	No additional measures or controls are required.

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environmental Regulations and consultation for the purpose of regulation 25 is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.4 of the EP. Specifically:

Sufficient Information

Sufficient information has been provided because:

- On 13 April 2026, Woodside made the Consultation Information Sheet available on the Woodside website.
- Woodside provided information on 13 April 2026 when consultation commenced. Woodside provided:
  - A Summary Information Sheet developed specifically for Traditional Custodian groups and reviewed by a member of the Indigenous Affairs team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, a summary of the potential risks and impacts of the activity, diagrams and details about how to provide feedback.
  - Links to the NOPSEMA Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information, and contact details.
  - Confirmation of the purpose of consultation, what was being sought by Woodside through consultation including understanding the nature of their interests and how the activity could impact those interests.
  - A request for the consultation information to be distributed to members and individuals as required.
  - An offer to provide more specific information, maps and images if required.
- Woodside provided contact information for Woodside and NOPSEMA.
- Woodside provided updated information which included:
  - A reference to the original consultation email for this EP sent 13 April 2026.
  - An updated Summary Information Sheet and link to the updated Consultation Information Sheet noting the EP changes made.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- An invitation to provide further feedback by 26 August 2026 for the purpose of preparation for this EP

Reasonable Period

A reasonable period for consultation in the preparation of the EP has been provided because:

- Woodside commenced consultation on this EP on 13 April 2026 and requested feedback by 12 May 2026 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.
- Woodside provided an activity update on this EP 28 July 2026 and requested feedback by 26 August 2026.
- Woodside has provided an opportunity to address and respond to feedback for over six months, demonstrating a "reasonable period" of consultation.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided and Woodside's approach to consultation is appropriate and adapted because:

- Woodside sought direction on the preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Traditional Custodian groups.
- Woodside has made information on this EP publicly available for over six months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (22 April 2026) and National Indigenous Times (28 April 2026) advising of the proposed activities and requesting comments or feedback.
- Woodside's initial email about this EP on 13 April 2026:
  - Included a general email address and telephone number for Woodside, as well as a direct email and telephone number for a dedicated focal person from Woodside's Indigenous Affairs Engagement team. Woodside also provided contact details for NOPSEMA.
  - Offered for Woodside to speak with members as well as the Board.
  - Asked to advise how the group would like Woodside to engage and whether further information is required.
- Woodside offered to meet on a number of occasions.

Outcomes of Consultation

The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- No feedback or information was provided during consultation for this EP.
- During the past six months, no objections or claims about the adverse impact of the activity to which this EP relates have been raised.

Woodside engages in ongoing consultation once an EP has been submitted for assessment as well as throughout the life of an EP. Should feedback be received after the EP has been accepted (including relevant new information relating to cultural values), it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8 of the EP).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

4.12 Native Title representative bodies

4.12.1 Kimberley Land Council (KLC)

Kimberley Land Council is the Native Title Representative Body for the Kimberley region of Western Australia. As such, it is not a Prescribed Body Corporate or Registered Native Title Body Corporate but exists to assist Native Title claimants and holders. During consultation for this EP, KLC advised that there has been staffing changes. Woodside updated its records to reflect this.

Summary of information provided and record of consultation for this EP:

- On 13 April 2026, Woodside emailed KLC advising of the proposed activity (Record of Consultation, reference 6.1.43). The email included:
  - A Summary Information Sheet.
  - A link to the Consultation Information Sheet.
  - An overview of the proposed activity.
  - Links to the NOPSEMA Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information and contact details.
  - A request for information on the group's preferred ways to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
  - A request for feedback by 12 May 2026 for the purposes of preparation of the EP.
  - Advice that feedback can continue to be provided to Woodside during the life of an EP, including after consultation for the EP has closed, during EP assessment, and after an EP has been accepted by NOPSEMA.
  - Woodside's commitment to managing gender-restricted or other culturally sensitive information.
  - A request for the group to provide information about the proposed activity to other individuals as required.
- On 30 April 2026, Woodside emailed KLC a reminder about the proposed activity (SI Report B, reference 2.1.1). The email included:
  - A reference to the original consultation email for this EP sent on 13 April 2026, which included a Summary Information Sheet and a link to the Consultation Information Sheet.
  - A reminder that consultation for the preparation of the EP closes on 12 May 2026.
  - A request for information on the group's preferred ways to engage with Woodside about the proposed activity, including the opportunity to meet face to face.
  - Woodside's commitment to managing gender-restricted or other culturally sensitive information.
  - Advice that feedback can continue to be provided to Woodside during the life of an EP, including after consultation for the EP has closed, during EP assessment, and after an EP has been accepted by NOPSEMA.
- On 5 May 2025, KLC emailed Woodside to advise of staffing changes (SI Report B, reference 2.1.2).
- On 28 July 2026, Woodside emailed KLC an activity update about the proposed activity (SI Report B, reference 2.1.3). The email included:
  - A reference to the original consultation email for this EP sent to the group on 13 April 2026.
  - A Summary Information Sheet and a link to the Consultation Information Sheet.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- A request to provide any additional feedback by 26 August 2026 so that it can be considered in the preparation of the EP.

- **(1)** On 14 September 2026, KLC emailed Woodside declining the request to be consulted (SI Report B, reference 2.1.4)
- **(1)** On 22 September 2026, Woodside emailed KLC in response to its 14 September email. Woodside welcomed the opportunity to meet with the KLC, provide additional information, and consider any feedback should the KLC wish to engage at any stage (SI Report B, reference 2.1.5)

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the Adverse Impact of the Activity	Woodside's Response	Inclusion in Environment Plan
(1) KLC declined the request to be consulted on the impacts of the proposed activities in circumstances where the affected native title holders were not provided with an opportunity to be informed about, and provided their free prior consent to, the grant of the titles.	**(1)** Woodside has an obligation to consult relevant persons in the course of preparing an EP and engages in ongoing consultation throughout the life of an EP.	**(1)** Woodside advised that it has obligations under the Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023 to consult with relevant persons while preparing an EP. Woodside acknowledged KLC's position that it declined to participate in consultation on this EP. Woodside reiterated the purpose of consultation was to answer questions, seek feedback and hear from KLC about potential impacts of the activity to KLC's functions, interests and activities, so that they could be considered in the preparation of the EP. Woodside advised it remains willing to meet with KLC, provide additional information, and consider any feedback should KLC wish to engage at any stage.	**(1)** No action required
While feedback has been received, there were no objections or claims.	Although no feedback, objections or claims were provided for this EP, historical cultural values considered relevant have been identified and included based on consultation and publicly available literature.	Woodside engages in ongoing consultation throughout the life of an EP. Should further feedback be received, it will be assessed and, where appropriate, Woodside will apply its Management of	Based on the engagement to date, no additional measures or controls required.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

		Change and Revision process (see Section 7.8 of the EP).	

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environmental Regulations and consultation for the purpose of regulation 25 is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.4 of the EP. Specifically:

Sufficient Information

Sufficient information has been provided because:

- On 13 April 2026, Woodside made the Consultation Information Sheet available on the Woodside website.
- Woodside provided information on 13 April 2026 when consultation commenced. Woodside provided:
  - A Summary Information Sheet developed specifically for Traditional Custodian groups and reviewed by a member of the Indigenous Affairs team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, a summary of the potential risks and impacts of the activity, diagrams and details about how to provide feedback.
  - Links to the NOPSEMA Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information, and contact details.
  - Confirmation of the purpose of consultation, what was being sought by Woodside through consultation including understanding the nature of their interests and how the activity could impact those interests.
  - A request for the consultation and information sheets to be distributed to members and individuals as required.
  - An offer to provide more specific information, maps and images if required.
- Woodside provided contact information for Woodside and NOPSEMA.
- Woodside provided updated information which included:
  - A reference to the original consultation email for this EP sent on 13 April 2026.
  - An updated Summary Information Sheet and link to the updated Consultation Information Sheet noting the EP changes made.
  - An invitation to provide further feedback by 26 August 2026 for the purpose of preparation for this EP

Reasonable Period

A reasonable period for consultation in the preparation of the EP has been provided because:

- Woodside commenced consultation on this EP on 13 April 2026 and requested feedback by 12 May 2026 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.
- Woodside provided an activity update on this EP 28 July 2026 and requested feedback by 26 August 2026.
- Woodside has provided an opportunity to address and respond to feedback for over six months, demonstrating a "reasonable period" of consultation.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided and Woodside's approach to consultation is appropriate and adapted because:

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- Woodside sought direction on the preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Traditional Custodian groups.
- Woodside has made information on this EP publicly available for over six months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (22 April 2026) and National Indigenous Times (28 April 2026) advising of the proposed activities and requesting comments or feedback.
- Woodside's initial email about this EP on 13 April 2026:
  - Included a general email address and telephone number for Woodside, as well as a direct email and telephone number for a dedicated focal person from Woodside's Indigenous Affairs Engagement team. Woodside also provided contact details for NOPSEMA.
  - Offered for Woodside to speak with members as well as the Board.
  - Asked to advise how the group would like Woodside to engage and whether further information is required.
- Woodside offered to meet on a number of occasions.

Outcomes of Consultation

The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- Feedback was provided during consultation for this EP relating to cultural values, in addition to cultural values obtained throughout consultation for other activities. Woodside has incorporated the groups interests and cultural values in Section 4.9.
- During the past six months, no objections or claims about the adverse impact of the activity to which this EP relates have been raised.

Woodside engages in ongoing consultation once an EP has been submitted for assessment as well as throughout the life of an EP. Should feedback be received after the EP has been accepted (including relevant new information relating to cultural values), it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8 of the EP).

4.12.2 Yamatji Marlpa Aboriginal Corporation (YMAC)

YMAC is the Native Title Representative Body for the Yamatji and Pilbara regions of Western Australia. As such, they are not a Prescribed or Registered Native Title Body Corporate representing the cultural rights of a Traditional Custodian Community but exist to assist native title claimants and holders.

Summary of information provided and record of consultation for this EP:

- On 13 April 2026, Woodside emailed YMAC advising of the proposed activity (Record of Consultation, reference 6.1.44). The email included:
  - A Summary Information Sheet.
  - A link to the Consultation Information Sheet.
  - An overview of the proposed activity.
  - Links to the NOPSEMA Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information and contact details.
  - A request for information on the group's preferred ways to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
  - A request for feedback by 12 May 2026 for the purposes of preparation of the EP.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- Advice that feedback can continue to be provided to Woodside during the life of an EP, including after consultation for the EP has closed, during EP assessment, and after an EP has been accepted by NOPSEMA.
- Woodside's commitment to managing gender-restricted or other culturally sensitive information.
- A request for the group to provide information about the proposed activity to other individuals as required.

- On 30 April 2026, Woodside emailed YMAC a reminder about the proposed activity (SI Report B, reference 2.2.1). The email included:
  - A reference to the original consultation email for this EP sent on 13 April 2026, which included a Summary Information Sheet and a link to the Consultation Information Sheet.
  - A reminder that consultation for the preparation of the EP closes on 12 May 2026.
  - A request for information on the group's preferred ways to engage with Woodside about the proposed activity, including the opportunity to meet face to face.
  - Woodside's commitment to managing gender-restricted or other culturally sensitive information.
  - Advice that feedback can continue to be provided to Woodside during the life of an EP, including after consultation for the EP has closed, during EP assessment, and after an EP has been accepted by NOPSEMA.
- On 28 July 2026, Woodside emailed YMAC an activity update about the proposed activity (SI Report B, reference 2.2.3). The email included:
  - A reference to the original consultation email for this EP sent to the group on 13 April 2026.
  - A Summary Information Sheet and a link to the Consultation Information Sheet.
  - A request to provide any additional feedback by 26 August 2026 so that it can be considered in the preparation of the EP.
  - Information on the cultural values that Woodside consider relevant to the activity.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the Adverse Impact of the Activity	Woodside's Response	Inclusion in Environment Plan
No feedback, objections or claims about the adverse impact of the activity received despite follow-up.	Woodside engages in ongoing consultation throughout the life of an EP.	Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8 of the EP).	No additional measures or controls are required.

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environmental Regulations and consultation for the purpose of regulation 25 is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.4 of the EP. Specifically:

Sufficient Information

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Sufficient information has been provided because:

- On 13 April 2026, Woodside made the Consultation Information Sheet available on the Woodside website.
- Woodside provided information on 13 April 2026 when consultation commenced. Woodside provided:
  - A Summary Information Sheet developed specifically for Traditional Custodian groups and reviewed by a member of the Indigenous Affairs team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, a summary of the potential risks and impacts of the activity, diagrams and details about how to provide feedback.
  - Links to the NOPSEMA *Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information*, and contact details.
  - Confirmation of the purpose of consultation, what was being sought by Woodside through consultation including understanding the nature of their interests and how the activity could impact those interests.
  - A request for the consultation information to be distributed to members and individuals as required.
  - An offer to provide more specific information, maps and images if required.
- Woodside provided contact information for Woodside and NOPSEMA.
- Woodside provided updated information which included:
  - A reference to the original consultation email for this EP sent on 13 April 2026.
  - An updated Summary Information Sheet and link to the updated Consultation Information Sheet noting the EP changes made.
  - An invitation to provide further feedback by 26 August 2026 for the purpose of preparation for this EP

Reasonable Period

A reasonable period for consultation in the preparation of the EP has been provided because:

- Woodside commenced consultation on this EP on 13 April 2026 and requested feedback by 12 May 2026 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.
- Woodside provided an activity update on this EP 28 July 2026 and requested feedback by 26 August 2026.
- Woodside has provided an opportunity to address and respond to feedback for more than six months, demonstrating a "reasonable period" of consultation.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided and Woodside's approach to consultation is appropriate and adapted because:

- Woodside sought direction on the preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Traditional Custodian groups.
- Woodside has made information on this EP publicly available for more than six months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (22 April 2026) and National Indigenous Times (28 April 2026) advising of the proposed activities and requesting comments or feedback.
- Woodside's initial email about this EP on 13 April 2026:
  - Included a general email address and telephone number for Woodside, as well as a direct email and telephone number for a dedicated focal person from Woodside's Indigenous Affairs Engagement team. Woodside also provided contact details for NOPSEMA.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- Offered for Woodside to speak with members as well as the Board.
- Asked to advise how the group would like Woodside to engage and whether further information is required.

- Woodside offered to meet on a number of occasions.

Outcomes of Consultation

The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- During the past six months, no objections or claims about the adverse impact of the activity to which this EP relates have been raised.

Woodside engages in ongoing consultation once an EP has been submitted for assessment as well as throughout the life of an EP. Should feedback be received after the EP has been accepted (including relevant new information relating to cultural values), it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8 of the EP).

4.13 Self-identified Indigenous Groups

4.13.1 Ngarluma Yindjibarndi Foundation Ltd (NYFL)

NYFL was created to act as Trustee for the Trust under the Northwest Shelf Agreement 1998 struck between the Ngarluma and Yindjibarndi registered native title claimants, the NWS JVs and Woodside, prior to the resolution of the Ngarluma and Yindjibarndi native title claim. Its purpose is to carry on the business of enterprise development, investment and social welfare.

In 1999 the Ngarluma and Yindjibarndi native title claim was settled with the Federal Court appointing, at the request of the common law native title holders, the Ngarluma Aboriginal Corporation (NAC) as PBC to represent the communal interests of the Ngarluma people and the Yindjibarndi Aboriginal Corporation as PBC to represent the communal interests of the Yindjibarndi people. Woodside consulted both NAC and Yindjibarndi as relevant persons in the course of preparing this EP. NYFL self-identified and has advised it is relevant for this EP.

Since March 2024, Woodside and NYFL have been in communication about a draft consultation agreement. Woodside and NYFL have exchanged the draft consultation agreement a number of times during this period. Woodside has also travelled to Roebourne to meet with NYFL to progress negotiations and provided funding to NYFL for legal advice to finalise the agreement. During consultation for other EPs, NYFL has claimed that formal consultation had not taken place due to the absence of a finalised consultation agreement. Woodside has reiterated to NYFL on a number of occasions, including during consultation for this EP, that a consultation agreement is not a pre-requisite for consultation and that negotiations relating to a consultation agreement have and continue to occur in parallel to EP consultation. Discussions between Woodside and NYFL in relation to finalising this agreement remain ongoing.

Woodside has continually informed NYFL that it is open to receiving or being notified of feedback, claims or objections on EPs.

Summary of information provided and record of consultation for this EP:

- On 13 April 2026, Woodside emailed NYFL advising of the proposed activity (Record of Consultation, reference 6.1.45). The email included:
  - A Summary Information Sheet.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

  - A link to the Consultation Information Sheet.
  - An overview of the proposed activity.
  - Links to the NOPSEMA Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information and contact details.
  - A request for information on the group's preferred ways to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
  - A request for feedback by 12 May 2026 for the purposes of preparation of the EP.
  - Advice that feedback can continue to be provided to Woodside during the life of an EP, including after consultation for the EP has closed, during EP assessment, and after an EP has been accepted by NOPSEMA.
  - Woodside's commitment to managing gender-restricted or other culturally sensitive information.
  - A request for the group to provide information about the proposed activity to other individuals as required.
  - Acknowledgement that discussions relating to a consultation framework agreement with Woodside has been ongoing and that these discussions will progress in parallel with consultation for the proposed activity's EP.
- On 30 April 2026, Woodside emailed NYFL a reminder about the proposed activity (SI Report B, reference 3.1.1). The email included:
  - A reference to the original consultation email for this EP sent on 13 April 2026, which included a Summary Information Sheet and a link to the Consultation Information Sheet.
  - A reminder that consultation for the preparation of the EP closes on 12 May 2026.
  - A request for information on the group's preferred ways to engage with Woodside about the proposed activity, including the opportunity to meet face to face.
  - Woodside's commitment to managing gender-restricted or other culturally sensitive information.
  - Advice that feedback can continue to be provided to Woodside during the life of an EP, including after consultation for the EP has closed, during EP assessment, and after an EP has been accepted by NOPSEMA.
- Between 1 and 18 May 2026, NYFL and Woodside exchanged emails relating a Consultation Agreement as well as a meeting (SI Report B, reference 3.1.2 – 3.1.5). Additionally:
  - **(1)** The group raised feedback for consideration within the EP.
  - **(1)** Woodside responded to and addressed feedback from the group.
- On 28 July 2026, Woodside emailed NYFL an activity update about the proposed activity (SI Report B, reference 3.1.6). The email included:
  - A reference to the original consultation email for this EP sent to the group on 13 April 2026.
  - A Summary Information Sheet and a link to the Consultation Information Sheet.
  - A request to provide any additional feedback by 26 August 2026 so that it can be considered in the preparation of the EP.
- On 3 September 2026, NYFL emailed Woodside regarding an unrelated EP advising that a priority matter for NYFL is the outstanding consultation agreement for EPs (SI Report B, reference 3.1.7).
- On 3 September 2026, Woodside responded to NYFL, the email included:
  - Advice that a consultation framework agreement is not a pre-requisite for EP consultation and that Woodside is happy to meet to discuss a framework separately from EP consultation. (SI Report B, reference 3.1.8).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the Adverse Impact of the Activity	Woodside's Response	Inclusion in Environment Plan
(1) NYFL requested to continue discussions on the Consultation Agreement and provided an opportunity to meet and discuss.	**(1)** A consultation framework agreement is not a prerequisite for EP consultation. Consultation for this EP and others has occurred in parallel to any discussion about a framework agreement.	**(1)** Woodside has reminded NYFL that a consultation framework agreement is not a prerequisite for EP consultation.	**(1)** No action required.
While feedback has been received, there were no objections or claims.	Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24.	Woodside engages in ongoing consultation throughout the life of an EP. Woodside notes that further feedback may be received as part of ongoing consultation. Should further feedback be received, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8 of the EP).	No additional measures or controls are required.

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environmental Regulations and consultation for the purpose of regulation 25 is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.4 of the EP. Specifically:

Sufficient Information

Sufficient information has been provided because:

- On 13 April 2026, Woodside made the Consultation Information Sheet available on the Woodside website.
- Woodside provided information on 13 April 2026 when consultation commenced. Woodside provided:
  - A Summary Information Sheet developed specifically for Traditional Custodian groups and reviewed by a member of the Indigenous Affairs team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, a summary of the potential risks and impacts of the activity, diagrams and details about how to provide feedback.
  - Links to the NOPSEMA *Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information*, and contact details.
  - Confirmation of the purpose of consultation, what was being sought by Woodside through consultation including understanding the nature of their interests and how the activity could impact those interests.
  - A request for the consultation information to be distributed to members and individuals as required.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- An offer to provide more specific information, maps and images if required.

- Woodside provided contact information for Woodside and NOPSEMA.
- Woodside provided updated information which included:
  - A reference to the original consultation email for this EP sent on 13 April 2026.
  - An updated Summary Information Sheet and link to the updated Consultation Information Sheet noting the EP changes made.
  - An invitation to provide further feedback by 26 August 2026 for the purpose of preparation for this EP

Reasonable Period

A reasonable period for consultation in the preparation of the EP has been provided because:

- Woodside commenced consultation on this EP on 13 April 2026 and requested feedback by 12 May 2026 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.
- Woodside provided an activity update on this EP 28 July 2026 and requested feedback by 26 August 2026.
- Woodside has provided an opportunity to address and respond to feedback for more than three months, demonstrating a "reasonable period" of consultation.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided and Woodside's approach to consultation is appropriate and adapted because:

- Woodside sought direction on the preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Traditional Custodian groups.
- Woodside has made information on this EP publicly available for more than three months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (22 April 2026) and National Indigenous Times (28 April 2026) advising of the proposed activities and requesting comments or feedback.
- Woodside's initial email about this EP on 13 April 2026:
  - Included a general email address and telephone number for Woodside, as well as a direct email and telephone number for a dedicated focal person from Woodside's Indigenous Affairs Engagement team. Woodside also provided contact details for NOPSEMA.
  - Offered for Woodside to speak with members as well as the Board.
  - Asked to advise how the group would like Woodside to engage and whether further information is required.
- Woodside offered to meet on a number of occasions.

Outcomes of Consultation

The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- During the past six months, while feedback was received, no objections or claims about the adverse impact of the activity to which this EP relates have been raised.

Woodside engages in ongoing consultation once an EP has been submitted for assessment as well as throughout the life of an EP. Should feedback be received after the EP has been accepted (including relevant new information relating to cultural values), it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8 of the EP).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

4.14 Other Indigenous Groups

4.14.1 Save Our Songlines (SOS)

SOS and/or [Individual 2] do not squarely fall within the consultation categories in the current Woodside methodology and are therefore considered in their own category. SOS is an organisation formed by [Individual 2], who we currently understand is the group's primary spokesperson. [Individual 2] and/or SOS are together represented by lawyers from Johnson Legal. During consultation for this EP, Johnson Legal advised that there has been staffing changes. Woodside updated its records to reflect this.

Woodside understands that the views expressed by SOS align with the views of [Individual 2]. Woodside therefore approaches communication with SOS and/or [Individual 2] as communication with SOS and has consulted them concurrently. The stated interests of [Individual 2] and/or SOS include the conservation of Murujuga rock art, and opposition to expansion of Protects on the Burrup Peninsula. On the information available to us, we understand that SOS and/or [Individual 2] have also been members of Aboriginal corporations who have been separately consulted as relevant persons by Woodside. This is relevant because it confirms that cultural values or interests of those groups have been consulted on and assessed in preparing this EP. This context and process demonstrates that Woodside's consultation approach with SOS is appropriate and adapted to the nature and interests of SOS.

Historical Information

During previous consultation for other activities, SOS and/or [Individual 2] has provided information relating to its cultural values which Woodside deem relevant to this EP.

- **(1-4)** Information on the cultural values related to the group that Woodside considers relevant to the activity.
- **(1-4)** Woodside has noted the cultural values and if relevant assessed risks in the EP.

Summary of information provided and record of consultation for this EP:

- On 13 April 2026, Woodside emailed SOS and/or [Individual 2] advising of the proposed activity (Record of Consultation, reference 6.1.46). The email included:
  - A Summary Information Sheet.
  - A link to the Consultation Information Sheet.
  - An overview of the proposed activity.
  - Links to the NOPSEMA Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information and contact details.
  - A request for information on the group's preferred ways to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
  - A request for feedback by 12 May 2026 for the purposes of preparation of the EP.
  - Advice that feedback can continue to be provided to Woodside during the life of an EP, including after consultation for the EP has closed, during EP assessment, and after an EP has been accepted by NOPSEMA.
  - Woodside's commitment to managing gender-restricted or other culturally sensitive information.
  - A request for the group to provide information about the proposed activity to other individuals as required.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- On 30 April 2026, Woodside emailed SOS and/or [Individual 2] a reminder about the proposed activity (SI Report B, reference 4.1.1). The email included:
  - A reference to the original consultation email for this EP sent on 13 April 2026, which included a Summary Information Sheet and a link to the Consultation Information Sheet.
  - A reminder that consultation for the preparation of the EP closes on 12 May 2026.
  - A request for information on the group's preferred ways to engage with Woodside about the proposed activity, including the opportunity to meet face to face.
  - Woodside's commitment to managing gender-restricted or other culturally sensitive information.
  - Advice that feedback can continue to be provided to Woodside during the life of an EP, including after consultation for the EP has closed, during EP assessment, and after an EP has been accepted by NOPSEMA.
- On 30 April 2026, SOS and/or [Individual 2] emailed Woodside requesting to update the contact details of the legal representation (SI Report B, reference 4.1.2).
- On 28 July 2026, Woodside emailed SOS and/or [Individual 2] an activity update about the proposed activity (SI Report B, reference 4.1.3). The email included:
  - A reference to the original consultation email for this EP sent to the group on 13 April 2026.
  - A Summary Information Sheet and a link to the Consultation Information Sheet.
  - A request to provide any additional feedback by 26 August 2026 so that it can be considered in the preparation of the EP.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the Adverse Impact of the Activity	Woodside's Response	Inclusion in Environment Plan
(1) Cultural value Marine Species: • Whales: migratory patterns, behavioural impacts, sonar communication. • Turtles: migratory patterns. • Dugongs. • Plankton. • Seagrass. • Pygmy blue whales. • Pelagic fish. • Sharks.	**(1)** This value has been identified through Woodside's data collection processes (consultation and Affidavit).	**(1)** Woodside acknowledges these interests and cultural values and assessed the potential impacts on there and where appropriate included controls	**(1)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate included controls in Sections 6.6, 6.7 and 6.9.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

• Seabirds.			
(2) Cultural value Totemic Species: • Bungarra. • Eagle. • Kangaroo.	**(2)** This value has been identified through Woodside's data collection processes (Affidavit).	**(2)** Woodside acknowledges these interests and cultural values and assessed the potential impacts on there and where appropriate included controls.	**(2)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate included controls in Sections 6.6, 6.7 and 6.9.
(3) Cultural value Caring for Country: • Sea Country. • Rock Art. • Water Quality. • Murujuga.	**(3)** This value has been identified through Woodside's data collection processes (Affidavit).	**(3)** Woodside acknowledges these interests and cultural values and assessed the potential impacts on there and where appropriate included controls.	**(3)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate included controls in Sections 6.6, 6.7 and 6.9.
(4) Cultural value Songlines, dreaming and energy lines, including where saltwater and freshwater meet.	**(4)** This value has been identified through Woodside's data collection processes (Affidavit).	**(4)** Woodside acknowledges these interests and cultural values and assessed the potential impacts on there and where appropriate included controls.	**(4)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate included controls in Sections 6.6, 6.7 and 6.9.
No feedback, objections or claims about the adverse impact of the activity received despite follow-up.	Woodside engages in ongoing consultation throughout the life of an EP	Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8 of the EP).	No additional measures or controls are required.
Summary Report – Consultation Complete			
Woodside has discharged its obligations for consultation under regulation 25 of the Environmental Regulations and consultation for the purpose of regulation 25 is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.4 of the EP. Specifically:			

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Sufficient Information

Sufficient information has been provided because:

- On 13 April 2026, Woodside made the Consultation Information Sheet available on the Woodside website.
- Woodside provided information on 13 April 2026 when consultation commenced. Woodside provided:
  - A Summary Information Sheet developed specifically for Traditional Custodian groups and reviewed by a member of the Indigenous Affairs team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, a summary of the potential risks and impacts of the activity, diagrams and details about how to provide feedback.
  - Links to the NOPSEMA *Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information*, and contact details.
  - Confirmation of the purpose of consultation, what was being sought by Woodside through consultation including understanding the nature of their interests and how the activity could impact those interests.
  - A request for the consultation and information sheets to be distributed to members and individuals as required.
  - An offer to provide more specific information, maps and images if required.
- Woodside provided contact information for Woodside and NOPSEMA.
- Woodside provided updated information which included:
  - A reference to the original consultation email for this EP sent on 13 April 2026.
  - An updated Summary Information Sheet and link to the updated Consultation Information Sheet noting the EP changes made.
  - An invitation to provide further feedback by 26 August 2026 for the purpose of preparation for this EP

Reasonable Period

A reasonable period for consultation in the preparation of the EP has been provided because:

- Woodside commenced consultation on this EP on 13 April 2026 and requested feedback by 12 May 2026 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.
- Woodside provided an activity update on this EP 28 July 2026 and requested feedback by 26 August 2026.
- Woodside has provided an opportunity to address and respond to feedback for more than three months, demonstrating a "reasonable period" of consultation.

Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided and Woodside's approach to consultation is appropriate and adapted because:

- Woodside sought direction on the preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Traditional Custodian groups.
- Woodside has made information on this EP publicly available for more than three months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (22 April 2026) and National Indigenous Times (28 April 2026) advising of the proposed activities and requesting comments or feedback.
- Woodside's initial email about this EP on 13 April 2026:

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- Included a general email address and telephone number for Woodside, as well as a direct email and telephone number for a dedicated focal person from Woodside's Indigenous Affairs Engagement team. Woodside also provided contact details for NOPSEMA.
- Offered for Woodside to speak with members as well as the Board.
- Asked to advise how the group would like Woodside to engage and whether further information is required.

- Woodside offered to meet on a number of occasions.

Outcomes of Consultation

The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- No feedback or information was provided during consultation for this EP relating to cultural values, but SOS however SOS has done so in consultation for other activities as from an Affidavit Woodside has incorporated the groups interest and cultural values in section 4.9.
- During the past six months, no objections or claims about the adverse impact of the activity to which this EP relates have been raised.

Woodside engages in ongoing consultation once an EP has been submitted for assessment as well as throughout the life of an EP. Should feedback be received after the EP has been accepted (including relevant new information relating to cultural values), it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8 of the EP).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

5. TABLE 3: ENGAGEMENT REPORT WITH PERSONS OR ORGANISATIONS ASSESSED AS NOT RELEVANT

The black numbering **(N)** in the 'Summary of information provided and record of consultation for this EP' in Table 3 denotes an item raised by a stakeholder. The green numbering **(N)** in this section denotes Woodside's response to that issue.

5.1 Other non-government groups or organisations (NGOs) or individuals

5.1.1 Australian Marine Conservation Society (AMCS)

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed AMCS advising of the proposed activity (Record of Consultation, reference 6.1.7, provided a Consultation Information Sheet, and a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
- On 7 May 2026, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 18 May 2026, AMCS replied to follow-up email (SI Report A, reference 26.1) and requested point **(1)**.
- On 18 May 2026, Woodside thanked AMCS for its query (SI Report A, reference 26.2) and confirmed point **(1)**.
- On 23 July 2026, Woodside sent an Activity Update to AMCS based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.11). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP was provided.

Summary of Feedback, Objection or Claim	Assessment of Merits of Feedback, Objection or Claim	Woodside's Statement of Response	Inclusion in Environment Plan
(1) AMCS requested a five-day consultation extension.	**(1)** Woodside considered AMCS' request for an extension and agreed to provide the additional five days.	**(1)** Woodside confirmed AMCS' request for an extension.	**(1)** No changes or additional measures are required.
While feedback has been received, there were no objections or claims.	Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24.	Woodside engages in ongoing consultation throughout the life of an EP. Woodside notes that further feedback may be received as part of ongoing consultation. Should further feedback be received, it will be assessed and, where	No changes or additional measures are required.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

		appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	
Outcomes of Consultation			
While AMCS is not a relevant person under regulation 25 of the Environment Regulations, Woodside considers it has still provided sufficient information and a reasonable period outside of regulatory requirements for AMCS to provide feedback during the consultation process.			

5.1.2 Conservation Council of Western Australia (CCWA)

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed CCWA advising of the proposed activity (Record of Consultation, reference 6.1.7), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
- On 7 May 2026, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 23 July 2026, Woodside sent an Activity Update to CCWA based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.11). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP was provided.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
No feedback, objections or claims about the adverse impact of the activity received despite follow-up.		Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	No changes or additional measures are required.
Outcomes of Consultation			
• While CCWA is not a relevant person under regulation 25 of the Environment Regulations, Woodside considers it has still provided sufficient information and a reasonable period outside of regulatory requirements for CCWA to provide feedback during the consultation process.			

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

5.1.3 Greenpeace Australia Pacific (GPAP)

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed the GPAP advising of the proposed activity (Record of Consultation, reference 6.1.7), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
- On 16 April, 2026, Woodside received an auto response email from the previous GPAP contact so exchanged emails with GPAP to identify and reach new contact for future consultation (SI Report A, references 15.1 – 15.3).
- On 7 May 2026, as no response with EP feedback had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 23 July 2026, Woodside sent an Activity Update to GPAP based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.11). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP was provided.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
No feedback, objections or claims about the adverse impact of the activity received despite follow-up.		Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	No changes or additional measures are required.

Outcomes of Consultation

- While GPAP is not a relevant person under regulation 25 of the Environment Regulations, Woodside considers it has still provided sufficient information and a reasonable period outside of regulatory requirements for GPAP to provide feedback during the consultation process.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

5.2 Research institutes and local conservation groups or organisations

5.2.1 Australian Institute of Marine Science (AIMS), Commonwealth Scientific and Industrial Research Organisation (CSIRO), Western Australian Marine Science Institution (WAMSI), University of Western Australia (UWA), Curtin University, Edith Cowan University, Murdoch University

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed the Australian Institute of Marine Science (AIMS), Commonwealth Scientific and Industrial Research Organisation (CSIRO), Western Australian Marine Science Institution (WAMSI), University of Western Australia (UWA), Curtin University, Edith Cowan University and Murdoch University (referred to as Research Institutes and Universities) advising of the proposed activity (Record of Consultation, reference 6.1.18), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
- On 7 May 2026, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 23 July 2026, Woodside sent an Activity Update to Research Institutes and Universities based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.22). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP was provided.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
No feedback, objections or claims about the adverse impact of the activity received despite follow-up.		Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	No additional measures or controls are required.

Outcomes of Consultation

- While the Research Institutes and Universities are not a relevant persons under regulation 25 of the Environment Regulations, Woodside considers it has still provided sufficient information and a reasonable period outside of regulatory requirements for the Research Institutes and Universities to provide feedback during the consultation process.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

5.3 Commonwealth commercial fisheries and peak representative bodies

5.3.1 Southern Bluefin Tuna Fishery Licence Holders, Western Skipjack Fishery Licence Holders

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed Southern Bluefin Tuna Fishery and Western Skipjack Fishery licence holders advising of the proposed activity (Record of Consultation, reference 6.1.12), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
- On 7 May 2026, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 23 July 2026, Woodside sent an Activity Update to Southern Bluefin Tuna Fishery and Western Skipjack Fishery licence holders based on the addition of the WA-7 and WA-8 wells to the EP's light well intervention activities. (Record of Consultation, reference 6.3.16). An updated Consultation Information Sheet for the renamed Okha Light Well Intervention EP was provided.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
No feedback, objections or claims about the adverse impact of the activity received despite follow-up.		Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	No additional measures or controls are required.

Outcomes of Consultation

- While Southern Bluefin Tuna Fishery and Western Skipjack Fishery licence holders are not a relevant person under regulation 25 of the Environment Regulations, Woodside considers it has still provided sufficient information and a reasonable period outside of regulatory requirements for Southern Bluefin Tuna Fishery and Western Skipjack Fishery licence holders to provide feedback during the consultation process.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

5.4 Commonwealth and WA State Government departments or agencies – environment

5.4.1 Department of Water and Environment Regulations (DWER)

Summary of information provided and record of consultation for this EP:

- On 16 April 2026, Woodside emailed DWER advising of the proposed activity (Record of Consultation, reference 6.1.7), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community*'.
- On 7 May 2026, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 7 May 2026, DWER thanked Woodside, provided background on circumstances where applications should be submitted to the EPA (SI Report A, reference 24.1) and provided point **(1).**
- On 15 May 2026, Woodside thanked emailed DWER (SI Report A, reference 24.2) and responded to point **(1).**
- On 23 July 2026, Woodside did not send DWER an Activity Update as DWER confirmed it was not commenting on EPs as demonstrated in their correspondence on 7 May 2026 point **(1)**.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim about the adverse impact of the activity	Woodside's Statement of Response	Inclusion in Environment Plan
(1) DWER's EP Services team confirmed it only provides comments on events or activities which require an application.	**(1)** Woodside understands that this activity does not require any applications to be submitted to EPA, and that EP Services will not provide comments on the EP.	**(1)** Woodside confirmed that it understood EPA Services would not provide comments and that it was aware of application requirements.	**(1)** Not required.
While feedback has been received, there were no objections or claims.	Woodside has assessed the merits of each objection or claim (if any) about the adverse impact of the activity to which the EP relates, as required under Regulation 24.	Woodside engages in ongoing consultation throughout the life of an EP. Woodside notes that further feedback may be received as part of ongoing consultation. Should further feedback be received, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8.1 of the EP).	No changes or additional measures are required.
Outcomes of Consultation			

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- While DWER is not a relevant person under regulation 25 of the Environment Regulations, Woodside considers it has still provided sufficient information and a reasonable period outside of regulatory requirements for DWER to provide feedback during the consultation process.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6. RECORD OF CONSULTATION

6.1 Initial consultation

6.1.1 Consultation Information Sheet

See next page for full page view.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Woodside Energy

Consultation Information Sheet
April 2026

CK4 and LH3 Well Intervention Environment Plan

Carnarvon Basin, North-West Australia

Activity overview

CK4 and LH3 Well Intervention Environment Plan (EP) covers:

- Light well intervention activities on the CK4 (Cossack-4H) and LH3 (Lambert-3) wells using a light well intervention vessel (LWIV).
- Support vessel and helicopter operations.

Context

The CK4 and LH3 wells operate under the accepted Okha Floating, Production, Storage and Offloading (FPSO) Facility Operations EP and are located in the Wanaea and Lambert fields, respectively on the North West Shelf (NWS).

- Wells tie back to manifolds, producing oil and gas through the Okha FPSO facility since 2011.
- Light well intervention activity on the CK4 and LH3 wells requires a new standalone EP, and on completion of the activity, the wells will continue to operate under the accepted Okha FPSO Facility Operations EP.

Location

- In Commonwealth waters, ~ 135 km north-west of Dampier **(Figure 2).**

Water depth

- ~ 81 m (CK4 well) and ~ 128 m (LH3 well) deep.

Timing and duration

- Light well intervention may occur between Q4 2026 and 2030, in a single campaign or over multiple campaigns.
- Activities are expected to take between 14 to 35 days at the CK-4 well and between 14 to 21 days at the LH-3 well.
- When activities occur, they will run 24 hours a day, 7 days a week.
- Timing and duration are subject to change due to factors including approvals, weather, project vessel availability and other unforeseen circumstances.

Joint Venture

- Operator – Woodside Burrup Pty Ltd.
- Joint Venture – Chevron Australia Pty Ltd, Woodside Energy (North West Shelf) Pty Ltd, Jadestone Energy (CWLH) Pty Ltd.

We would like to hear from you

We would like relevant persons whose functions, interests or activities may be affected by the proposed activity to have the opportunity to provide feedback on our proposed activity, in accordance with the intended outcome of consultation.

Woodside must consult relevant persons when developing an Environment Plan (EP) to confirm current measures or identify additional measures, which could lessen or avoid potential adverse effects of the proposed activity on the environment.

Woodside aims to ensure the proposed activity is consistent with the principles of ecologically sustainable development, by which the environmental impacts and risks of the activity are reduced to as low as reasonably practicable (ALARP) and of an acceptable level.

If you are an individual, organisation or community group and believe your functions, interests or activities may be impacted by the activities under this EP, we would like to hear from you by **18 May 2026.**

Feedback@woodside.com
Toll free: 1800 442 977
woodside.com

A summary of the activity and location is found in **Table 1** and **2**.



Figure 1: Example of a Light Well Intervention Vessel (LWIV) with equipment on deck for well intervention activities. Photo credit: Sapura Energy.

Woodside Energy recognises Aboriginal and Torres Strait Islander peoples as Australia's First Peoples. We acknowledge their connection to land, waters and the environment and pay our respects to ancestors and Elders, past and present. We extend this recognition and respect to Indigenous Peoples and communities around the world.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Activity Location

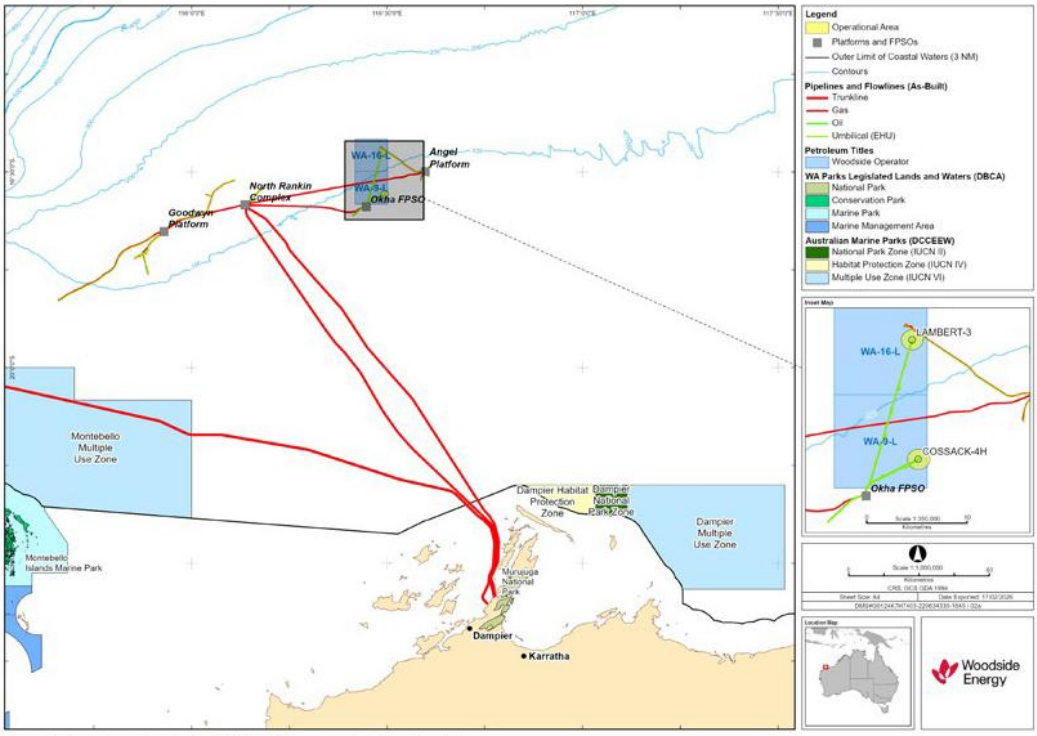


Figure 2. Location of the CK4 and LH3 Well Intervention Operational Area

Table 1 – Activity and location summary

CK-4 and LH-3 Well Intervention Environment Plan	
Activity details	• Light well intervention activities on the CK4 and LH3 wells. Both CK4 and LH3 wells may require temporary well suspension, Xmas tree (XT) changeout and re-commissioning. The wells may also require Tubing Retrievable Safety Valve (TRSV) remediation. • Preparation and support activities (e.g. inspections, cleaning). • Well start-up and production following intervention activities will be managed under the accepted Okha FPSO Facility Operations EP.
Titles	• WA-9-L (CK4). • WA-16-L (LH3).
Infrastructure	• CK4 subsea production well and associated manifold. • LH3 subsea production well and associated manifold.
Vessels	• Light well intervention vessel (LWIV). • Additional support vessels. • Helicopter to transport personnel and/or freight.
Operational Area and exclusion zones	• Operational Area: 1 km around each well. • Temporary exclusion zone: 500 m around the LWIV during light well intervention.
Communication with mariners	• Marine notices will be issued prior to the commencement of activities within the Operational Area. • Other marine users are permitted to use the Operational Area. • A 500 m temporary exclusion zone will be in place around the LWIV.
Distance to nearest marine park/nature reserve	• Montebello Marine Park – Multiple Use Zone (Cth) is 96 km south-west of the Operational Area. • Dampier Marine Park – Habitat Protection Zone (Cth) is 90 km south of the Operational Area.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 2 – Approximate locations of key infrastructure within the scope of the CK4 and LH3 Well Intervention EP

Production well and centre locations	Water Depth (m)	Latitude (WGS84)	Longitude (WGS84)	Title
Cossack-4H (CK4)	– 81	19°33 22.909 S	116°29 35.754 E	WA-9-L
Lambert-3 (LH3)	– 128	19°26 58.469 S	116°29 16.227 E	WA-16-L

Environment that May Be Affected (EMBA)

The EMBA is the largest geographic area where an unplanned event could potentially have an environmental consequence. The broadest extent of the EMBA takes into consideration planned activities and unplanned events. The EMBA was developed combining numerous modelling outputs based on highly unlikely releases of hydrocarbons to the environment. The modelling scenarios that inform the EMBA are a loss of well containment and a vessel collision. The EMBA is depicted in **Figure 3.**

The EMBA does not represent the extent of the predicted impact of a highly unlikely hydrocarbon release. Rather, the EMBA represents the merged area of many possible paths that a highly unlikely hydrocarbon release could travel, which depends on the weather and ocean conditions at the time of a release. This means that in the highly unlikely event that a hydrocarbon release does occur, the whole EMBA will not be affected. The specific and minimal part of the EMBA that is affected will only be known if there is a release. To learn more about an EMBA, please see the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) video on oil spill modelling at **www.nopsema.gov.au**.

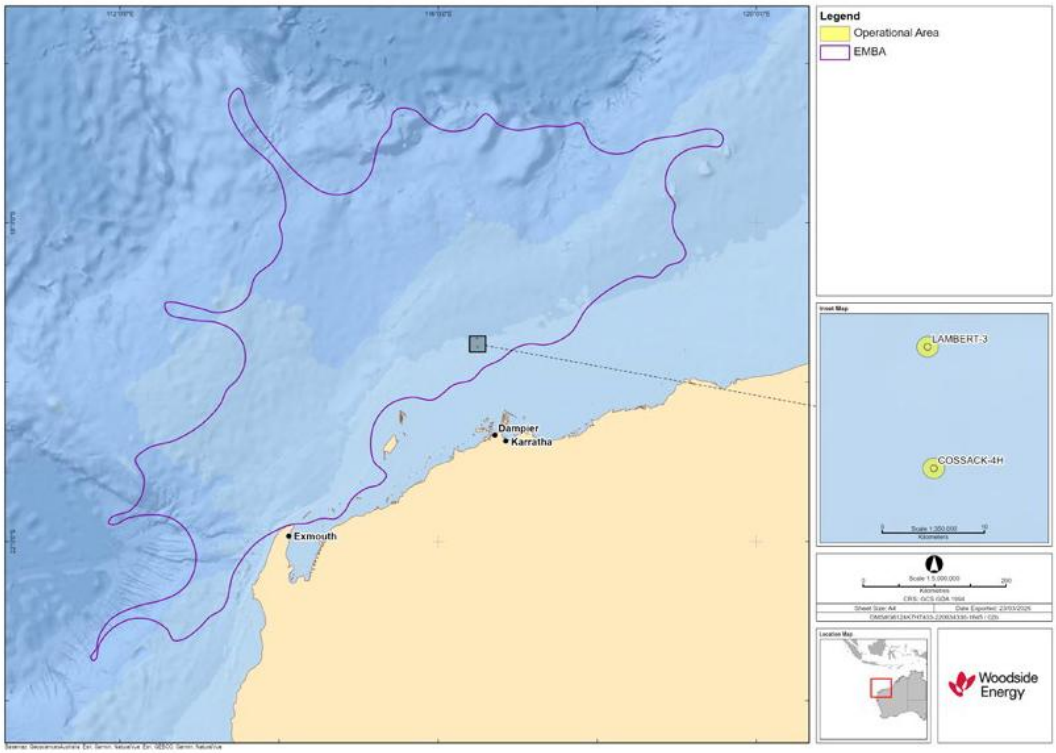


Figure 3. Location of the CK4 and LH3 Well Intervention EP EMBA

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Impacts/Risks, and Mitigation and/or Management Measures

Woodside assessed the impacts and risks to the environment arising from the planned activities and unplanned events. This assessment considers the timing, duration and location of the activities. Proposed mitigation and management measures will be implemented and are summarised in **Table 3.** Further details will be provided in the EP.

In preparing the EP, Woodside's intent is to minimise environmental, social and cultural impacts and risks associated with the proposed activities, and Woodside seeks your feedback to inform our decision-making.

Table 3 – Summary of key impacts and risks and proposed management measures

Impact/Risk	Description of Source of Impact/Risk	Description of Impact/Risk	Proposed Mitigation and/or Management Measure
Planned activities (routine and non-routine)			
Physical presence: ***interaction with other marine users***	• Physical presence of the LWIV and support vessels within the Operational Area.	• Potential temporary displacement of other marine users. - Due to the offshore location and the localised nature of the activity, if there is an interaction, it is expected to be localised with no lasting effect.	• Vessels adhere to regulatory requirements for navigational safety. • Establish a temporary 500 m exclusion zone around the LWIV which other marine users are notified of. - Notify relevant stakeholders of activity commencement. - Notify the Australian Hydrographic Office prior to commencement of the activity so that marine users are aware of the activity. - Consult with relevant persons so they are informed of the proposed activities.
Physical presence: ***disturbance to seabed***	• Seabed disturbance may result from the following activities: - Wellhead cleaning and removal will cause localised seabed disturbance around the wellhead. - Use of a remotely operated vehicle near the seabed and temporary placement of equipment on the seabed will disturb small areas of seabed habitat.	• Localised impact with no lasting effect to seabed and associated benthic communities, arising from: - Localised modification of seabed habitat within the Operational Area. - Localised change in habitat, water quality, and sediment quality, which may affect marine fauna.	• Equipment temporarily placed on the seabed will be tracked and removed. • Comply with requirements of Underwater Cultural Heritage Act 2018 (Cth). • Manage unexpected finds of potential underwater cultural heritage sites/features, including Indigenous Peoples underwater cultural heritage in accordance with Woodside's Unexpected Finds Procedure.
Routine and non-routine acoustic emissions	• Noise generated within the Operational Area from LWIV, support vessels, and helicopters.	• Localised behavioural impacts to marine fauna around vessels, with no lasting impact.	• Comply with regulatory requirements for interactions with marine fauna. • Environmental induction of all relevant marine crew.
Routine and non-routine discharges: ***subsea fluids***	• Light well intervention will result in subsea chemical and fluid discharge.	• Localised decrease in water quality at the well location with no lasting impact.	• Assessment of all chemicals used following Woodside's Environment Chemical Selection and Assessment Procedure – Australia. • Chemicals selected with the lowest reasonably practicable environmental impacts and risks subject to technical constraints and approved through the Woodside chemical assessment process.
Routine and non-routine discharges: ***vessel utility systems (bilge water, greywater, sewage, putrescible wastes and deck drainage water)***	• Discharges from vessel utility systems including: - Sewage, greywater and organic solid waste. - Deck water, drainage systems and bilge water. - Brine and cooling water.	• Localised impact with no lasting effect arising from: - Change in marine water quality, which may affect marine fauna.	• LWIV and support vessels will comply with relevant Marine Orders.
Routine and non-routine atmospheric and Greenhouse Gas (GHG) emissions	• Atmospheric and GHG emissions associated with: - Use of internal combustion engines and incinerators on the LWIV and support vessels.	• Emissions associated with vessels could result in temporary, localised reductions in air quality in the immediate vicinity.	• Comply with regulatory requirements relating to GHG emissions and reporting. • Vessels comply with relevant Marine Orders regarding pollution prevention to air.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Impact/Risk	Description of Source of Impact/Risk	Description of Impact/Risk	Proposed Mitigation and/or Management Measure
Routine and non-routine light emissions: ***light emissions from vessel operations***	• Light emissions from the LWIV and support vessels.	• Slight and low level impact arising from: - Change in ambient light resulting in change in fauna behaviour.	• Lighting is limited to the minimum required for navigational and safety requirements except for emergency events. • Implementation of Woodside's Seabird Management Plan.
Unplanned events (accidents / incidents / emergency situations)			
Unplanned hydrocarbon release: ***loss of well containment***	• Loss of well containment resulting in release of hydrocarbons to the environment.	• In the highly unlikely event of a loss of well containment causing a release of crude oil, impacts to water quality and marine ecosystems could occur. • Modelling of a subsea release of crude oil was used to understand potential impacts. • Potential to result in a reduction in water quality. • Potential disruption to marine fauna, including protected species. • Potential interference with or displacement of other marine users including fisheries, tourism and recreation.	**Preventing loss of well containment** • Wells in compliance with accepted well operation management plan (WOMP) including implementation of barriers to prevent a loss of well containment. • Checks completed to establish minimum acceptable standard of well integrity. **Spill response arrangements** • In the event of a spill emergency response activities implemented in accordance with the Oil Pollution Emergency Plan (OPEP). • First Strike Plan. • Arrangements supporting the activities in the OPEP will be tested so that the OPEP can be implemented as planned.
Unplanned hydrocarbon release: ***loss of control of suspended load from lifting operations***	• Loss of control of suspended load from lifting operations resulting in release of hydrocarbons to the environment.	• In the highly unlikely event of a loss of control of a suspended load impacting subsea infrastructure causing a release of crude oil, impacts to water quality and marine ecosystems could occur. • Modelling of a subsea release of crude oil was used to understand potential impacts. • Potential to result in a reduction in water quality. • Potential disruption to marine fauna, including protected species. • Potential interference with or displacement of other marine users including fisheries, tourism and recreation.	**Preventing subsea equipment loss of well containment** • Lifting procedures applied to minimise risk of dropped objects. • Simultaneous operations management plan implemented. **Spill response arrangements** • In the event of a spill emergency response, activities implemented in accordance with the Oil Pollution Emergency Plan (OPEP). • First Strike Plan. • Arrangements supporting the activities in the OPEP will be tested so that the OPEP can be implemented as planned.
Unplanned hydrocarbon release: ***vessel collision***	• Vessel collision resulting in release of hydrocarbons to the environment.	• In the highly unlikely event of a vessel collision causing a release of marine diesel, impacts to water quality and marine ecosystems could occur. • Modelling of a surface release of marine diesel was used to understand potential impacts. • Marine diesel is a relatively volatile, non-persistent nature hydrocarbon with up to 26% evaporating within the first 24 hours. • Potential to result in a reduction in water quality. • Potential disruption to marine fauna, including protected species. • Potential interference with or displacement of other marine users including fisheries, tourism and recreation.	**Preventing marine vessel collisions** • Vessels adhere to regulatory requirements for navigational safety and the prevention of vessel collisions. • Notify relevant stakeholders of activity commencement. • Notify the Australian Hydrographic Office prior to commencement of the activity so that marine users are notified of the activity. • Consult with relevant persons so they are informed of the proposed activities. • Establish a temporary 500 m exclusion zone around the LWIV which is communicated to marine users. **Spill response arrangements** • In the event of a spill emergency response activities implemented in accordance with the OPEP. • Arrangements supporting the activities in the OPEP will be tested so that the OPEP can be implemented as planned.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Impact/Risk	Description of Source of Impact/Risk	Description of Impact/Risk	Proposed Mitigation and/or Management Measure
Unplanned release: ***hydrocarbon and chemical spills from vessel and subsea activities***	• Loss of hydrocarbons and chemicals to the environment during: - Refuelling and chemical transfer. - Chemical storage and use. - Deck activities and equipment. - Subsea equipment and ROV leaks.	• Potential to result in a reduction to water quality; - Potential disruption to marine fauna, including protected species. - Potential interference with or displacement of other marine users including fisheries, tourism and recreation.	• Comply with Marine Orders to prevent pollution events. • Implement bunkering and transfer procedures. • Assessment of all chemicals used following Woodside's Environment Chemical Selection and Assessment Procedure – Australia. • Safe storage of diesel and chemicals. • Spill kits positioned in high-risk locations around the vessel. • In the event of a spill emergency response activities implemented in accordance with the OPEP. • Arrangements supporting the activities in the OPEP will be tested so that the OPEP can be implemented as planned.
Unplanned release: ***hazardous and non-hazardous solid waste management***	• Accidental loss of solid wastes generated by vessels including packaging, domestic wastes and hazardous wastes such as oil rags, batteries and waste oil.	• The potential impacts of hazardous or non hazardous solid wastes and equipment accidentally released to the marine environment include contamination of the environment as well as secondary impacts relating to potential contact of marine fauna with wastes. • The temporary or permanent loss of waste materials/equipment into the marine environment is not likely to have a significant environmental impact based on the types, size and low likelihood of waste loss that could occur.	• Comply with the relevant Marine Orders to prevent pollution events. • If safe and practicable to do so, solid waste is to be recovered. • Implementation of vessel waste management plans.
Physical presence: ***interactions with marine fauna***	• Accidental collision between vessels and marine fauna.	• Vessel movements have the potential to result in accidental collisions between the vessel (hull and propellers) and marine fauna. • Given the short duration of activities and the slow speeds at which vessels operate in the Operational Area, collisions with cetaceans are considered unlikely.	• Comply with regulatory requirements for interactions with marine fauna to reduce the likelihood of a collision occurring.
Physical presence: ***introduction of invasive marine species (IMS)***	• Vessels and immersible equipment have the potential to introduce IMS to the Operational Area through marine biofouling (containing IMS), as well as within high-risk ballast water exchange.	• In the highly unlikely event of IMS being introduced and establishing viable populations within the Operational Area or immediate surrounds, this may result in changes to the ecology of the Operational Area and competition with existing biota.	• Ballast water and biofouling will be managed according to the Australian Ballast Water Management Requirements and the Australian Biofouling Management Requirements, as applicable. • Woodside's IMS risk assessment process will be applied to vessels and immersible equipment entering the Operational Area.

** These mitigation and management measures are subject to change through the consultation and subsequent assessment process and may not represent content in the publicly available EP or in the final plan once accepted.*

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Feedback

Woodside consults relevant persons in the course of preparing Environment Plans to notify them of the activity and to obtain relevant feedback to inform its planning for proposed petroleum activities.

If you would like to comment on the proposed activities outlined in this information sheet, or would like additional information, please provide feedback to Woodside by **18 May 2026** via:

Feedback@woodside.com
Toll free: 1800 442 977

You can subscribe on our website to receive Consultation Information Sheets for proposed activities:
woodside.com/what-we-do/consultation-activities

Please note that stakeholder feedback will be communicated to the NOPSEMA as required under legislation. Woodside will communicate any material changes to the proposed activity to affected relevant persons as relevant and appropriate.

Your feedback and our response will be included in our Environment Plan for the proposed activity, which will be submitted to NOPSEMA for acceptance in accordance with the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (Cth) and support other regulatory processes associated with the planned activities (which may or may not be confidential).

Personal information collected in the course of consultation will be handled in accordance with Woodside's Environment Plan Privacy Collection Notice. To understand how personal information will be handled, please visit:
woodside.com/what-we-do/consultation-activities



This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.1.2 Summary Information Sheet

Woodside Energy

Consultation Summary Information Sheet
April 2026

CK4 and LH3 Well Intervention Environment Plan

Carnarvon Basin, North-West Australia
(Commonwealth Waters)

Woodside Energy recognises Aboriginal and Torres Strait Islander peoples as Australia's First Peoples. We acknowledge their connection to land, waters and the environment and pay our respects to ancestors and Elders, past and present. We extend this recognition and respect to First Nations peoples and communities around the world.

Have Your Say

We want to talk, share ideas, and yarn with local community who have a deep connection to the land and sea. Your knowledge helps us do our work better!

We want to understand the environments we want to work in. We want to work in a way which manages the environmental impacts and risks of the activities appropriately. By working together, we want to help protect cultural heritage and keep the Land and Sea Country healthy.

We welcome feedback from Indigenous communities and stakeholders whose functions, interests and activities may be affected by our activities under this Environment Plan (EP). If you'd like to share your views, please contact us before 12 May 2026.

Email: IndigenousAffairs@woodside.com
Call: 1800 442 977 (toll-free)
Visit: woodside.com/what-we-do/consultation-activities

Your feedback will be included in our EP submissions to NOPSEMA (National Offshore Petroleum Safety and Environmental Management Authority) and will help guide responsible environmental decision-making.



Figure 1: Example of a Light Well Intervention Vessel (LWIV) with equipment on deck for well intervention activities. Photo credit: Sapura Energy.

Activity Overview

The CK4 (Cossack-4H) and LH3 (Lambert-3) wells operate under the accepted Okha Floating, Production, Storage and Offloading (FPSO) Facility Operations EP and are located in the Wanaea and Lambert fields, respectively on the North West Shelf (NWS). This plan covers:

- Light well intervention activities on the CK4 and LH3 wells using a light well intervention vessel (LWIV), see Figure 1.
- Support vessel and helicopter operations

Location

- In Commonwealth waters, ~ 135 km North-West of Dampier

Water Depth

- ~ 81 m (CK4 well) and ~ 128 m (LH3 well) deep.

Timing and Duration

- Light well intervention may occur between Q4 2026 and 2030, in a single campaign or over multiple campaigns.
- Activities are expected to take between 14 - 35 days at the CK-4 well and between 14 to 21 days at the LH-3 well.
- When activities occur, they will run 24 hours a day, 7 days a week.
- Timing and duration are subject to change due to factors including approvals, weather, project vessel availability and other unforeseen circumstances.

Joint Venture

- Operator – Woodside Burrup Pty Ltd.
- Joint Venture – Chevron Australia Pty Ltd, Woodside Energy (North West Shelf) Pty Ltd, Jadestone Energy (CWLH) Pty Ltd.

1

CK4 and LH3 Well Intervention Environment Plan | April 2026

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Activity Location

The EP explains how Woodside will manage environmental risks and impacts while carrying out our activities. These plans help us conduct operations safely and responsibly, with respect for the environment and cultural heritage. The location where the work will be done is known as the Operational Area (Figure 2).

Woodside must consult with relevant persons, including Traditional Custodian groups whose functions, interests or activities may be affected by the activities to be carried out under the EP or that are considered relevant, to listen to concerns and, where required, incorporate feedback into the EP.

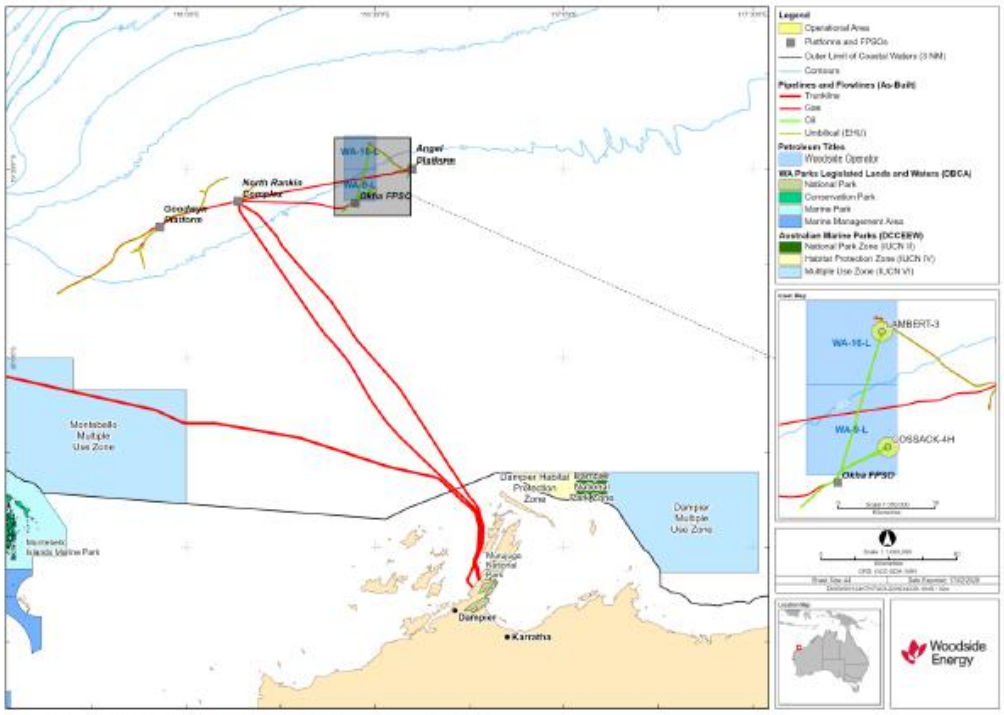


Figure 2: Location of the activity, including Operational Area and associated infrastructure

Planned Activities and Unplanned Events

We assess both planned activities and unplanned events which may result in environmental risks and impacts.

Planned activities are activities that Woodside knows will happen as part of the work under the EP. This could include generating underwater noise, light emissions, associated atmospheric emissions or routine discharges (such as sewage, waste, and deck drainage). We take steps so that planned activities comply with legislative and regulatory requirements.

Unplanned events are very unlikely. They may be the result of an accident, incident or emergency, such as a spill of fuel or oil from a ship (vessel) collision, a spill on the deck of a vessel (like during refuelling), unplanned seabed and/or marine life disturbance, or accidental introduction of invasive species from outside the region.

Planned and unplanned activities, potential impacts, and management measures are included in the Consultation Information Sheet for this activity, available at www.woodside.com/what-we-do/consultation-activities.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Environment that May Be Affected (EMBA)

The EMBA map (Figure 3) is a model of the largest spatial area where the activity could have a potential environmental impact. It combines multiple modelling outputs for both planned and unplanned activities in the highly unlikely event of an oil and natural gas (hydrocarbon) release to the environment. The modelling scenarios that inform the EMBA are loss of well containment and vessel collision.

The EMBA does not show the predicted impact of a single event - it is the merged area of many possible scenarios that a highly unlikely hydrocarbon release could travel, depending on the weather and ocean conditions at the time. This means that if a hydrocarbon release was to occur, the whole EMBA would not be affected. The specific and minimal part of the EMBA that is affected will only be known at the time of a release.

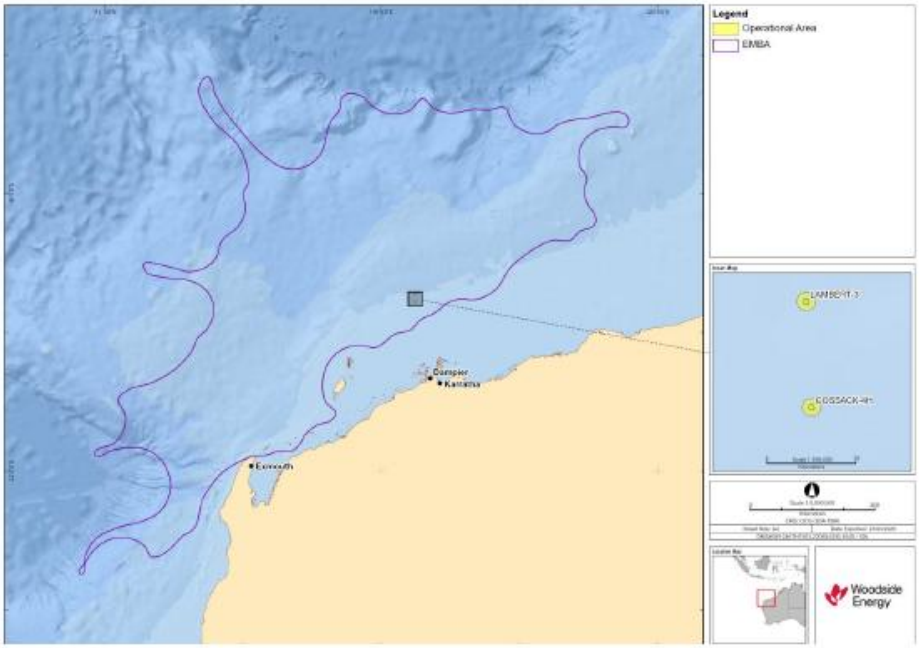


Figure 3: Environment that May Be Affected (EMBA) map

Your Feedback is Important

Woodside consults with relevant persons during the preparation of EPs to notify them about the activity and hear their feedback. By working together, we aim to protect biodiversity and maintain the health of ecosystems while carrying out our projects.

Your feedback helps shape the EP by:

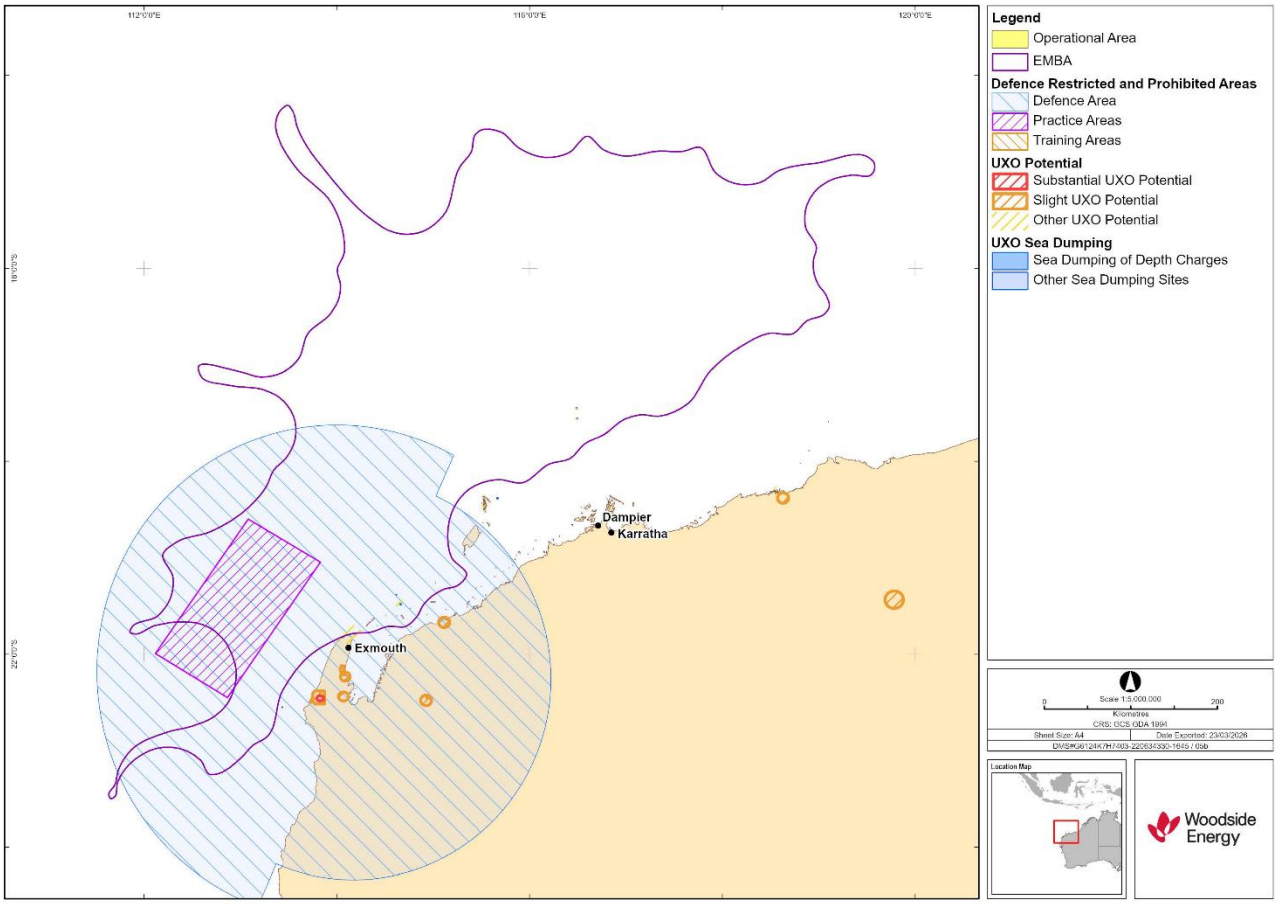
- Identifying additional possible measures to reduce environmental impacts.
- Helping us consider cultural heritage and environmental values.
- Providing information that may help improve Woodside's environmental practices.

If there is particular information that you provide during consultation that you'd prefer not to be published, please let us know. We'll make your request known to NOPSEMA.

We'll manage any personal information collected during our consultation with you in accordance with Woodside's Environment Plan Privacy Collection Notice. To understand more, please visit www.woodside.com/what-we-do/consultation-activities.

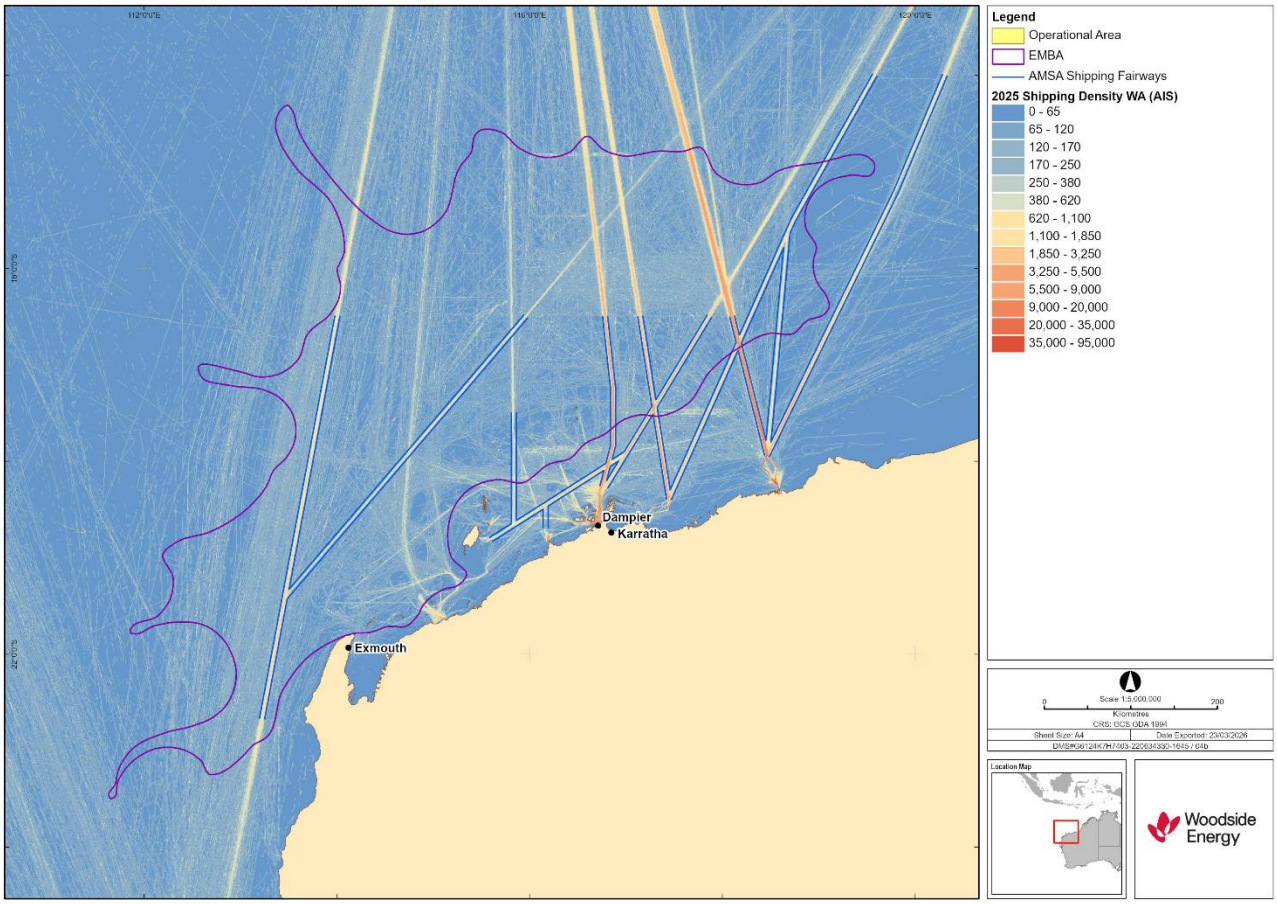
This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.1.3 Defence zones map



This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.1.4 Vessel density map



This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.1.5 Shipwrecks

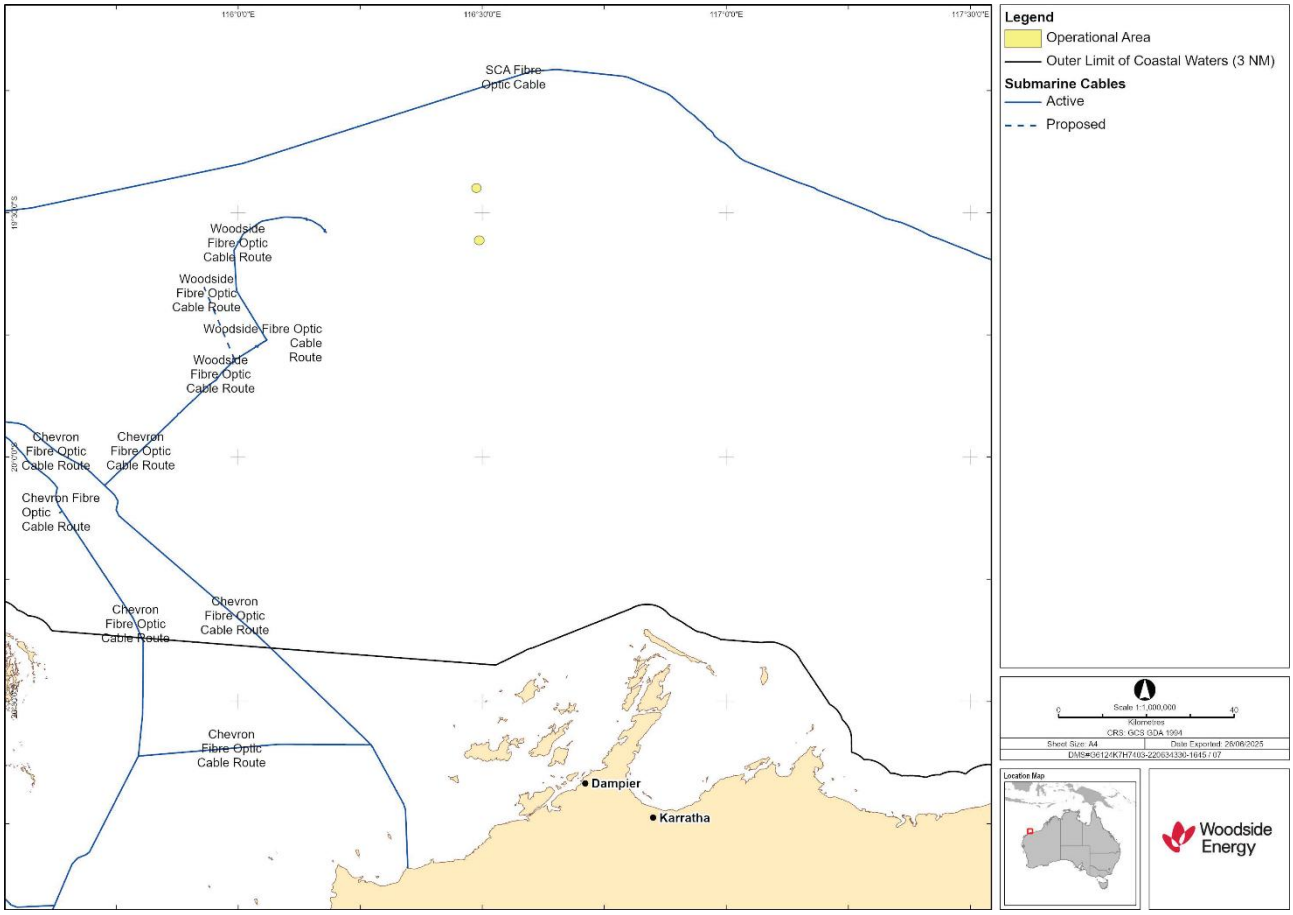
CK4 and LH3 Well Intervention Environment Plan EMBA and accumulated shoreline - Western Australia State shipwrecks overlap			
Vessel Name	**Vessel Type**	**When Lost**	**Where Lost**
Gem	Lugger	1893/03/25	North West Cape
Emlyn Castle		1960	
Haw Kiet		2003	
Lady Ann	Ship (non-sail)	18/09/1982	24 miles north of NW Cape
McCormack	Barge	1989/10/00	N.E. tip of Eaglehawk Island West of Dampier, Dampier Archipelago
McDermott Derrick Barge No	Barge	20/10/1989	N.E. tip of Eaglehawk Island, Dampier Archipelago
Mildura	Steamer	1166	North-West Cape
Pelsart (Pelsaert)	Cutter	15/10/1908	12 miles Northwest of Imperieuse Reef, Rowley Shoals
Trial	Ship	1622/05/24	Trial Rocks
Veronica	Lugger	1928/07	Sunday Island, Exmouth Gulf

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

CK4 and LH3 Well Intervention Environment Plan EMBA and accumulated shoreline - Australia National shipwrecks overlap			
Vessel Name	**Vessel Type**	**When Lost**	**Where Lost**
Agnes	Sailing vessel	1893	Exmouth Gulf
Alfred	Sailing vessel	1908	Off north-west coast
Beatrice	Sailing vessel	1899	Off North-West Cape
Bell	Sailing vessel	1893	Exmouth
Curlew	Sailing vessel	1911	At Onslow, Monte Bellos Group
Elizabeth	Sailing vessel	1893	Exmouth Gulf
Ellen	Sailing vessel	1893	Exmouth Gulf
Emlyn Castle	Unknown	1960	
Florence	Sailing vessel	1893	Exmouth Gulf
Gem	Sailing vessel	1893	North West Cape
Haw Kiet	Unknown	2003	
Kapala	Unknown	1964	Exmouth Gulf
Lady Ann	Sailing vessel	1982	24 miles north of NW Cape
Lamareaux	Sailing vessel	1893	Exmouth Gulf
Leave	Sailing vessel	1893	Exmouth Gulf
Lily Of The Lake	Sailing vessel	1875	Exmouth Gulf
Mabel	Sailing vessel	1893	Exmouth Gulf
Marietta	Unknown	1905	Barrow Island
McCormack		1989	N.E. tip of Eaglehawk Island West of Dampier,
McDermott Derrick Barge No 20	Barge	1989	N.E. tip of Eaglehawk Island, Dampier Archipelago
Mildura	Twin screw steamer	1907	North-West Cape
Nellie	Sailing vessel	1893	Exmouth Gulf
Olive	Sailing vessel	1893	Exmouth Gulf
Pearl	Sailing vessel	1896	Exmouth Gulf, Meda Creek
Pelsart (Pelsaert)	Sailing vessel	1908	12 miles off Imperieuse Reef, Rowley Shoals
Rose	Sailing vessel	1908	Ashburton
Ruby	Sailing vessel	1893	Exmouth Gulf
Sea Queen	Sailing vessel	1893	Exmouth Gulf
See Taube	Unknown	1954	North-east of Rowley Shoals
Smuggler	Sailing vessel	1893	Exmouth Gulf
Tanami	Sailing vessel		Trial Rocks
Trial	Sailing vessel	1622	Trial Rocks
Unidentified Lugger	Unknown	1893	Exmouth Gulf
Veronica	Sailing vessel	1928	Sunday Island, Exmouth Gulf
Vianen	Sailing vessel	1628	Barrow Island Area
Wild Wave	Sailing vessel	1875	Exmouth Gulf
Wild Wave (China)	Sailing vessel	1873	Monte Bello Island

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.1.6 Submarine communication cables map



This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.1.7 Email sent to Australian Border Force (ABF), Australian Energy Producers (AEP), Australian Marine Conservation Society (AMCS), Australian Maritime Safety Authority (AMSA)–Marine Pollution, BP, Beagle No. 1, Broome Chamber of Commerce and Industry (BCCI), Cape Conservation Group (CCG), Carbon CQ, Carnarvon Energy Ltd, City of Karratha, Conservation Council of WA (CCWA), Department of Industry, Science and Resources (DISR), Department of Mines, Petroleum and Exploration (DMPE), Department of Transport and Major Infrastructure (DTMI), Department of Water and Environmental Regulation (DWER), Exmouth Chamber of Commerce and Industry (Exmouth CCI), Exmouth Community Liaison Group (Exmouth CLG), Finder Energy, Greenpeace Australia Pacific (GPAP), INPEX (EP), InCapture, JX Nippon, KATO Energy (WA), Karratha & Districts Chamber of Commerce and Industry (KDCCI), Karratha Community Liaison Group (Karratha CLG), Kuwait Foreign Petroleum Exploration Company (KUFPEC), Kyushu Electric Wheatstone, Longreach Capital Investments, Marine Tourism WA, Ningaloo Coast World Heritage Advisory Committee (NCWHAC), OMV Australia, OPIC Australia Pty Limited, PE Wheatstone, Pelsart Resources N.L., Pilbara Ports, Protect Ningaloo, Recfishwest, SK Earthon, Santos, Shire of Broome, Shire of Exmouth, Skye Resources Pty Ltd, Tanami Energy, WA Game Fishing Association, Western Gas – 16 April 2026

Woodside is planning to submit the CK4 and LH3 Well Intervention Environment Plan (EP). The Cossack-4H (CK4) and Lambert-3 (LH3) well intervention is within the Woodside Burrup Pty Ltd Petroleum Licence Area WA-9-L and WA-16-L, located within Commonwealth waters ~135 km north-west of Dampier.

We are seeking feedback from relevant persons whose functions, interests or activities may be affected by the proposed activity in accordance with the intended outcome of consultation.

If you would like to comment on the proposed activity, please provide feedback to Woodside by **18 May 2026** using the details below.

Overview

CK4 and LH3 Well Intervention EP covers:

- Light well intervention activities on the CK4 and LH3 wells using a light well intervention vessel (LWIV). The two wells produce oil and gas through the Okha FPSO facility which commenced production from the fields in 2011.
- Support vessel and helicopter operations.

Consultation information

A Consultation Information Sheet is attached, which provides additional background on the proposed activities including summaries of key impacts and risks and associated management measures. This is also available on our website.

Activity and location summary

CK4 and LH3 Well Intervention Environment Plan	
Activity details	Activities include: • Light well intervention activities on the CK4 and LH-3 wells. Both CK4 and LH3 wells may require temporary well suspension, Xmas tree (XT) changeout and re-commissioning. The wells may also require Tubing Retrievable Safety Valve (TRSV) remediation.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

	• Preparation and support activities (e.g. inspections, cleaning). • Well start-up and production following intervention activities will be managed under the Okha FPSO Facility Operations EP.
Titles	• WA-9-L (CK4 well). • WA-16-L (LH3 well).
Location	• In Commonwealth waters, ~135 km north-west of Dampier.
Water depth	• ~81 m (CK4 well) and ~128 m (LH3 well).
Timing	• Between Q4 2026 and 2030.
Duration	• Between 14 to 35 days at the CK4 well • Between 14 to 21 days at the LH3 well. • Activities will take place 24 hours, 7 days a week. • Timing and duration are subject to change due to factors including approvals, weather, Protect vessel availability and other unforeseen circumstances.
Vessels	Key vessels include, but are not limited to: • LWIV • Additional support vessels • Helicopter to transport personnel and/or freight.
Operational Area and exclusion zones	• Operational Area is 1 km around each well. • A temporary 500 m exclusion zone will be in place around the LWIV.

Environment that May Be Affected (EMBA)

The EMBA is the largest geographic area where an unplanned event could potentially have an environmental consequence. The broadest extent of the EMBA takes into consideration planned activities and unplanned events. The EMBA has been developed combining numerous modelling outputs based on highly unlikely releases of hydrocarbons to the environment. The modelling scenarios that inform the EMBA are a loss of well control and a vessel collision.

The EMBA does not represent the extent of the predicted impact of a highly unlikely hydrocarbon release. Rather, the EMBA represents the merged area of many possible paths that a highly unlikely hydrocarbon release could travel, which depends on the weather and ocean conditions at the time of a release. This means that in the highly unlikely event that a hydrocarbon release does occur, the whole EMBA would not be affected. The specific and minimal part of the EMBA that is affected will only be known if there is a release.

Feedback

If you have feedback specific to the proposed activities, we welcome your feedback via email at consultation@feedback.woodside.com, via phone call at 1800 442 977 or via the feedback form on our website by **18 May 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suits you.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Your feedback and our response will be included in our EP, which will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for acceptance in accordance with the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (Cth). Your feedback may also be used to support other regulatory processes associated with the planned activities (which may or may not be confidential).

You may request that particular information you provide during consultation not be published in the EP made available on the NOPSEMA website. Please let us know if you request that particular information not be published, and we will make your request known to NOPSEMA.

NOPSEMA has published the brochure *Consultation on offshore petroleum environment plans – Information for the Community* to help community members understand consultation requirements for Commonwealth EPs and how to participate in consultation.

Personal information collected in the course of consultation will be handled in accordance with Woodside's Environment Plan Privacy Collection Notice. To understand how personal information will be handled, please visit our website.

Regards

Woodside Energy Consultation

6.1.8 Email sent to Department of Defence (DoD) – 16 April 2026

Woodside is planning to submit the CK4 and LH3 Well Intervention Environment Plan (EP). The Cossack-4H (CK4) and Lambert-3 (LH3) well intervention is within the Woodside Burrup Pty Ltd Petroleum Licence Area WA-9-L and WA-16-L, located within Commonwealth waters ~135 km north-west of Dampier.

We are seeking feedback from relevant persons whose functions, interests or activities may be affected by the proposed activity in accordance with the intended outcome of consultation.

If you would like to comment on the proposed activity, please provide feedback to Woodside by **18 May 2026** using the details below.

Overview

- CK4 and LH3 Well Intervention EP covers:
- Light well intervention activities on the CK4 and LH3 wells using a light well intervention vessel (LWIV). The two wells produce oil and gas through the Okha FPSO facility which commenced production from the fields in 2011.
- Support vessel and helicopter operations.

Consultation information

A Consultation Information Sheet is attached, which provides additional background on the proposed activities including summaries of key impacts and risks and associated management measures. This is also available on our website.

Please also find attached a defence area map in the areas surrounding the Operational Area.

Activity and location summary

CK4 and LH3 Well Intervention Environment Plan	
Activity details	• Activities include: • Light well intervention activities on the CK4 and LH-3 wells. Both CK4 and LH3 wells may require temporary well suspension, Xmas tree (XT) changeout and re-

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

	commissioning. The wells may also require Tubing Retrievable Safety Valve (TRSV) remediation. • Preparation and support activities (e.g. inspections, cleaning). • Well start-up and production following intervention activities will be managed under the Okha FPSO Facility Operations EP.
Titles	• WA-9-L (CK4 well). • WA-16-L (LH3 well).
Location	• In Commonwealth waters, ~135 km north-west of Dampier.
Water depth	• ~81 m (CK4 well) and ~128 m (LH3 well).
Timing	• Between Q4 2026 and 2030.
Duration	• Between 14 to 35 days at the CK4 well • Between 14 to 21 days at the LH3 well. • Activities will take place 24 hours, 7 days a week. • Timing and duration are subject to change due to factors including approvals, weather, Protect vessel availability and other unforeseen circumstances.
Vessels	• Key vessels include, but are not limited to: • LWIV • Additional support vessels • Helicopter to transport personnel and/or freight.
Operational Area and exclusion zones	• Operational Area is 1 km around each well. • A temporary 500 m exclusion zone will be in place around the LWIV.

Environment that May Be Affected (EMBA)

The EMBA is the largest geographic area where an unplanned event could potentially have an environmental consequence. The broadest extent of the EMBA takes into consideration planned activities and unplanned events. The EMBA has been developed combining numerous modelling outputs based on highly unlikely releases of hydrocarbons to the environment. The modelling scenarios that inform the EMBA are a loss of well control and a vessel collision.

The EMBA does not represent the extent of the predicted impact of a highly unlikely hydrocarbon release. Rather, the EMBA represents the merged area of many possible paths that a highly unlikely hydrocarbon release could travel, which depends on the weather and ocean conditions at the time of a release. This means that in the highly unlikely event that a hydrocarbon release does occur, the whole EMBA would not be affected. The specific and minimal part of the EMBA that is affected will only be known if there is a release.

Feedback

If you have feedback specific to the proposed activities, we welcome your feedback via email at consultation@feedback.woodside.com, via phone call at 1800 442 977 or via the feedback form on

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

our website by **18 May 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suits you.

Your feedback and our response will be included in our EP, which will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for acceptance in accordance with the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (Cth). Your feedback may also be used to support other regulatory processes associated with the planned activities (which may or may not be confidential).

You may request that particular information you provide during consultation not be published in the EP made available on the NOPSEMA website. Please let us know if you request that particular information not be published, and we will make your request known to NOPSEMA.

NOPSEMA has published the brochure *Consultation on offshore petroleum environment plans – Information for the Community* to help community members understand consultation requirements for Commonwealth EPs and how to participate in consultation.

Personal information collected in the course of consultation will be handled in accordance with Woodside's Environment Plan Privacy Collection Notice. To understand how personal information will be handled, please visit our website.

Regards

Woodside Energy Consultation

6.1.9 Email sent to Australian Communications and Media Authority (ACMA), Telstra, Vocus – 16 April 2026

Woodside is planning to submit the CK4 and LH3 Well Intervention Environment Plan (EP). The Cossack-4H (CK4) and Lambert-3 (LH3) well intervention is within the Woodside Burrup Pty Ltd Petroleum Licence Area WA-9-L and WA-16-L, located within Commonwealth waters ~135 km north-west of Dampier.

We are seeking feedback from relevant persons whose functions, interests or activities may be affected by the proposed activity in accordance with the intended outcome of consultation.

If you would like to comment on the proposed activity, please provide feedback to Woodside by **18 May 2026** using the details below.

Overview

CK4 and LH3 Well Intervention EP covers:

- Light well intervention activities on the CK4 and LH3 wells using a light well intervention vessel (LWIV). The two wells produce oil and gas through the Okha FPSO facility which commenced production from the fields in 2011.
- Support vessel and helicopter operations.

Consultation information

A Consultation Information Sheet is attached, which provides additional background on the proposed activities including summaries of key impacts and risks and associated management measures. This is also available on our website.

Please also find attached a map of the submarine communication cables in the vicinity of the Operational Area.

Activity and location summary

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

CK4 and LH3 Well Intervention Environment Plan	
Activity details	Activities include: • Light well intervention activities on the CK4 and LH-3 wells. Both CK4 and LH3 wells may require temporary well suspension, Xmas tree (XT) changeout and re-commissioning. The wells may also require Tubing Retrievable Safety Valve (TRSV) remediation. • Preparation and support activities (e.g. inspections, cleaning). • Well start-up and production following intervention activities will be managed under the Okha FPSO Facility Operations EP.
Titles	• WA-9-L (CK4 well). • WA-16-L (LH3 well).
Location	• In Commonwealth waters, ~135 km north-west of Dampier.
Water depth	• ~81 m (CK4 well) and ~128 m (LH3 well).
Timing	• Between Q4 2026 and 2030.
Duration	• Between 14 to 35 days at the CK4 well • Between 14 to 21 days at the LH3 well. • Activities will take place 24 hours, 7 days a week. • Timing and duration are subject to change due to factors including approvals, weather, Protect vessel availability and other unforeseen circumstances.
Vessels	• Key vessels include, but are not limited to: • LWIV • Additional support vessels • Helicopter to transport personnel and/or freight.
Operational Area and exclusion zones	• Operational Area is 1 km around each well. • A temporary 500 m exclusion zone will be in place around the LWIV.

Environment that May Be Affected (EMBA)

The EMBA is the largest geographic area where an unplanned event could potentially have an environmental consequence. The broadest extent of the EMBA takes into consideration planned activities and unplanned events. The EMBA has been developed combining numerous modelling outputs based on highly unlikely releases of hydrocarbons to the environment. The modelling scenarios that inform the EMBA are a loss of well control and a vessel collision.

The EMBA does not represent the extent of the predicted impact of a highly unlikely hydrocarbon release. Rather, the EMBA represents the merged area of many possible paths that a highly unlikely hydrocarbon

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

release could travel, which depends on the weather and ocean conditions at the time of a release. This means that in the highly unlikely event that a hydrocarbon release does occur, the whole EMBA would not be affected. The specific and minimal part of the EMBA that is affected will only be known if there is a release.

Feedback

If you have feedback specific to the proposed activities, we welcome your feedback via email at consultation@feedback.woodside.com, via phone call at 1800 442 977 or via the feedback form on our website by **18 May 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suits you.

Your feedback and our response will be included in our EP, which will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for acceptance in accordance with the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (Cth). Your feedback may also be used to support other regulatory processes associated with the planned activities (which may or may not be confidential).

You may request that particular information you provide during consultation not be published in the EP made available on the NOPSEMA website. Please let us know if you request that particular information not be published, and we will make your request known to NOPSEMA.

NOPSEMA has published the brochure *Consultation on offshore petroleum environment plans – Information for the Community* to help community members understand consultation requirements for Commonwealth EPs and how to participate in consultation.

Personal information collected in the course of consultation will be handled in accordance with Woodside's Environment Plan Privacy Collection Notice. To understand how personal information will be handled, please visit our website.

Regards.

Woodside Energy Consultation

6.1.10 Email sent to Australian Hydrographic Office (AHO), Australian Maritime Safety Authority (AMSA)–Navigation Safety – 16 April 2026

Woodside is planning to submit the CK4 and LH3 Well Intervention Environment Plan (EP). The Cossack-4H (CK4) and Lambert-3 (LH3) well intervention is within the Woodside Burrup Pty Ltd Petroleum Licence Area WA-9-L and WA-16-L, located within Commonwealth waters ~135 km north-west of Dampier.

We are seeking feedback from relevant persons whose functions, interests or activities may be affected by the proposed activity in accordance with the intended outcome of consultation.

If you would like to comment on the proposed activity, please provide feedback to Woodside by **18 May 2026** using the details below.

Overview

CK4 and LH3 Well Intervention EP covers:

- Light well intervention activities on the CK4 and LH3 wells using a light well intervention vessel (LWIV). The two wells produce oil and gas through the Okha FPSO facility which commenced production from the fields in 2011.
- Support vessel and helicopter operations.

Consultation information

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

A Consultation Information Sheet is attached, which provides additional background on the proposed activities including summaries of key impacts and risks and associated management measures. This is also available on our website.

Please also find attached vessel density maps and GIS shape files.

Activity and location summary

CK4 and LH3 Well Intervention Environment Plan	
Activity details	• Activities include: • Light well intervention activities on the CK4 and LH-3 wells. Both CK4 and LH3 wells may require temporary well suspension, Xmas tree (XT) changeout and re-commissioning. The wells may also require Tubing Retrievable Safety Valve (TRSV) remediation. • Preparation and support activities (e.g. inspections, cleaning). • Well start-up and production following intervention activities will be managed under the Okha FPSO Facility Operations EP.
Titles	• WA-9-L (CK4 well). • WA-16-L (LH3 well).
Location	• In Commonwealth waters, ~135 km north-west of Dampier.
Water depth	• ~81 m (CK4 well) and ~128 m (LH3 well).
Timing	• Between Q4 2026 and 2030.
Duration	• Between 14 to 35 days at the CK4 well • Between 14 to 21 days at the LH3 well. • Activities will take place 24 hours, 7 days a week. • Timing and duration are subject to change due to factors including approvals, weather, Protect vessel availability and other unforeseen circumstances.
Vessels	• Key vessels include, but are not limited to: • LWIV • Additional support vessels • Helicopter to transport personnel and/or freight.
Operational Area and exclusion zones	• Operational Area is 1 km around each well. • A temporary 500 m exclusion zone will be in place around the LWIV.

Environment that May Be Affected (EMBA)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

The EMBA is the largest geographic area where an unplanned event could potentially have an environmental consequence. The broadest extent of the EMBA takes into consideration planned activities and unplanned events. The EMBA has been developed combining numerous modelling outputs based on highly unlikely releases of hydrocarbons to the environment. The modelling scenarios that inform the EMBA are a loss of well control and a vessel collision.

The EMBA does not represent the extent of the predicted impact of a highly unlikely hydrocarbon release. Rather, the EMBA represents the merged area of many possible paths that a highly unlikely hydrocarbon release could travel, which depends on th weather and ocean conditions at the time of a release. This means that in the highly unlikely event that a hydrocarbon release does occur, the whole EMBA would not be affected. The specific and minimal part of the EMBA that is affected will only be known if there is a release.

Please note that Woodside will:

- Notify the AHO no less than 4 weeks before operations commence
- Notify AMSA's Response Centre (ARC) at least 24-48 hours before operations commence [
- Provide updates to both the AHO and AMSA on any material changes to planned activities
- Ensure vessels exhibit appropriate lights and shapes to reflect the nature of operations and the obligation to comply with the International Rules for Preventing Collisions at Sea (COLREGS)
- Evaluate and implement adequate anti-collision measures including but not limited to additional warnings and/or lights to attract attention and installation of Automatic Identification System (AIS) units.

Feedback

If you have feedback specific to the proposed activities, we welcome your feedback via email at consultation@feedback.woodside.com, via phone call at 1800 442 977 or via the feedback form on our website by **18 May 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suits you.

Your feedback and our response will be included in our EP, which will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for acceptance in accordance with the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (Cth). Your feedback may also be used to support other regulatory processes associated with the planned activities (which may or may not be confidential).

You may request that particular information you provide during consultation not be published in the EP made available on the NOPSEMA website. Please let us know if you request that particular information not be published, and we will make your request known to NOPSEMA.

NOPSEMA has published the brochure *Consultation on offshore petroleum environment plans – Information for the Community* to help community members understand consultation requirements for Commonwealth EPs and how to participate in consultation.

Personal information collected in the course of consultation will be handled in accordance with Woodside's Environment Plan Privacy Collection Notice. To understand how personal information will be handled, please visit our website.

6.1.11 Email sent to Australian Fisheries Management Authority (AFMA), Commonwealth Fisheries Association (CFA), Department of Agriculture, Fisheries and Forestry (DAFF)–Fisheries, Tuna Australia – 16 April 2026

Woodside is planning to submit the CK4 and LH3 Well Intervention Environment Plan (EP). The Cossack-4H (CK4) and Lambert-3 (LH3) well intervention is within the Woodside Burrup Pty Ltd Petroleum Licence Area WA-9-L and WA-16-L, located within Commonwealth waters ~135 km north-west of Dampier.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

We are seeking feedback from relevant persons whose functions, interests or activities may be affected by the proposed activity in accordance with the intended outcome of consultation.

If you would like to comment on the proposed activity, please provide feedback to Woodside by **18 May 2026** using the details below.

Overview

CK4 and LH3 Well Intervention EP covers:

- Light well intervention activities on the CK4 and LH3 wells using a light well intervention vessel (LWIV). The two wells produce oil and gas through the Okha FPSO facility which commenced production from the fields in 2011.
- Support vessel and helicopter operations.

Consultation information

A Consultation Information Sheet is attached, which provides additional background on the proposed activities including summaries of key impacts and risks and associated management measures. This is also available on our website.

Activity and location summary

CK4 and LH3 Well Intervention Environment Plan	
Activity details	• Activities include: • Light well intervention activities on the CK4 and LH-3 wells. Both CK4 and LH3 wells may require temporary well suspension, Xmas tree (XT) changeout and re-commissioning. The wells may also require Tubing Retrievable Safety Valve (TRSV) remediation. • Preparation and support activities (e.g. inspections, cleaning). • Well start-up and production following intervention activities will be managed under the Okha FPSO Facility Operations EP.
Titles	• WA-9-L (CK4 well). • WA-16-L (LH3 well).
Location	• In Commonwealth waters, ~135 km north-west of Dampier.
Water depth	• ~81 m (CK4 well) and ~128 m (LH3 well).
Timing	• Between Q4 2026 and 2030.
Duration	• Between 14 to 35 days at the CK4 well • Between 14 to 21 days at the LH3 well. • Activities will take place 24 hours, 7 days a week. • Timing and duration are subject to change due to factors including approvals, weather, Protect vessel availability and other unforeseen circumstances.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Vessels	• Key vessels include, but are not limited to: • LWIV • Additional support vessels • Helicopter to transport personnel and/or freight.
Operational Area and exclusion zones	• Operational Area is 1 km around each well. • A temporary 500 m exclusion zone will be in place around the LWIV.

Environment that May Be Affected (EMBA)

The EMBA is the largest geographic area where an unplanned event could potentially have an environmental consequence. The broadest extent of the EMBA takes into consideration planned activities and unplanned events. The EMBA has been developed combining numerous modelling outputs based on highly unlikely releases of hydrocarbons to the environment. The modelling scenarios that inform the EMBA are a loss of well control and a vessel collision.

The EMBA does not represent the extent of the predicted impact of a highly unlikely hydrocarbon release. Rather, the EMBA represents the merged area of many possible paths that a highly unlikely hydrocarbon release could travel, which depends on the weather and ocean conditions at the time of a release. This means that in the highly unlikely event that a hydrocarbon release does occur, the whole EMBA would not be affected. The specific and minimal part of the EMBA that is affected will only be known if there is a release.

Commonwealth fisheries

Commonwealth fisheries active in the Operational Area:

- none

Commonwealth fisheries active in the EMBA:

- North West Slope Trawl Fishery
- Western Deepwater Trawl Fishery
- Western Tuna and Billfish Fishery

Please note that Woodside has provided consultation information directly to licence holders it has assessed as ‘relevant persons’ for this EP, as well as relevant fishery representative bodies.

Notifications

Please let us know if you **do not** require notification prior to and on completion of the proposed activities, otherwise notifications will be provided. .

Feedback

If you have feedback specific to the proposed activities, we welcome your feedback via email at consultation@feedback.woodside.com, via phone call at 1800 442 977 or via the feedback form on our website by **18 May 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suits you.

Your feedback and our response will be included in our EP, which will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for acceptance in accordance with the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (Cth). Your feedback may also be used to support other regulatory processes associated with the planned activities (which may or may not be confidential).

You may request that particular information you provide during consultation not be published in the EP made available on the NOPSEMA website. Please let us know if you request that particular information not be published, and we will make your request known to NOPSEMA.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

NOPSEMA has published the brochure *Consultation on offshore petroleum environment plans – Information for the Community* to help community members understand consultation requirements for Commonwealth EPs and how to participate in consultation.

Personal information collected in the course of consultation will be handled in accordance with Woodside's Environment Plan Privacy Collection Notice. To understand how personal information will be handled, please visit our website.

6.1.12 Email sent to Australian Southern Bluefin Tuna Fishery, Australian Southern Bluefin Tuna Industry Association (ASBTIA), North West Slope Trawl Fishery, Western Deepwater Trawl Fishery, Western Skipjack Fishery and Western Tuna and Billfish Fishery – 16 April 2026

Woodside is planning to submit the CK4 and LH3 Well Intervention Environment Plan (EP). The Cossack-4H (CK4) and Lambert-3 (LH3) well intervention is within the Woodside Burrup Pty Ltd Petroleum Licence Area WA-9-L and WA-16-L, located within Commonwealth waters ~135 km north-west of Dampier.

We are seeking feedback from relevant persons whose functions, interests or activities may be affected by the proposed activity in accordance with the intended outcome of consultation.

If you would like to comment on the proposed activity, please provide feedback to Woodside by **18 May 2026** using the details below.

Overview

CK4 and LH3 Well Intervention EP covers:

- Light well intervention activities on the CK4 and LH3 wells using a light well intervention vessel (LWIV). The two wells produce oil and gas through the Okha FPSO facility which commenced production from the fields in 2011.
- Support vessel and helicopter operations.

Consultation information

A Consultation Information Sheet is attached, which provides additional background on the proposed activities including summaries of key impacts and risks and associated management measures. This is also available on our website.

Activity and location summary

CK4 and LH3 Well Intervention Environment Plan	
Activity details	Activities include: • Light well intervention activities on the CK4 and LH-3 wells. Both CK4 and LH3 wells may require temporary well suspension, Xmas tree (XT) changeout and re-commissioning. The wells may also require Tubing Retrievable Safety Valve (TRSV) remediation. • Preparation and support activities (e.g. inspections, cleaning). • Well start-up and production following intervention activities will be managed under the Okha FPSO Facility Operations EP.
Titles	• WA-9-L (CK4 well).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

	• WA-16-L (LH3 well).
Location	• In Commonwealth waters, ~135 km north-west of Dampier.
Water depth	• ~81 m (CK4 well) and ~128 m (LH3 well).
Timing	• Between Q4 2026 and 2030.
Duration	• Between 14 to 35 days at the CK4 well • Between 14 to 21 days at the LH3 well. • Activities will take place 24 hours, 7 days a week. • Timing and duration are subject to change due to factors including approvals, weather, Protect vessel availability and other unforeseen circumstances.
Vessels	Key vessels include, but are not limited to: • LWIV • Additional support vessels • Helicopter to transport personnel and/or freight.
Operational Area and exclusion zones	• Operational Area is 1 km around each well. • A temporary 500 m exclusion zone will be in place around the LWIV.

Environment that May Be Affected (EMBA)

The EMBA is the largest geographic area where an unplanned event could potentially have an environmental consequence. The broadest extent of the EMBA takes into consideration planned activities and unplanned events. The EMBA has been developed combining numerous modelling outputs based on highly unlikely releases of hydrocarbons to the environment. The modelling scenarios that inform the EMBA are a loss of well control and a vessel collision.

The EMBA does not represent the extent of the predicted impact of a highly unlikely hydrocarbon release. Rather, the EMBA represents the merged area of many possible paths that a highly unlikely hydrocarbon release could travel, which depends on the weather and ocean conditions at the time of a release. This means that in the highly unlikely event that a hydrocarbon release does occur, the whole EMBA would not be affected. The specific and minimal part of the EMBA that is affected will only be known if there is a release.

Commonwealth fisheries

Commonwealth fisheries active in the Operational Area:

- none

Commonwealth fisheries active in the EMBA:

- North West Slope Trawl Fishery
- Western Deepwater Trawl Fishery
- Western Tuna and Billfish Fishery

Please note that Woodside has provided consultation information directly to licence holders it has assessed as ‘relevant persons’ for this EP, as well as relevant fishery representative bodies.

Notifications

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Please let us know if you require notification prior to and on completion of the proposed activities.

Feedback

If you have feedback specific to the proposed activities, we welcome your feedback via email at consultation@feedback.woodside.com, via phone call at 1800 442 977 or via the feedback form on our website by **18 May 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suits you.

Your feedback and our response will be included in our EP, which will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for acceptance in accordance with the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (Cth). Your feedback may also be used to support other regulatory processes associated with the planned activities (which may or may not be confidential).

You may request that particular information you provide during consultation not be published in the EP made available on the NOPSEMA website. Please let us know if you request that particular information not be published, and we will make your request known to NOPSEMA.

NOPSEMA has published the brochure *Consultation on offshore petroleum environment plans – Information for the Community* to help community members understand consultation requirements for Commonwealth EPs and how to participate in consultation.

Personal information collected in the course of consultation will be handled in accordance with Woodside's Environment Plan Privacy Collection Notice. To understand how personal information will be handled, please visit our website.

6.1.13 Email sent to Department of Agriculture, Fisheries and Forestry (DAFF) – Biosecurity, marine pests, vessels, aircraft and personnel – 16 April 2026

Woodside is planning to submit the CK4 and LH3 Well Intervention Environment Plan (EP). The Cossack-4H (CK4) and Lambert-3 (LH3) well intervention is within the Woodside Burrup Pty Ltd Petroleum Licence Area WA-9-L and WA-16-L, located within Commonwealth waters ~135 km north-west of Dampier.

We are seeking feedback from relevant persons whose functions, interests or activities may be affected by the proposed activity in accordance with the intended outcome of consultation.

If you would like to comment on the proposed activity, please provide feedback to Woodside by **18 May 2026** using the details below.

Overview

CK4 and LH3 Well Intervention EP covers:

- Light well intervention activities on the CK4 and LH3 wells using a light well intervention vessel (LWIV). The two wells produce oil and gas through the Okha FPSO facility which commenced production from the fields in 2011.
- Support vessel and helicopter operations.

Consultation information

A Consultation Information Sheet is attached, which provides additional background on the proposed activities including summaries of key impacts and risks and associated management measures. This is also available on our website.

Activity and location summary

CK4 and LH3 Well Intervention Environment Plan	
Activity details	• Activities include:

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

	• Light well intervention activities on the CK4 and LH-3 wells. Both CK4 and LH3 wells may require temporary well suspension, Xmas tree (XT) changeout and re-commissioning. The wells may also require Tubing Retrievable Safety Valve (TRSV) remediation. • Preparation and support activities (e.g. inspections, cleaning). • Well start-up and production following intervention activities will be managed under the Okha FPSO Facility Operations EP.
Titles	• WA-9-L (CK4 well). • WA-16-L (LH3 well).
Location	• In Commonwealth waters, ~135 km north-west of Dampier.
Water depth	• ~81 m (CK4 well) and ~128 m (LH3 well).
Timing	• Between Q4 2026 and 2030.
Duration	• Between 14 to 35 days at the CK4 well • Between 14 to 21 days at the LH3 well. • Activities will take place 24 hours, 7 days a week. • Timing and duration are subject to change due to factors including approvals, weather, Protect vessel availability and other unforeseen circumstances.
Vessels	• Key vessels include, but are not limited to: • LWIV • Additional support vessels • Helicopter to transport personnel and/or freight.
Operational Area and exclusion zones	• Operational Area is 1 km around each well. • A temporary 500 m exclusion zone will be in place around the LWIV.

Environment that May Be Affected (EMBA)

The EMBA is the largest geographic area where an unplanned event could potentially have an environmental consequence. The broadest extent of the EMBA takes into consideration planned activities and unplanned events. The EMBA has been developed combining numerous modelling outputs based on highly unlikely releases of hydrocarbons to the environment. The modelling scenarios that inform the EMBA are a loss of well control and a vessel collision.

The EMBA does not represent the extent of the predicted impact of a highly unlikely hydrocarbon release. Rather, the EMBA represents the merged area of many possible paths that a highly unlikely hydrocarbon release could travel, which depends on the weather and ocean conditions at the time of a release. This means that in the highly unlikely event that a hydrocarbon release does occur, the whole EMBA would not be affected. The specific and minimal part of the EMBA that is affected will only be known if there is a release.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Biosecurity

With respect to the biosecurity matters, please note the following information below:

Environment description	
The proposed activity is within Woodside Burrup Pty Ltd Petroleum Licence Areas WA-9-L and WA-16-L, located within Commonwealth waters ~135 km north-west of Dampier. Water depths are ~81 m (CK4 well) and ~128 m (LH3 well)	
Potential IMS risk	IMS mitigation management
Vessels are potential vectors for introducing invasive marine species (IMS) during the proposed activity. IMS introduction is highly unlikely, however may be introduced to the Operational Areas through transfer of IMS.	Ballast water and biofouling will be managed according to the Australian Ballast Water Management Requirements and the Australian Biofouling Management Requirements, as applicable. Woodside's IMS risk assessment process will be applied to vessels and immersible equipment entering the Operational Areas. Based on the outcomes of each IMS risk assessment, management measures commensurate with the risk (such as the treatment of internal systems, IMS inspection or cleaning) will be implemented to minimise the likelihood of introducing IMS.

Feedback

If you have feedback specific to the proposed activities, we welcome your feedback via email at consultation@feedback.woodside.com, via phone call at 1800 442 977 or via the feedback form on our website by **18 May 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suits you.

Your feedback and our response will be included in our EP, which will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for acceptance in accordance with the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (Cth). Your feedback may also be used to support other regulatory processes associated with the planned activities (which may or may not be confidential).

You may request that particular information you provide during consultation not be published in the EP made available on the NOPSEMA website. Please let us know if you request that particular information not be published, and we will make your request known to NOPSEMA.

NOPSEMA has published the brochure *Consultation on offshore petroleum environment plans – Information for the Community* to help community members understand consultation requirements for Commonwealth EPs and how to participate in consultation.

Personal information collected in the course of consultation will be handled in accordance with Woodside's Environment Plan Privacy Collection Notice. To understand how personal information will be handled, please visit our website.

6.1.14 Email sent to Director of National Parks (DNP) – 16 April 2026

Woodside is planning to submit the CK4 and LH3 Well Intervention Environment Plan (EP). The Cossack-4H (CK4) and Lambert-3 (LH3) well intervention is within the Woodside Burrup Pty Ltd Petroleum Licence Area WA-9-L and WA-16-L, located within Commonwealth waters ~135 km north-west of Dampier.

We are seeking feedback from relevant persons whose functions, interests or activities may be affected by the proposed activity in accordance with the intended outcome of consultation.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

If you would like to comment on the proposed activity, please provide feedback to Woodside by **18 May 2026** using the details below.

Overview

CK4 and LH3 Well Intervention EP covers:

- Light well intervention activities on the CK4 and LH3 wells using a light well intervention vessel (LWIV). The two wells produce oil and gas through the Okha FPSO facility which commenced production from the fields in 2011.
- Support vessel and helicopter operations.

Consultation information

A Consultation Information Sheet is attached, which provides additional background on the proposed activities including summaries of key impacts and risks and associated management measures. This is also available on our website.

Activity and location summary

CK4 and LH3 Well Intervention Environment Plan	
Activity details	Activities include: • Light well intervention activities on the CK4 and LH-3 wells. Both CK4 and LH3 wells may require temporary well suspension, Xmas tree (XT) changeout and re-commissioning. The wells may also require Tubing Retrievable Safety Valve (TRSV) remediation. • Preparation and support activities (e.g. inspections, cleaning). • Well start-up and production following intervention activities will be managed under the Okha FPSO Facility Operations EP.
Titles	• WA-9-L (CK4 well). • WA-16-L (LH3 well).
Location	• In Commonwealth waters, ~135 km north-west of Dampier.
Water depth	• ~81 m (CK4 well) and ~128 m (LH3 well).
Timing	• Between Q4 2026 and 2030.
Duration	• Between 14 to 35 days at the CK4 well • Between 14 to 21 days at the LH3 well. • Activities will take place 24 hours, 7 days a week. • Timing and duration are subject to change due to factors including approvals, weather, Protect vessel availability and other unforeseen circumstances.
Vessels	Key vessels include, but are not limited to: • LWIV

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

	• Additional support vessels • Helicopter to transport personnel and/or freight.
Operational Area and exclusion zones	• Operational Area is 1 km around each well. • A temporary 500 m exclusion zone will be in place around the LWIV.

Environment that May Be Affected (EMBA)

The EMBA is the largest geographic area where an unplanned event could potentially have an environmental consequence. The broadest extent of the EMBA takes into consideration planned activities and unplanned events. The EMBA has been developed combining numerous modelling outputs based on highly unlikely releases of hydrocarbons to the environment. The modelling scenarios that inform the EMBA are a loss of well control and a vessel collision.

The EMBA does not represent the extent of the predicted impact of a highly unlikely hydrocarbon release. Rather, the EMBA represents the merged area of many possible paths that a highly unlikely hydrocarbon release could travel, which depends on the weather and ocean conditions at the time of a release. This means that in the highly unlikely event that a hydrocarbon release does occur, the whole EMBA would not be affected. The specific and minimal part of the EMBA that is affected will only be known if there is a release.

Australian Marine Parks (AMPs)

We note Australian Government Guidance on consultation activities and confirm that:

- The Operational Area does not overlap any AMPs.
- The worst-case credible spill scenarios assessed in this EP are a loss of well containment and vessel collision. Through a review of hydrocarbon spill modelling, and with consideration of a 10 ppb dissolved and 1000 ppb entrained hydrocarbon threshold, the following AMPs may be contacted in the event of a spill:
    - Montebello AMP
    - Gascoyne AMP
    - Ningaloo AMP
    - Argo-Rowley Terrace AMP
    - Mermaid Reef AMP
- A Commonwealth Government-approved oil spill response plan will be in place for the duration of the activities, which will include notification to relevant agencies and organisations as to the nature and scale of the event, as soon as practicable following an occurrence. The Director of National Parks will be advised if an environmental incident occurs that may impact the values of any AMP.

Woodside is aware of and will consider the *'Petroleum Activities and Australian Marine Parks'* guidance note developed and published jointly by DNP and NOPSEMA, while preparing this EP to ensure that the EP:

- Identifies and manages all impacts and risks on AMP values (including ecosystem values) to an acceptable level and has considered all options to avoid or reduce them to as low as reasonably practicable (ALARP).
- Clearly demonstrates that the activities will not be inconsistent with the North-west Marine Parks Network Management Plan 2018.

If there is a change in activities which results in an overlap or new impact to a marine park, Woodside will notify DNP.

Feedback

If you have feedback specific to the proposed activities, we welcome your feedback via email at consultation@feedback.woodside.com, via phone call at 1800 442 977 or via the feedback form on

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

our website by **18 May 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suits you.

Your feedback and our response will be included in our EP, which will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for acceptance in accordance with the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (Cth). Your feedback may also be used to support other regulatory processes associated with the planned activities (which may or may not be confidential).

You may request that particular information you provide during consultation not be published in the EP made available on the NOPSEMA website. Please let us know if you request that particular information not be published, and we will make your request known to NOPSEMA.

NOPSEMA has published the brochure *Consultation on offshore petroleum environment plans – Information for the Community* to help community members understand consultation requirements for Commonwealth EPs and how to participate in consultation.

Personal information collected in the course of consultation will be handled in accordance with Woodside's Environment Plan Privacy Collection Notice. To understand how personal information will be handled, please visit our website.

6.1.15 Email sent to Department of Primary Industries and Regional Development (DPIRD) – 16 April 2026

Woodside is planning to submit the CK4 and LH3 Well Intervention Environment Plan (EP). The Cossack-4H (CK4) and Lambert-3 (LH3) well intervention is within the Woodside Burrup Pty Ltd Petroleum Licence Area WA-9-L and WA-16-L, located within Commonwealth waters ~135 km north-west of Dampier.

We are seeking feedback from relevant persons whose functions, interests or activities may be affected by the proposed activity in accordance with the intended outcome of consultation.

If you would like to comment on the proposed activity, please provide feedback to Woodside by **18 May 2026** using the details below.

Overview

CK4 and LH3 Well Intervention EP covers:

- Light well intervention activities on the CK4 and LH3 wells using a light well intervention vessel (LWIV). The two wells produce oil and gas through the Okha FPSO facility which commenced production from the fields in 2011.
- Support vessel and helicopter operations.

Consultation information

A Consultation Information Sheet is attached, which provides additional background on the proposed activities including summaries of key impacts and risks and associated management measures. This is also available on our website.

Activity and location summary

CK4 and LH3 Well Intervention Environment Plan	
Activity details	Activities include: • Light well intervention activities on the CK4 and LH-3 wells. Both CK4 and LH3 wells may require temporary

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

	well suspension, Xmas tree (XT) changeout and re-commissioning. The wells may also require Tubing Retrievable Safety Valve (TRSV) remediation. • Preparation and support activities (e.g. inspections, cleaning). • Well start-up and production following intervention activities will be managed under the Okha FPSO Facility Operations EP.
Titles	• WA-9-L (CK4 well). • WA-16-L (LH3 well).
Location	• In Commonwealth waters, ~135 km north-west of Dampier.
Water depth	• ~81 m (CK4 well) and ~128 m (LH3 well).
Timing	• Between Q4 2026 and 2030.
Duration	• Between 14 to 35 days at the CK4 well • Between 14 to 21 days at the LH3 well. • Activities will take place 24 hours, 7 days a week. • Timing and duration are subject to change due to factors including approvals, weather, Protect vessel availability and other unforeseen circumstances.
Vessels	Key vessels include, but are not limited to: • LWIV • Additional support vessels • Helicopter to transport personnel and/or freight.
Operational Area and exclusion zones	• Operational Area is 1 km around each well. • A temporary 500 m exclusion zone will be in place around the LWIV.

Environment that May Be Affected (EMBA)

The EMBA is the largest geographic area where an unplanned event could potentially have an environmental consequence. The broadest extent of the EMBA takes into consideration planned activities and unplanned events. The EMBA has been developed combining numerous modelling outputs based on highly unlikely releases of hydrocarbons to the environment. The modelling scenarios that inform the EMBA are a loss of well control and a vessel collision.

The EMBA does not represent the extent of the predicted impact of a highly unlikely hydrocarbon release. Rather, the EMBA represents the merged area of many possible paths that a highly unlikely hydrocarbon release could travel, which depends on the weather and ocean conditions at the time of a release. This means that in the highly unlikely event that a hydrocarbon release does occur, the whole EMBA would not be affected. The specific and minimal part of the EMBA that is affected will only be known if there is a release.

State fisheries

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

State fisheries active in the Operational Area:

- Mackerel Managed Fishery (Area 2)
- Pilbara Trawl Managed Fishery
- Pilbara Trap Managed Fishery
- Pilbara Line Fishery

State fisheries & aquaculture active in the EMBA:

- Exmouth Gulf Prawn Managed Fishery
- Gascoyne Demersal Scalefish Managed Fishery
- Mackerel Managed Fishery (Area 2)
- Marine Aquarium Fish Managed Fishery
- Nickol Bay Prawn Managed Fishery
- Onslow Prawn Managed Fishery
- Pilbara Crab Managed Fishery
- Pilbara Fish Trawl Managed Fishery
- Pilbara Trap Managed Fishery
- Pilbara Line Fishery
- West Australian Sea Cucumber Fishery
- Specimen Shell Managed Fishery
- West Coast Deep Sea Crustacean Managed Fishery
- Licensed aquaculture site, Mackerel Islands
- Approved pearl holding site, Dailey Shoal

Please note that Woodside has provided consultation information to the Western Australian Fishing Industry Council (WAFIC), Aquaculture Council of Western Australia (ACWA) and Recfishwest. Information provided to these bodies includes the planned timing and duration of the activities, and the spatial extent of the proposed activities (including any exclusion zones).

Woodside consults individual fishing license holders based on WAFIC's guidance and advice, whereby WAFIC:

- directly consults fishery licence holders that are assessed as having a potential for interaction in the Operational Area
- consults fisheries that are assessed as having a potential for interaction in the EMBA only in the event of an unplanned emergency scenario.

Woodside also consults with relevant Traditional Owners in the preparation of this EP.

Spill Contingency Plans

Within Woodside's Oil Pollution First Strike Plan (FSP), Woodside commits to notifying Department of Transport and Major Infrastructure (DTMI) within 2 hours of becoming aware of a marine pollution incident that occurs in or may impact State waters. Woodside also consults DTMI in the development of the FSP.

Woodside commits to notify DPIRD within 24 hours of our reporting the incident to the appropriate authority. We have noted this contact as environment@dpird.wa.gov.au and placed this in the Notification section of the FSP.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

In addition, within the FSP, Woodside commits to identify and notify additional relevant persons and organisations such as, but not limited to, commercial fishers or tourism operators that may be affected during a spill event. Woodside would, at the relevant time, engage with these parties as appropriate and will re-assess relevant persons and organisations throughout the response period.

Woodside mitigates the risk of spill events through the adoption of a range of preventative controls (including engineering design) that all contribute to reducing the likelihood of a spill event to an unlikely level. The potential for hydrocarbons to reach coastal regions would be further minimised in the event of a spill by offshore response actions. Such responses would be aimed at reducing hydrocarbon contact with sensitive coastal areas, including commercially important fish species' spawning and aggregation areas.

Woodside's oil spill Operational and Scientific Monitoring (OSM) Program is executed under the Joint Industry OSM Framework (AEP, 2021). In the event of a spill, the OSM Framework will guide the situational awareness and response as well as undertake a suite of comprehensive science-based monitoring programs to evaluate environmental impacts. One such program is dedicated to the impacts on fisheries. The fisheries impact assessment has two objectives – to assess any physiological impacts to important fish and shellfish species and to assess targeted fish and shellfish species for hydrocarbon contamination.

Biosecurity

Woodside contracts support and light well intervention vessel services for the petroleum activity described in the EP. Woodside works closely with contractors to ensure compliance with all requirements previously requested by DPIRD including DPIRD's policy that marine pests or disease are reported within 24 hours. A 24-hour notification will be formally captured as a notification within the EP and communicated to vessel operators.

All vessels are required to comply with the Australian Biosecurity Act 2015, specifically the Australian Ballast Water Management Requirements (as defined under the Biosecurity Act 2015) (aligned with the International Convention for the Control and Management of Ships' Ballast Water and Sediments) to prevent introducing invasive marine species (IMS). Vessels will be assessed and managed to prevent the introduction of invasive marine species in accordance with Woodside's Invasive Marine Species Management Plan. Woodside's Invasive Marine Species Management Plan includes a risk assessment process that is applied to vessels undertaking activities. Based on the outcomes of each IMS risk assessment, management measures commensurate with the risk (such as the treatment of internal systems, IMS inspections or cleaning) will be implemented to minimise the likelihood of IMS being introduced.

Feedback

If you have feedback specific to the proposed activities, we welcome your feedback via email at consultation@feedback.woodside.com, via phone call at 1800 442 977 or via the feedback form on our website by **18 May 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suits you.

Your feedback and our response will be included in our EP, which will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for acceptance in accordance with the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (Cth). Your feedback may also be used to support other regulatory processes associated with the planned activities (which may or may not be confidential).

You may request that particular information you provide during consultation not be published in the EP made available on the NOPSEMA website. Please let us know if you request that particular information not be published, and we will make your request known to NOPSEMA.

NOPSEMA has published the brochure *Consultation on offshore petroleum environment plans – Information for the Community* to help community members understand consultation requirements for Commonwealth EPs and how to participate in consultation.

Personal information collected in the course of consultation will be handled in accordance with Woodside's Environment Plan Privacy Collection Notice. To understand how personal information will be handled, please visit our website.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.1.16 Email sent to Gascoyne Recreational Marine Users, Pilbara/Kimberley Recreational Marine Users– 16 April 2026

Woodside is planning to submit the CK4 and LH3 Well Intervention Environment Plan (EP). The Cossack-4H (CK4) and Lambert-3 (LH3) well intervention is within the Woodside Burrup Pty Ltd Petroleum Licence Area WA-9-L and WA-16-L, located within Commonwealth waters ~135 km north-west of Dampier.

We are seeking feedback from relevant persons whose functions, interests or activities may be affected by the proposed activity in accordance with the intended outcome of consultation.
If you would like to comment on the proposed activity, please provide feedback to Woodside by **18 May 2026** using the details below.

Overview
CK4 and LH3 Well Intervention EP covers:

- Light well intervention activities on the CK4 and LH3 wells using a light well intervention vessel (LWIV). The two wells produce oil and gas through the Okha FPSO facility which commenced production from the fields in 2011.
- Support vessel and helicopter operations.

Consultation information
A Consultation Information Sheet is attached, which provides additional background on the proposed activities including summaries of key impacts and risks and associated management measures. This is also available on our website.

Activity and location summary

CK4 and LH3 Well Intervention Environment Plan	
Activity details	Activities include: • Light well intervention activities on the CK4 and LH-3 wells. Both CK4 and LH3 wells may require temporary well suspension, Xmas tree (XT) changeout and re-commissioning. The wells may also require Tubing Retrievable Safety Valve (TRSV) remediation. • Preparation and support activities (e.g. inspections, cleaning). • Well start-up and production following intervention activities will be managed under the Okha FPSO Facility Operations EP.
Titles	• WA-9-L (CK4 well). • WA-16-L (LH3 well).
Location	• In Commonwealth waters, ~135 km north-west of Dampier.
Water depth	• ~81 m (CK4 well) and ~128 m (LH3 well).
Timing	• Between Q4 2026 and 2030.
Duration	• Between 14 to 35 days at the CK4 well • Between 14 to 21 days at the LH3 well. • Activities will take place 24 hours, 7 days a week.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

	• Timing and duration are subject to change due to factors including approvals, weather, Protect vessel availability and other unforeseen circumstances.
Vessels	Key vessels include, but are not limited to: • LWIV • Additional support vessels • Helicopter to transport personnel and/or freight.
Operational Area and exclusion zones	• Operational Area is 1 km around each well. • A temporary 500 m exclusion zone will be in place around the LWIV.

Environment that May Be Affected (EMBA)

The EMBA is the largest geographic area where an unplanned event could potentially have an environmental consequence. The broadest extent of the EMBA takes into consideration planned activities and unplanned events. The EMBA has been developed combining numerous modelling outputs based on highly unlikely releases of hydrocarbons to the environment. The modelling scenarios that inform the EMBA are a loss of well control and a vessel collision.

The EMBA does not represent the extent of the predicted impact of a highly unlikely hydrocarbon release. Rather, the EMBA represents the merged area of many possible paths that a highly unlikely hydrocarbon release could travel, which depends on the weather and ocean conditions at the time of a release. This means that in the highly unlikely event that a hydrocarbon release does occur, the whole EMBA would not be affected. The specific and minimal part of the EMBA that is affected will only be known if there is a release.

Feedback

If you have feedback specific to the proposed activities, we welcome your feedback via email at consultation@feedback.woodside.com, via phone call at 1800 442 977 or via the feedback form on our website by **18 May 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suits you.

Your feedback and our response will be included in our EP, which will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for acceptance in accordance with the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (Cth). Your feedback may also be used to support other regulatory processes associated with the planned activities (which may or may not be confidential).

You may request that particular information you provide during consultation not be published in the EP made available on the NOPSEMA website. Please let us know if you request that particular information not be published, and we will make your request known to NOPSEMA.

NOPSEMA has published the brochure *Consultation on offshore petroleum environment plans – Information for the Community* to help community members understand consultation requirements for Commonwealth EPs and how to participate in consultation.

Personal information collected in the course of consultation will be handled in accordance with Woodside's Environment Plan Privacy Collection Notice. To understand how personal information will be handled, please visit our website.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.1.17 Letter sent to Gascoyne Recreational Marine Users, Pilbara/Kimberley Recreational Marine Users– 16 April 2026

Please direct all responses/queries to:
Woodside Energy Feedback
t: +61 8 (1)800 442 977
e: feedback@woodside.com.au

007 - 1

Woodside Energy Group Ltd
ACN 004 898 962
Mia Yellagonga
11 Mount Street
Perth WA 6000
Australia
T: +61 8 9348 4000
www.woodside.com

Dear Stakeholder

Woodside is planning to submit the CK4 and LH3 Well Intervention Environment Plan (EP). The Cossack-4H (CK4) and Lambert-3 (LH3) well intervention is within the Woodside Burrup Pty Ltd Petroleum Licence Area WA-9-L and WA-16-L, located within Commonwealth waters ~135 km north-west of Dampier.

We are seeking feedback from relevant persons whose functions, interests or activities may be affected by the proposed activity in accordance with the intended outcome of consultation.

If you would like to comment on the proposed activity, please provide feedback to Woodside by **18 May 2026** using the details below.

Overview

CK4 and LH3 Well Intervention EP covers:

- Light well intervention activities on the CK4 and LH3 wells using a light well intervention vessel (LWIV). The two wells produce oil and gas through the Okha FPSO facility which commenced production from the fields in 2011.
- Support vessel and helicopter operations.

Consultation information

A Consultation Information Sheet is enclosed, which provides additional background on the proposed activities including summaries of key impacts and risks and associated management measures. This is also available at www.woodside.com/what-we-do/consultation-activities.

Activity and location summary

CK4 and LH3 Well Intervention Environment Plan	
Activity details	Activities include: • Light well intervention activities on the CK4 and LH-3 wells. Both CK4 and LH3 wells may require temporary well suspension, Xmas tree (XT) changeout and re-commissioning. The wells may also require Tubing Retrievable Safety Valve (TRSV) remediation. • Preparation and support activities (e.g. inspections, cleaning). • Well start-up and production following intervention activities will be managed under the Okha FPSO Facility Operations EP.
Titles	• WA-9-L (CK4 well). • WA-16-L (LH3 well).
Location	• In Commonwealth waters, ~135 km north-west of Dampier.
Water depth	• ~81 m (CK4 well) and ~128 m (LH3 well).
Timing	• Between Q4 2026 and 2030.
Duration	• Between 14 to 35 days at the CK4 well • Between 14 to 21 days at the LH3 well. • Activities will take place 24 hours, 7 days a week. • Timing and duration are subject to change due to factors including approvals, weather, project vessel availability and other unforeseen circumstances.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Vessels	Key vessels include, but are not limited to: • LWIV • Additional support vessels • Helicopter to transport personnel and/or freight.
Operational Area and exclusion zones	• Operational Area is 1 km around each well. • A temporary 500 m exclusion zone will be in place around the LWIV.

Environment that May Be Affected (EMBA)

The EMBA is the largest geographic area where an unplanned event could potentially have an environmental consequence. The broadest extent of the EMBA takes into consideration planned activities and unplanned events. The EMBA has been developed combining numerous modelling outputs based on highly unlikely releases of hydrocarbons to the environment. The modelling scenarios that inform the EMBA are a loss of well control and a vessel collision.

The EMBA does not represent the extent of the predicted impact of a highly unlikely hydrocarbon release. Rather, the EMBA represents the merged area of many possible paths that a highly unlikely hydrocarbon release could travel, which depends on the weather and ocean conditions at the time of a release. This means that in the highly unlikely event that a hydrocarbon release does occur, the whole EMBA would not be affected. The specific and minimal part of the EMBA that is affected will only be known if there is a release.

Feedback

If you have feedback specific to the proposed activities, we welcome your feedback via email at consultation@feedback.woodside.com, via phone call at 1800 442 977 or via the feedback form at www.woodside.com/what-we-do/consultation-activities by **18 May 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suits you.

Your feedback and our response will be included in our EP, which will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for acceptance in accordance with the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (Cth). Your feedback may also be used to support other regulatory processes associated with the planned activities (which may or may not be confidential).

You may request that particular information you provide during consultation not be published in the EP made available on the NOPSEMA website. Please let us know if you request that particular information not be published, and we will make your request known to NOPSEMA.

NOPSEMA has published the brochure *Consultation on offshore petroleum environment plans – Information for the Community* to help community members understand consultation requirements for Commonwealth EPs and how to participate in consultation. You can access the brochure online through the QR code below.

Personal information collected in the course of consultation will be handled in accordance with Woodside's Environment Plan Privacy Collection Notice. To understand how personal information will be handled, please visit www.woodside.com/what-we-do/consultation-activities.

Regards

Woodside Energy Feedback

Woodside Energy
Mia Yellagonga
Karlak, 11 Mount Street
Perth WA 6000
Australia

T: 1800 442 977
E: feedback@woodside.com
www.woodside.com

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.1.18 Email sent to Australian Institute of Marine Science (AIMS), Commonwealth Scientific and Industrial Research Organisation (CSIRO), Curtin University, Edith Cowan University (ECU), Murdoch University, University of Western Australia (UWA), Western Australian Marine Science Institution (WAMSI) – 16 April 2026

Woodside is planning to submit the CK4 and LH3 Well Intervention Environment Plan (EP). The Cossack-4H (CK4) and Lambert-3 (LH3) well intervention is within the Woodside Burrup Pty Ltd Petroleum Licence Area WA-9-L and WA-16-L, located within Commonwealth waters ~135 km north-west of Dampier.

We are seeking feedback from relevant persons whose functions, interests or activities may be affected by the proposed activity in accordance with the intended outcome of consultation.

If you would like to comment on the proposed activity, please provide feedback to Woodside by **18 May 2026** using the details below.

Overview

CK4 and LH3 Well Intervention EP covers:

- Light well intervention activities on the CK4 and LH3 wells using a light well intervention vessel (LWIV). The two wells produce oil and gas through the Okha FPSO facility which commenced production from the fields in 2011.
- Support vessel and helicopter operations.

Consultation information

A Consultation Information Sheet is attached, which provides additional background on the proposed activities including summaries of key impacts and risks and associated management measures. This is also available on our website.

Woodside is seeking your advice regarding any research activities that your institution may be undertaking that may overlap with our proposed activities.

Activity and location summary

□CK4 and LH3 Well Intervention Environment Plan	
Activity details	Activities include: • Light well intervention activities on the CK4 and LH-3 wells. Both CK4 and LH3 wells may require temporary well suspension, Xmas tree (XT) changeout and re-commissioning. The wells may also require Tubing Retrievable Safety Valve (TRSV) remediation. • Preparation and support activities (e.g. inspections, cleaning). • Well start-up and production following intervention activities will be managed under the Okha FPSO Facility Operations EP.
Titles	• WA-9-L (CK4 well). • WA-16-L (LH3 well).
Location	• In Commonwealth waters, ~135 km north-west of Dampier.
Water depth	• ~81 m (CK4 well) and ~128 m (LH3 well).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Timing	• Between Q4 2026 and 2030.
Duration	• Between 14 to 35 days at the CK4 well • Between 14 to 21 days at the LH3 well. • Activities will take place 24 hours, 7 days a week. • Timing and duration are subject to change due to factors including approvals, weather, Protect vessel availability and other unforeseen circumstances.
Vessels	Key vessels include, but are not limited to: • LWIV • Additional support vessels • Helicopter to transport personnel and/or freight.
Operational Area and exclusion zones	• Operational Area is 1 km around each well. • A temporary 500 m exclusion zone will be in place around the LWIV.

Environment that May Be Affected (EMBA)

The EMBA is the largest geographic area where an unplanned event could potentially have an environmental consequence. The broadest extent of the EMBA takes into consideration planned activities and unplanned events. The EMBA has been developed combining numerous modelling outputs based on highly unlikely releases of hydrocarbons to the environment. The modelling scenarios that inform the EMBA are a loss of well control and a vessel collision.

The EMBA does not represent the extent of the predicted impact of a highly unlikely hydrocarbon release. Rather, the EMBA represents the merged area of many possible paths that a highly unlikely hydrocarbon release could travel, which depends on the weather and ocean conditions at the time of a release. This means that in the highly unlikely event that a hydrocarbon release does occur, the whole EMBA would not be affected. The specific and minimal part of the EMBA that is affected will only be known if there is a release.

Feedback

If you have feedback specific to the proposed activities, we welcome your feedback via email at consultation@feedback.woodside.com, via phone call at 1800 442 977 or via the feedback form on our website by **18 May 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suits you.

Your feedback and our response will be included in our EP, which will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for acceptance in accordance with the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (Cth). Your feedback may also be used to support other regulatory processes associated with the planned activities (which may or may not be confidential).

You may request that particular information you provide during consultation not be published in the EP made available on the NOPSEMA website. Please let us know if you request that particular information not be published, and we will make your request known to NOPSEMA.

NOPSEMA has published the brochure *Consultation on offshore petroleum environment plans – Information for the Community* to help community members understand consultation requirements for Commonwealth EPs and how to participate in consultation.

Personal information collected in the course of consultation will be handled in accordance with Woodside's Environment Plan Privacy Collection Notice. To understand how personal information will be handled, please visit our website.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.1.19 Email sent to Department of Climate Change, Energy, the Environment and Water (DCCEEW), Western Australian Museum (WAM) – 16 April 2026

Woodside is planning to submit the CK4 and LH3 Well Intervention Environment Plan (EP). The Cossack-4H (CK4) and Lambert-3 (LH3) well intervention is within the Woodside Burrup Pty Ltd Petroleum Licence Area WA-9-L and WA-16-L, located within Commonwealth waters ~135 km north-west of Dampier.

We are seeking feedback from relevant persons whose functions, interests or activities may be affected by the proposed activity in accordance with the intended outcome of consultation.

If you would like to comment on the proposed activity, please provide feedback to Woodside by **18 May 2026** using the details below.

Overview

CK4 and LH3 Well Intervention EP covers:

- Light well intervention activities on the CK4 and LH3 wells using a light well intervention vessel (LWIV). The two wells produce oil and gas through the Okha FPSO facility which commenced production from the fields in 2011.
- Support vessel and helicopter operations.

Consultation information

A Consultation Information Sheet is attached, which provides additional background on the proposed activities including summaries of key impacts and risks and associated management measures. This is also available on our website.

Please also find attached the details of Commonwealth and WA shipwrecks that are relevant for this EP.

Woodside refers to the *Underwater Cultural Heritage Act 2018 (Cwth)* and the Commonwealth Government's (2024) Assessing and Managing Impacts to Underwater Cultural Heritage in Australian Waters: Guidelines on the application of the *Underwater Cultural Heritage Act* 2018.

Activity and location summary

CK4 and LH3 Well Intervention Environment Plan	
Activity details	Activities include: • Light well intervention activities on the CK4 and LH-3 wells. Both CK4 and LH3 wells may require temporary well suspension, Xmas tree (XT) changeout and re-commissioning. The wells may also require Tubing Retrievable Safety Valve (TRSV) remediation. • Preparation and support activities (e.g. inspections, cleaning). • Well start-up and production following intervention activities will be managed under the Okha FPSO Facility Operations EP.
Titles	• WA-9-L (CK4 well). • WA-16-L (LH3 well).
Location	• In Commonwealth waters, ~135 km north-west of Dampier.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Water depth	• ~81 m (CK4 well) and ~128 m (LH3 well).
Timing	• Between Q4 2026 and 2030.
Duration	• Between 14 to 35 days at the CK4 well • Between 14 to 21 days at the LH3 well. • Activities will take place 24 hours, 7 days a week. • Timing and duration are subject to change due to factors including approvals, weather, Protect vessel availability and other unforeseen circumstances.
Vessels	Key vessels include, but are not limited to: • LWIV • Additional support vessels • Helicopter to transport personnel and/or freight.
Operational Area and exclusion zones	• Operational Area is 1 km around each well. • A temporary 500 m exclusion zone will be in place around the LWIV.

Environment that May Be Affected (EMBA)

The EMBA is the largest geographic area where an unplanned event could potentially have an environmental consequence. The broadest extent of the EMBA takes into consideration planned activities and unplanned events. The EMBA has been developed combining numerous modelling outputs based on highly unlikely releases of hydrocarbons to the environment. The modelling scenarios that inform the EMBA are a loss of well control and a vessel collision.

The EMBA does not represent the extent of the predicted impact of a highly unlikely hydrocarbon release. Rather, the EMBA represents the merged area of many possible paths that a highly unlikely hydrocarbon release could travel, which depends on the weather and ocean conditions at the time of a release. This means that in the highly unlikely event that a hydrocarbon release does occur, the whole EMBA would not be affected. The specific and minimal part of the EMBA that is affected will only be known if there is a release.

Feedback

If you have feedback specific to the proposed activities, we welcome your feedback via email at consultation@feedback.woodside.com, via phone call at 1800 442 977 or via the feedback form on our website by **18 May 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suits you.

Your feedback and our response will be included in our EP, which will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for acceptance in accordance with the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (Cth). Your feedback may also be used to support other regulatory processes associated with the planned activities (which may or may not be confidential).

You may request that particular information you provide during consultation not be published in the EP made available on the NOPSEMA website. Please let us know if you request that particular information not be published, and we will make your request known to NOPSEMA.

NOPSEMA has published the brochure *Consultation on offshore petroleum environment plans – Information for the Community* to help community members understand consultation requirements for Commonwealth EPs and how to participate in consultation.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Personal information collected in the course of consultation will be handled in accordance with Woodside's Environment Plan Privacy Collection Notice. To understand how personal information will be handled, please visit our website

6.1.20 Email sent to Department of Planning, Lands and Heritage (DPLH) – 16 April 2026

Woodside is planning to submit the CK4 and LH3 Well Intervention Environment Plan (EP). The Cossack-4H (CK4) and Lambert-3 (LH3) well intervention is within the Woodside Burrup Pty Ltd Petroleum Licence Area WA-9-L and WA-16-L, located within Commonwealth waters ~135 km north-west of Dampier.

We are seeking feedback from relevant persons whose functions, interests or activities may be affected by the proposed activity in accordance with the intended outcome of consultation.
If you would like to comment on the proposed activity, please provide feedback to Woodside by **18 May 2026** using the details below.

Overview
CK4 and LH3 Well Intervention EP covers:

- Light well intervention activities on the CK4 and LH3 wells using a light well intervention vessel (LWIV). The two wells produce oil and gas through the Okha FPSO facility which commenced production from the fields in 2011.
- Support vessel and helicopter operations.

Consultation information
A Consultation Information Sheet is attached, which provides additional background on the proposed activities including summaries of key impacts and risks and associated management measures. This is also available on our website.

Please also find attached the details of WA shipwrecks that are relevant for this EP.
Given the proximity of the proposed activities to Marine Parks, Woodside is consulting with the Department of Biodiversity, Conservation and Attractions (DBCA) for this EP. Woodside is also consulting with the Western Australian Museum and provided it with relevant shipwreck information for this EP.

Activity and location summary

CK4 and LH3 Well Intervention Environment Plan	
Activity details	Activities include: • Light well intervention activities on the CK4 and LH-3 wells. Both CK4 and LH3 wells may require temporary well suspension, Xmas tree (XT) changeout and re-commissioning. The wells may also require Tubing Retrievable Safety Valve (TRSV) remediation. • ·Preparation and support activities (e.g. inspections, cleaning). • ·Well start-up and production following intervention activities will be managed under the Okha FPSO Facility Operations EP.
Titles	• ·WA-9-L (CK4 well). • A-16-L (LH3 well).
Location	• ·n Commonwealth waters, ~135 km north-west of Dampier.
Water depth	• ~81 m (CK4 well) and ~128 m (LH3 well).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Timing	• Between Q4 2026 and 2030.
Duration	• Between 14 to 35 days at the CK4 well • Between 14 to 21 days at the LH3 well. • Activities will take place 24 hours, 7 days a week. • ·Timing and duration are subject to change due to factors including approvals, weather, Protect vessel availability and other unforeseen circumstances.
Vessels	Key vessels include, but are not limited to: • LWIV • Additional support vessels • Helicopter to transport personnel and/or freight.
Operational Area and exclusion zones	• ·Operational Area is 1 km around each well. • A temporary 500 m exclusion zone will be in place around the LWIV.

Environment that May Be Affected (EMBA)

The EMBA is the largest geographic area where an unplanned event could potentially have an environmental consequence. The broadest extent of the EMBA takes into consideration planned activities and unplanned events. The EMBA has been developed combining numerous modelling outputs based on highly unlikely releases of hydrocarbons to the environment. The modelling scenarios that inform the EMBA are a loss of well control and a vessel collision.

The EMBA does not represent the extent of the predicted impact of a highly unlikely hydrocarbon release. Rather, the EMBA represents the merged area of many possible paths that a highly unlikely hydrocarbon release could travel, which depends on the weather and ocean conditions at the time of a release. This means that in the highly unlikely event that a hydrocarbon release does occur, the whole EMBA would not be affected. The specific and minimal part of the EMBA that is affected will only be known if there is a release.

Feedback

If you have feedback specific to the proposed activities, we welcome your feedback via email at consultation@feedback.woodside.com, via phone call at 1800 442 977 or via the feedback form on our website by **18 May 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suits you.

Your feedback and our response will be included in our EP, which will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for acceptance in accordance with the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (Cth). Your feedback may also be used to support other regulatory processes associated with the planned activities (which may or may not be confidential).

You may request that particular information you provide during consultation not be published in the EP made available on the NOPSEMA website. Please let us know if you request that particular information not be published, and we will make your request known to NOPSEMA.

NOPSEMA has published the brochure *Consultation on offshore petroleum environment plans – Information for the Community* to help community members understand consultation requirements for Commonwealth EPs and how to participate in consultation.

Personal information collected in the course of consultation will be handled in accordance with Woodside's Environment Plan Privacy Collection Notice. To understand how personal information will be handled, please visit our website.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.1.21 Email sent to Shire of Ashburton – 16 April 2026

Woodside is planning to submit the CK4 and LH3 Well Intervention Environment Plan (EP). The Cossack-4H (CK4) and Lambert-3 (LH3) well intervention is within the Woodside Burrup Pty Ltd Petroleum Licence Area WA-9-L and WA-16-L, located within Commonwealth waters ~135 km north-west of Dampier.

We are seeking feedback from relevant persons whose functions, interests or activities may be affected by the proposed activity in accordance with the intended outcome of consultation.

If you would like to comment on the proposed activity, please provide feedback to Woodside by **18 May 2026** using the details below.

Overview

CK4 and LH3 Well Intervention EP covers:

- Light well intervention activities on the CK4 and LH3 wells using a light well intervention vessel (LWIV). The two wells produce oil and gas through the Okha FPSO facility which commenced production from the fields in 2011.
- Support vessel and helicopter operations.

Consultation information

A Consultation Information Sheet is attached, which provides additional background on the proposed activities including summaries of key impacts and risks and associated management measures. This is also available on our website.

Activity and location summary

CK4 and LH3 Well Intervention Environment Plan	
Activity details	Activities include: • Light well intervention activities on the CK4 and LH-3 wells. Both CK4 and LH3 wells may require temporary well suspension, Xmas tree (XT) changeout and re-commissioning. The wells may also require Tubing Retrievable Safety Valve (TRSV) remediation. • Preparation and support activities (e.g. inspections, cleaning). • Well start-up and production following intervention activities will be managed under the Okha FPSO Facility Operations EP.
Titles	• WA-9-L (CK4 well). • WA-16-L (LH3 well).
Location	• In Commonwealth waters, ~135 km north-west of Dampier.
Water depth	• ~81 m (CK4 well) and ~128 m (LH3 well).
Timing	• Between Q4 2026 and 2030.
Duration	• Between 14 to 35 days at the CK4 well

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

	• Between 14 to 21 days at the LH3 well. • Activities will take place 24 hours, 7 days a week. • Timing and duration are subject to change due to factors including approvals, weather, Protect vessel availability and other unforeseen circumstances.
Vessels	Key vessels include, but are not limited to: • LWIV • Additional support vessels • Helicopter to transport personnel and/or freight.
Operational Area and exclusion zones	• Operational Area is 1 km around each well. • A temporary 500 m exclusion zone will be in place around the LWIV.

Environment that May Be Affected (EMBA)

The EMBA is the largest geographic area where an unplanned event could potentially have an environmental consequence. The broadest extent of the EMBA takes into consideration planned activities and unplanned events. The EMBA has been developed combining numerous modelling outputs based on highly unlikely releases of hydrocarbons to the environment. The modelling scenarios that inform the EMBA are a loss of well control and a vessel collision.

The EMBA does not represent the extent of the predicted impact of a highly unlikely hydrocarbon release. Rather, the EMBA represents the merged area of many possible paths that a highly unlikely hydrocarbon release could travel, which depends on the weather and ocean conditions at the time of a release. This means that in the highly unlikely event that a hydrocarbon release does occur, the whole EMBA would not be affected. The specific and minimal part of the EMBA that is affected will only be known if there is a release.

Woodside is required to manage environmental impacts and risks to the EMBA by its proposed activities to As Low As Reasonably Practicable (ALARP) and to an acceptable level, as required by the Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023 (Environment Regulations), through the implementation of the EP. Woodside will submit the proposed EP to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA).

Preparedness and Response

In the course of developing the EP, Woodside will develop the oil spill preparedness and response position tailored to this activity including the drafting of the Oil Pollution First Strike Plan which details the potential impacts, notifications and response mitigations that may be executed to manage an emergency event. Woodside consults with the relevant jurisdictional authorities and controlling agencies, including the Western Australian Department of Transport and Major Infrastructure (DTMI), the Australian Maritime Safety Agency (AMSA) and, in some circumstances, relevant port authorities, during the plan drafting process to inform mitigation management measures in place for the proposed activities. Woodside may also consult with other relevant external emergency management agencies, including LEMC, to ensure emergency management plans are aligned with effective outcomes.

In addition to the jurisdictional authorities and controlling agencies, the plan includes standard emergency notifications to agencies including NOPSEMA, the Department of Climate Change, Energy, the Environment and Water (DCCEEW), the Director of National Parks (DNP), and the WA Department of Biodiversity, Conservation and Attractions (DBCA). Where applicable, notification information for relevant Shires is also included in the Oil Pollution First Strike Plan.

Cultural heritage

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Woodside routinely utilises the Department of Planning, Land and Heritage Aboriginal Cultural Heritage Inquiry System as part of the EP development process and includes the results of these inquiry system searches as an appendix to each EP.

Feedback

If you have feedback specific to the proposed activities, we welcome your feedback via email at consultation@feedback.woodside.com, via phone call at 1800 442 977 or via the feedback form on our website by **18 May 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suits you.

Your feedback and our response will be included in our EP, which will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for acceptance in accordance with the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (Cth). Your feedback may also be used to support other regulatory processes associated with the planned activities (which may or may not be confidential).

You may request that particular information you provide during consultation not be published in the EP made available on the NOPSEMA website. Please let us know if you request that particular information not be published, and we will make your request known to NOPSEMA.

NOPSEMA has published the brochure *Consultation on offshore petroleum environment plans – Information for the Community* to help community members understand consultation requirements for Commonwealth EPs and how to participate in consultation.

Personal information collected in the course of consultation will be handled in accordance with Woodside's Environment Plan Privacy Collection Notice. To understand how personal information will be handled, please visit our website.

6.1.22 Email sent to Chevron Australia – 16 April 2026

Woodside is planning to submit the CK4 and LH3 Well Intervention Environment Plan (EP). The Cossack-4H (CK4) and Lambert-3 (LH3) well intervention is within the Woodside Burrup Pty Ltd Petroleum Licence Area WA-9-L and WA-16-L, located within Commonwealth waters ~135 km north-west of Dampier.

We are seeking feedback from relevant persons whose functions, interests or activities may be affected by the proposed activity in accordance with the intended outcome of consultation.

If you would like to comment on the proposed activity, please provide feedback to Woodside by **18 May 2026** using the details below.

Overview

CK4 and LH3 Well Intervention EP covers:

- Light well intervention activities on the CK4 and LH3 wells using a light well intervention vessel (LWIV). The two wells produce oil and gas through the Okha FPSO facility which commenced production from the fields in 2011.
- Support vessel and helicopter operations.

Consultation information

A Consultation Information Sheet is attached, which provides additional background on the proposed activities including summaries of key impacts and risks and associated management measures. This is also available on our website.

Please also find attached GIS shape files.

We would be grateful if you could please forward this consultation information to your Joint Venture participants Osaka Gas Gorgon, MidOcean Gorgon and JERA Gorgon for feedback.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Activity and location summary

CK4 and LH3 Well Intervention Environment Plan	
Activity details	Activities include: • Light well intervention activities on the CK4 and LH-3 wells. Both CK4 and LH3 wells may require temporary well suspension, Xmas tree (XT) changeout and re-commissioning. The wells may also require Tubing Retrievable Safety Valve (TRSV) remediation. • Preparation and support activities (e.g. inspections, cleaning). • Well start-up and production following intervention activities will be managed under the Okha FPSO Facility Operations EP.
Titles	• WA-9-L (CK4 well). • WA-16-L (LH3 well).
Location	• In Commonwealth waters, ~135 km north-west of Dampier.
Water depth	• ~81 m (CK4 well) and ~128 m (LH3 well).
Timing	• Between Q4 2026 and 2030.
Duration	• Between 14 to 35 days at the CK4 well • Between 14 to 21 days at the LH3 well. • Activities will take place 24 hours, 7 days a week. • Timing and duration are subject to change due to factors including approvals, weather, Protect vessel availability and other unforeseen circumstances.
Vessels	Key vessels include, but are not limited to: • LWIV • Additional support vessels • Helicopter to transport personnel and/or freight.
Operational Area and exclusion zones	• Operational Area is 1 km around each well. • A temporary 500 m exclusion zone will be in place around the LWIV.

Environment that May Be Affected (EMBA)

The EMBA is the largest geographic area where an unplanned event could potentially have an environmental consequence. The broadest extent of the EMBA takes into consideration planned activities and unplanned events. The EMBA has been developed combining numerous modelling outputs based on highly unlikely releases of hydrocarbons to the environment. The modelling scenarios that inform the EMBA are a loss of well control and a vessel collision.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

The EMBA does not represent the extent of the predicted impact of a highly unlikely hydrocarbon release. Rather, the EMBA represents the merged area of many possible paths that a highly unlikely hydrocarbon release could travel, which depends on the weather and ocean conditions at the time of a release. This means that in the highly unlikely event that a hydrocarbon release does occur, the whole EMBA would not be affected. The specific and minimal part of the EMBA that is affected will only be known if there is a release.

Feedback

If you have feedback specific to the proposed activities, we welcome your feedback via email at consultation@feedback.woodside.com, via phone call at 1800 442 977 or via the feedback form on our website by **18 May 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suits you.

Your feedback and our response will be included in our EP, which will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for acceptance in accordance with the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (Cth). Your feedback may also be used to support other regulatory processes associated with the planned activities (which may or may not be confidential).

You may request that particular information you provide during consultation not be published in the EP made available on the NOPSEMA website. Please let us know if you request that particular information not be published, and we will make your request known to NOPSEMA.

NOPSEMA has published the brochure *Consultation on offshore petroleum environment plans – Information for the Community* to help community members understand consultation requirements for Commonwealth EPs and how to participate in consultation.

Personal information collected in the course of consultation will be handled in accordance with Woodside's Environment Plan Privacy Collection Notice. To understand how personal information will be handled, please visit our website.

Regards.

Woodside Energy Consultation

6.1.23 Email sent to Western Australian Fishing Industry Council – 16 April 2026

Please see SI Report A, reference 12.1

6.1.24 Email sent by WAFIC on behalf of Woodside to Mackerel Managed Fishery (Area 2), Pilbara Trap Fishery, Pilbara Line Fishery, Pilbara Trawl Fishery

Dear Licence Holders:

Woodside is planning to submit the CK4 and LH3 Well Intervention Environment Plan (EP). The Cossack-4H (CK4) and Lambert-3 (LH3) well intervention is within the Woodside Burrup Pty Ltd Petroleum Licence Area WA-9-L and WA-16-L, located within Commonwealth waters ~135 km north-west of Dampier.

We are seeking feedback from relevant persons whose functions, interests or activities may be affected by the proposed activity in accordance with the intended outcome of consultation. If you would like to comment on the proposed activity, please contact WAFIC by **18 May 2026** using the details below.

Overview

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

CK4 and LH3 Well Intervention EP covers:

- Light well intervention activities on the CK4 and LH3 wells using a light well intervention vessel (LWIV). The two wells produce oil and gas through the Okha FPSO facility which commenced production from the fields in 2011.
- Support vessel and helicopter operations.

Consultation information

The table below provides a summary of the proposed activities under this EP. The attached Consultation Information Sheet provides additional information including a map of impacted areas, summaries of potential impacts and risks relating to the proposed activities, and associated management measures, as well as Woodside's approach to consultation. This is also available on Woodsides website.

Activity and location summary

CK4 and LH3 Well Intervention Environment Plan	
Activity details	Activities include: • Light well intervention activities on the CK4 and LH-3 wells. Both CK4 and LH3 wells may require temporary well suspension, Xmas tree (XT) changeout and re-commissioning. The wells may also require Tubing Retrievable Safety Valve (TRSV) remediation. • Preparation and support activities (e.g. inspections, cleaning). • Well start-up and production following intervention activities will be managed under the Okha FPSO Facility Operations EP.
Titles	• WA-9-L (CK4 well). • WA-16-L (LH3 well).
Location	• In Commonwealth waters, ~135 km north-west of Dampier.
Water depth	• ~81 m (CK4 well) and ~128 m (LH3 well).
Timing	• Between Q4 2026 and 2030.
Duration	• Between 14 to 35 days at the CK4 well • Between 14 to 21 days at the LH3 well. • Activities will take place 24 hours, 7 days a week. • Timing and duration are subject to change due to factors including approvals, weather, Protect vessel availability and other unforeseen circumstances.
Vessels	Key vessels include, but are not limited to: • LWIV • Additional support vessels • Helicopter to transport personnel and/or freight.
Operational Area and exclusion zones	• Operational Area is 1 km around each well. • A temporary 500 m exclusion zone will be in place around the LWIV.

Notifications

Please let WAFIC know if you require notification prior to and on completion of the proposed activities.

Feedback

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Please provide feedback specific to the proposed activities described to [Individual 1] by **18 May 2026.** Your feedback and our response will be included in Woodside's EP, which will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for acceptance in accordance with the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (Cth). Your feedback may also be used to support other regulatory processes associated with the planned activities (which may or may not be confidential).

You may request that particular information you provide during consultation not be published in the EP made available on the NOPSEMA website. Please let us know if you request that particular information not be published, and if so, Woodside will make your request known to NOPSEMA. NOPSEMA has published the brochure *Consultation on offshore petroleum environment plans – Information for the Community* to help community members understand consultation requirements for Commonwealth EPs and how to participate in consultation.

Personal information collected in the course of consultation will be handled in accordance with Woodside's Environment Plan Privacy Collection Notice. To understand how personal information will be handled, please visit Woodside's website.

6.1.25 Email sent to Department of Biodiversity, Conservation and Attractions (DBCA) – 16 April 2026

Woodside is planning to submit the CK4 and LH3 Well Intervention Environment Plan (EP). The Cossack-4H (CK4) and Lambert-3 (LH3) well intervention is within the Woodside Burrup Pty Ltd Petroleum Licence Area WA-9-L and WA-16-L, located within Commonwealth waters ~135 km north-west of Dampier.

We are seeking feedback from relevant persons whose functions, interests or activities may be affected by the proposed activity in accordance with the intended outcome of consultation.

If you would like to comment on the proposed activity, please provide feedback to Woodside by **18 May 2026** using the details below.

Overview

CK4 and LH3 Well Intervention EP covers:

- Light well intervention activities on the CK4 and LH3 wells using a light well intervention vessel (LWIV). The two wells produce oil and gas through the Okha FPSO facility which commenced production from the fields in 2011.
- Support vessel and helicopter operations.

Consultation information

A Consultation Information Sheet is attached, which provides additional background on the proposed activities including summaries of key impacts and risks and associated management measures. This is also available on our website.

Activity and location summary

CK4 and LH3 Well Intervention Environment Plan	
Activity details	Activities include: • Light well intervention activities on the CK4 and LH-3 wells. Both CK4 and LH3 wells may require temporary well suspension, Xmas tree (XT) changeout and re-

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

	commissioning. The wells may also require Tubing Retrievable Safety Valve (TRSV) remediation. • Preparation and support activities (e.g. inspections, cleaning). • Well start-up and production following intervention activities will be managed under the Okha FPSO Facility Operations EP.
Titles	• WA-9-L (CK4 well). • WA-16-L (LH3 well).
Location	• In Commonwealth waters, ~135 km north-west of Dampier.
Water depth	• ~81 m (CK4 well) and ~128 m (LH3 well).
Timing	• Between Q4 2026 and 2030.
Duration	• Between 14 to 35 days at the CK4 well • Between 14 to 21 days at the LH3 well. • Activities will take place 24 hours, 7 days a week. • Timing and duration are subject to change due to factors including approvals, weather, Protect vessel availability and other unforeseen circumstances.
Vessels	Key vessels include, but are not limited to: • LWIV • Additional support vessels • Helicopter to transport personnel and/or freight.
Operational Area and exclusion zones	• Operational Area is 1 km around each well. • A temporary 500 m exclusion zone will be in place around the LWIV.

Environment that May Be Affected (EMBA)

The EMBA is the largest geographic area where an unplanned event could potentially have an environmental consequence. The broadest extent of the EMBA takes into consideration planned activities and unplanned events. The EMBA has been developed combining numerous modelling outputs based on highly unlikely releases of hydrocarbons to the environment. The modelling scenarios that inform the EMBA are a loss of well control and a vessel collision.

The EMBA does not represent the extent of the predicted impact of a highly unlikely hydrocarbon release. Rather, the EMBA represents the merged area of many possible paths that a highly unlikely hydrocarbon release could travel, which depends on the weather and ocean conditions at the time of a release. This means that in the highly unlikely event that a hydrocarbon release does occur, the whole EMBA would not be affected. The specific and minimal part of the EMBA that is affected will only be known if there is a release.

Areas of ecological importance

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Woodside maintains knowledge and an understanding of areas of ecological importance within and adjacent to the Operational Areas. An information system to track current existing environment knowledge is regularly updated and covers the following topics:

- EPBC Act Matters of National Ecological Significance (MNES) including threatened and migratory listed species
- WA Biodiversity Conservation Act 2016 – threatened and priority fauna list, the Part 13 Instruments, i.e., threatened species recovery plans and Biodiversity Regulations 2018
- EPBC Act threatened Species, Recovery Plans and Conservation advice
- State protected areas information and management plans on the habitats and associated fish and benthic communities.

The sources of information include credible published scientific research, industry and research agencies (government and university) study reports including baseline and monitoring programs. Woodside is also committed to sharing knowledge and contributes to the Index of Marine Surveys for Assessment (IMSA) hosted by the Department of Water and Environmental Regulation (WA) and supported by WAMSI.

National Light Pollution Guidelines

The lighting associated with the CK4 and LH3 Well Intervention EP vessels is required as a priority for safe operation. Woodside has considered the Commonwealth Department of Climate Change, Energy, the Environment and Water's National Light Pollution Guidelines for Wildlife (NLPG; Commonwealth of Australia 2023) with respect to vessel activities. The assessment of potential impacts to seabird and turtle behaviour, is based on recommendations in the NLPG. This impact assessment determined that the impacts of lighting are as low as reasonably practicable (ALARP).

Operational and Scientific Monitoring Program

Woodside's oil spill Operational and Scientific Monitoring (OSM) Program, executed under the Joint Industry OSM Framework (AEP, 2021), provides for a quantitative assessment of the overall environmental impacts in the event of an unplanned hydrocarbon release, or any release event with the potential to contact sensitive environmental receptors including but not limited to the Ningaloo Marine Park (M 2), Montebello Islands Marine Park (M 9) and the Barrow Island Nature Reserve (R 11648). The OSM comprises ten scientific monitoring programs (SMPs) and six operational monitoring programs (OMPs). The SMPs are targeted environmental monitoring programs to assess and quantify the environmental impact of a hydrocarbon spill range of physical-chemical (water and sediment) and biological (species and habitats) receptors, including EPBC Act listed species, environmental values associated with protected areas and socio-economic values, such as fisheries. The ten SMPs address a range of receptors most vulnerable to the impacts of a hydrocarbon release. The actual design and execution of the OSM program will be dependent on the nature and scale of the spill and the receptors predicted to be impacted. One of the priority focus areas in the early phase of an incident would be to identify and execute OSM at First Strike Monitoring Priorities.

Incidents and emergency response

Woodside's Oil Pollution First Strike Plan for this activity includes a commitment that the DBCA will be notified via phone call as soon as practicable if there is potential for oiled wildlife or the spill is expected to contact land or waters managed by WA DBCA. Woodside has incorporated the DBCA Pilbara regional office phone number as part of the notifications as listed in the Oil Pollution First Strike Plan.

This plan describes the incident management structure, notification and reporting requirements, the Operational Area, activity specific credible spill scenarios, and the hydrocarbon spill response strategies available for the protection of priority receptors. Links are included in the plan to a suite of existing Operational Plans and Tactical Response Plans (TRPs) to commence the mobilisation of response resources immediately, including 'monitor and evaluate' services, operational and scientific monitoring, and shoreline clean-up where required. Woodside understands that DBCA will not implement an oiled wildlife management response on behalf of a petroleum operator.

Feedback

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

If you have feedback specific to the proposed activities, we welcome your feedback via email at consultation@feedback.woodside.com, via phone call at 1800 442 977 or via the feedback form on our website by **18 May 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suits you.

Your feedback and our response will be included in our EP, which will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for acceptance in accordance with the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (Cth). Your feedback may also be used to support other regulatory processes associated with the planned activities (which may or may not be confidential).

You may request that particular information you provide during consultation not be published in the EP made available on the NOPSEMA website. Please let us know if you request that particular information not be published, and we will make your request known to NOPSEMA.

NOPSEMA has published the brochure *Consultation on offshore petroleum environment plans – Information for the Community* to help community members understand consultation requirements for Commonwealth EPs and how to participate in consultation.

Personal information collected in the course of consultation will be handled in accordance with Woodside's Environment Plan Privacy Collection Notice. To understand how personal information will be handled, please visit our website.

6.1.26 Email sent to Aquaculture Council of Western Australia (ACWA) – 16 April 2026

Woodside is planning to submit the CK4 and LH3 Well Intervention Environment Plan (EP). The Cossack-4H (CK4) and Lambert-3 (LH3) well intervention is within the Woodside Burrup Pty Ltd Petroleum Licence Area WA-9-L and WA-16-L, located within Commonwealth waters ~135 km north-west of Dampier.

We are seeking feedback from relevant persons whose functions, interests or activities may be affected by the proposed activity in accordance with the intended outcome of consultation.

If you would like to comment on the proposed activity, please provide feedback to Woodside by **18 May 2026** using the details below.

Overview

CK4 and LH3 Well Intervention EP covers:

- Light well intervention activities on the CK4 and LH3 wells using a light well intervention vessel (LWIV). The two wells produce oil and gas through the Okha FPSO facility which commenced production from the fields in 2011.
- Support vessel and helicopter operations.

Consultation information

A Consultation Information Sheet is attached, which provides additional background on the proposed activities including summaries of key impacts and risks and associated management measures. This is also available on our website.

Activity and location summary

CK4 and LH3 Well Intervention Environment Plan	
Activity details	Activities include: • Light well intervention activities on the CK4 and LH-3 wells. Both CK4 and LH3 wells may require temporary well suspension, Xmas tree (XT) changeout and re-

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

	commissioning. The wells may also require Tubing Retrievable Safety Valve (TRSV) remediation. • Preparation and support activities (e.g. inspections, cleaning). • Well start-up and production following intervention activities will be managed under the Okha FPSO Facility Operations EP.
Titles	• WA-9-L (CK4 well). • WA-16-L (LH3 well).
Location	• In Commonwealth waters, ~135 km north-west of Dampier.
Water depth	• ~81 m (CK4 well) and ~128 m (LH3 well).
Timing	• Between Q4 2026 and 2030.
Duration	• Between 14 to 35 days at the CK4 well • Between 14 to 21 days at the LH3 well. • Activities will take place 24 hours, 7 days a week. • Timing and duration are subject to change due to factors including approvals, weather, Protect vessel availability and other unforeseen circumstances.
Vessels	Key vessels include, but are not limited to: • LWIV • Additional support vessels • Helicopter to transport personnel and/or freight.
Operational Area and exclusion zones	• Operational Area is 1 km around each well. • A temporary 500 m exclusion zone will be in place around the LWIV.

Environment that May Be Affected (EMBA)

The EMBA is the largest geographic area where an unplanned event could potentially have an environmental consequence. The broadest extent of the EMBA takes into consideration planned activities and unplanned events. The EMBA has been developed combining numerous modelling outputs based on highly unlikely releases of hydrocarbons to the environment. The modelling scenarios that inform the EMBA are a loss of well control and a vessel collision.

The EMBA does not represent the extent of the predicted impact of a highly unlikely hydrocarbon release. Rather, the EMBA represents the merged area of many possible paths that a highly unlikely hydrocarbon release could travel, which depends on the weather and ocean conditions at the time of a release. This means that in the highly unlikely event that a hydrocarbon release does occur, the whole EMBA would not be affected. The specific and minimal part of the EMBA that is affected will only be known if there is a release.

EMBA Overlap

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Woodside is providing this information to the Aquaculture Council of Western Australia as our mapping data shows the EMBA for this EP overlaps with a pearl farm lease in Dailey Shoal and an aquaculture site in the Mackerel Islands.

Notifications

Please let us know if you require notification prior to and on completion of the proposed activities.

Feedback

If you have feedback specific to the proposed activities, we welcome your feedback via email at consultation@feedback.woodside.com, via phone call at 1800 442 977 or via the feedback form on our website by **18 May 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suits you.

Your feedback and our response will be included in our EP, which will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for acceptance in accordance with the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (Cth). Your feedback may also be used to support other regulatory processes associated with the planned activities (which may or may not be confidential).

You may request that particular information you provide during consultation not be published in the EP made available on the NOPSEMA website. Please let us know if you request that particular information not be published, and we will make your request known to NOPSEMA.

NOPSEMA has published the brochure *Consultation on offshore petroleum environment plans – Information for the Community* to help community members understand consultation requirements for Commonwealth EPs and how to participate in consultation.

Personal information collected in the course of consultation will be handled in accordance with Woodside's Environment Plan Privacy Collection Notice. To understand how personal information will be handled, please visit our website.

6.1.27 Email sent to Buurabalayji Thalanyji Aboriginal Corporation (BTAC) (via legal representative) – 13 April 2026

We are contacting you as the delegated representative for Buurabalayji Thalanyji Aboriginal Corporation (BTAC), as well as the primary contact for the Thalanyji / Nhuwala People.

Woodside would like to consult with BTAC and the Thalanyji / Nhuwala People as a relevant stakeholder that may be affected by the:

- Goodwyn Alpha Facility Operations Environment Plan (EP).
- CK4 (Cossack-4H) and LH3 (Lambert-3) Well Intervention EP

Consultation for these activities closes on Tuesday 12 May 2026. Your feedback, opinions and comments provided by this date will be reflected in the EPs and considered by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA).

The purpose of this email is to:

- inform you about our plans for the activities,
- invite you to submit feedback for the activities,
- provide an opportunity to discuss the activities,
- discuss further ways to consult and engage for the activities.

Overview of the activities

The attached Summary Information Sheets have been developed for an Indigenous audience and provide a high-level overview of the activities, including the Environment that May Be Affected (EMBA) map. We have

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

also linked Consultation Information Sheets here with further details including assessments of the potential impacts and risks relevant to these activities, as well as mitigation and management measures.

Consultation with Woodside

We'd like to gather your feedback about:

- How the activities could impact your cultural values, interests, and activities.
- Protection of the environment and its relationship to your cultural values.
- Your concerns about the proposed activities.
- Other elements we should consider in the EPs.
- Any other individuals, groups, or organisations we should talk to about these activities.

We have considered the information you have already provided Woodside during previous consultation and conducted reviews of available literature in relation to BTAC's cultural values that we consider relevant to these activities, which is outlined in Attachment A. Please get in touch with us if you would like more information or references regarding the values outlined in the document. If there are any changes or additional information you would like Woodside to consider in the preparation of these EPs, please let us know by Tuesday 12 May 2026.

Please let us know your preferred method of consultation including whether you would like to meet face to face. We welcome the opportunity to speak with Elders, office holders and other interested parties about these activities. Woodside provides various forms of assistance to organisations, Traditional Custodian groups and individuals to support participation in consultation.

Woodside manages gender-restricted or other culturally sensitive information carefully and will work with you to understand how you would like your information to be managed. If you would prefer to provide the information directly to NOPSEMA, please do so by phoning (08) 6188 8700 or via email communications@nopsema.gov.au.

Information can be sent to IndigenousAffairs@woodside.com, via telephone on 1800 442 977 or directly to me.

Further information about NOPSEMA

The following NOPSEMA publications may be of assistance to support understanding of the requirements to participate in consultation for Commonwealth EPs:

- Brochure: Consultation on offshore petroleum environment plans brochure (nopsema.gov.au)
- Guideline: Consultation in the course of preparing an environment plan (nopsema.gov.au)
- Policy: Draft policy for managing gender-restricted information (nopsema.gov.au)

Ongoing Feedback

Feedback can continue to be provided during the life of the EPs, including after consultation for the EPs has closed, during EP assessment, and after the EPs has been accepted by NOPSEMA. Woodside continues to receive, assess and respond to claims and objections from relevant persons throughout the life of the EPs. Should a claim or objection be received following the acceptance of the EPs that Woodside assesses, and which identifies a measure or control that Woodside considers requires implementation or updates to meet the intended outcome of consultation, Woodside will apply its Management of Change and Review process as appropriate.

Please feel free to forward this email and the attached document to members, Traditional Owners and other people and organisations who may be interested.

We also acknowledge our discussions relating to a consultation framework agreement have been ongoing

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

and appreciate that these discussions will progress in parallel with consultation for these EPs.

I look forward to your response and please feel free to call or send through guidance on next steps.

Kind regards

Appendix A

Cultural Values – Buurabalayji Thalanyji Aboriginal Corporation (BTAC)

Cultural Value	Source	
	Consultation	Literature review (publicly available)
Sea Country – connection to, access to and transfer of knowledge: • Enduring deep connection north of Onslow, extending out to Islands off the Pilbara coast including Montebello, Barrow and Mackerel Islands. • Cultural obligation to care for environment and values of Sea Country. • Resources including fish, shellfish, crabs, crustaceans, sea urchins, eggs, turtles, dugongs, flora and fauna associated with mangrove communities. • Artefacts and burials in coastal sand dunes. • Archaeological sites on Barrow and Montebello Islands. • Archaeological evidence of use of resources including fish, turtles, marine mammals, crocodiles, crabs and sea urchins. • Ceremonial sites (Thalu) for the increase of turtle, shark, ray, fish, squid, octopus, hill kangaroo and emu.	x	x

6.1.28 Email sent to Karajarri Traditional Lands Association (KTLA) – 13 April 2026

Woodside would like to consult with KTLA as a relevant stakeholder that may be affected by the CK4 (Cossack-4H) and LH3 (Lambert-3) Well Intervention (the activity) Environment Plan (EP). Consultation for this activity closes on Tuesday 12 May 2026. Your feedback, opinions and comments provided by this date will be reflected in the EP and considered by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA).

The purpose of this email is to:

- inform you about our plans for the activity
- invite you to submit feedback for the activity
- provide an opportunity to discuss the activity
- discuss further ways to consult and engage for the activity.

Overview of the activity

The attached Summary Information Sheet has been developed for a First Nations audience and provides a high-level overview of the activity, including the Environment that May Be Affected (EMBA) map. We have linked a Consultation Information Sheet here with further details including an assessment of the potential impacts and risks relevant to the activity, as well as mitigation and management measures.

Consultation with Woodside

We'd like to gather your feedback about:

- How the activity could impact your cultural values, interests, and activities
- Protection of the environment and its relationship to your cultural values

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- Your concerns about the proposed activity
- Other elements we should consider in the EP
- Any other individuals, groups, or organisations we should talk to about this activity

Please let us know your preferred method of consultation including whether you would like to meet face to face. We welcome the opportunity to speak with Elders, office holders and other interested parties about this activity. Woodside provides various forms of assistance to organisations, Traditional Custodian groups and individuals to support participation in consultation.

Woodside manages gender-restricted or other culturally sensitive information carefully and will work with you to understand how you would like your information to be managed. If you would prefer to provide the information directly to NOPSEMA, please do so by phoning (08) 6188 8700 or via email communications@nopsema.gov.au.

Information can be sent to IndigenousAffairs@woodside.com, via telephone on 1800 442 977 or directly to me.

Further information about NOPSEMA

The following NOPSEMA publications may be of assistance to support understanding of the requirements to participate in consultation for Commonwealth EPs:

- Brochure: Consultation on offshore petroleum environment plans brochure (nopsema.gov.au)
- Guideline: Consultation in the course of preparing an environment plan (nopsema.gov.au)
- Policy: Draft policy for managing gender-restricted information (nopsema.gov.au)

Ongoing Feedback

Feedback can continue to be provided during the life of an EP, including after consultation for the EP has closed, during EP assessment, and after an EP has been accepted by NOPSEMA. Woodside continues to receive, assess and respond to claims and objections from relevant persons throughout the life of the EP. Should a claim or objection be received following the acceptance of an EP that Woodside assesses, and which identifies a measure or control that Woodside considers requires implementation or updates to meet the intended outcome of consultation, Woodside will apply its Management of Change and Review process as appropriate.

Please feel free to forward this email and the attached document to members, Traditional Owners and other people and organisations who may be interested.

I look forward to your response and please feel free to call or send through guidance on next steps.

Kind regards

6.1.29 Email sent to Kariyarra Aboriginal Corporation (KAC) – 13 April 2026

Woodside would like to consult with KAC as a relevant stakeholder that may be affected by the:

- Goodwyn Alpha Facility Operations Environment Plan (EP).
- CK4 (Cossack-4H) and LH3 (Lambert-3) Well Intervention EP

Consultation for these activities closes on Tuesday 12 May 2026. Your feedback, opinions and comments provided by this date will be reflected in the EPs and considered by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA).

The purpose of this email is to:

- inform you about our plans for the activities,

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- invite you to submit feedback for the activities,
- provide an opportunity to discuss the activities,
- discuss further ways to consult and engage for the activities.

Overview of the activities

The attached Summary Information Sheets have been developed for an Indigenous audience and provide a high-level overview of the activities, including the Environment that May Be Affected (EMBA) map. We have also linked Consultation Information Sheets here with further details including assessments of the potential impacts and risks relevant to these activities, as well as mitigation and management measures.

Consultation with Woodside

We'd like to gather your feedback about:

- How the activities could impact your cultural values, interests, and activities.
- Protection of the environment and its relationship to your cultural values.
- Your concerns about the proposed activities.
- Other elements we should consider in the EPs.
- Any other individuals, groups, or organisations we should talk to about these activities.

We have considered the information you have already provided Woodside during previous consultation and also conducted reviews of available literature in relation to KAC's cultural values that we consider relevant to these activities, which is outlined in Attachment A. Please get in touch with us if you would like more information or references regarding the values outlined in the document. If there are any changes or additional information you would like Woodside to consider in the preparation of these EPs, please let us know by Tuesday 12 May 2026.

Please let us know your preferred method of consultation including whether you would like to meet face to face. We welcome the opportunity to speak with Elders, office holders and other interested parties about these activities. Woodside provides various forms of assistance to organisations, Traditional Custodian groups and individuals to support participation in consultation.

Woodside manages gender-restricted or other culturally sensitive information carefully and will work with you to understand how you would like your information to be managed. If you would prefer to provide the information directly to NOPSEMA, please do so by phoning (08) 6188 8700 or via email communications@nopsema.gov.au.

Information can be sent to IndigenousAffairs@woodside.com, via telephone on 1800 442 977 or directly to me.

Further information about NOPSEMA

The following NOPSEMA publications may be of assistance to support understanding of the requirements to participate in consultation for Commonwealth EPs:

- Brochure: Consultation on offshore petroleum environment plans brochure (nopsema.gov.au)
- Guideline: Consultation in the course of preparing an environment plan (nopsema.gov.au)
- Policy: Draft policy for managing gender-restricted information (nopsema.gov.au)

Ongoing Feedback

Feedback can continue to be provided during the life of the EPs, including after consultation for the EPs has closed, during EP assessment, and after the EPs has been accepted by NOPSEMA. Woodside continues to receive, assess and respond to claims and objections from relevant persons throughout the life of the EPs. Should a claim or objection be received following the acceptance of the EPs that Woodside assesses, and which identifies a measure or control that Woodside considers requires implementation or updates to meet

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

the intended outcome of consultation, Woodside will apply its Management of Change and Review process as appropriate.

Please feel free to forward this email and the attached document to members, Traditional Owners and other people and organisations who may be interested.

We also acknowledge our discussions relating to the framework agreement have been ongoing and appreciate that these discussions will progress in parallel with consultation for this EP.

I look forward to your response and please feel free to call or send through guidance on next steps.

Kind regards

Attachment A

KAC Cultural Values

Cultural Value	Source	
	Consultation	Literature review (publicly available)
Marine Animals • Turtles: management of and sea turtle nesting. • Whales: connection to Songlines, impacts to whale migration. • Shellfish, cockles, oysters, clam shells, con shells. • Mullets (fish). • Sea cow (dugong).	x	
Sea Country • Cultural obligations to care for Country. • Secret habitat totems. • Access for fishing, trapping, crabbing, catching turtle, hunting dugong, using stingray barbs for spears, collecting shellfish and visiting offshore islands at low tide.	x	x
Yinta • Significant cultural/spiritual sites, often a water source but possibly other features such as hills. • Cultural rights to land determine who can use or speak for an area.	x	x
Marine species as resources • Marine mammals including sea cow (dugong). • Fish including mullets. • Molluscs including bivalves, gastropods and cephalopods. • Shellfish, cockles, oysters, clam shells, con shells.	x	
Coastal landforms	x	
Coastal vegetation	x	
Heritage sites associated with the coast and ocean including the presence of mythical snakes. • Traditional knowledge recalls that a saltwater serpent lives in the sea and brings fish to shore.	x	x
Transfer of knowledge to future generations • Impacts to resources: species reduction • Temporary exclusion to areas in the case of an oil spill etc.	x	
Islands off the coast of Port Hedland are significant • Little Turtle • North Turtle • Bedout	x	
Importance of river systems as food chains.	x	

6.1.30 Email sent to Murujuga Aboriginal Corporation (MAC) – 13 April 2026

Woodside would like to consult with MAC as a relevant stakeholder that may be affected by the:

- Goodwyn Alpha Facility Operations Environment Plan (EP).
- CK4 (Cossack-4H) and LH3 (Lambert-3) Well Intervention EP

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Consultation for these activities closes on Tuesday 12 May 2026. Your feedback, opinions and comments provided by this date will be reflected in the EPs and considered by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA).

The purpose of this email is to:

- inform you about our plans for the activities,
- invite you to submit feedback for the activities,
- provide an opportunity to discuss the activities,
- discuss further ways to consult and engage for the activities.

Overview of the activities

The attached Summary Information Sheets have been developed for an Indigenous audience and provide a high-level overview of the activities, including the Environment that May Be Affected (EMBA) map. We have also linked Consultation Information Sheets here with further details including assessments of the potential impacts and risks relevant to these activities, as well as mitigation and management measures.

Consultation with Woodside

We'd like to gather your feedback about:

- How the activities could impact your cultural values, interests, and activities.
- Protection of the environment and its relationship to your cultural values.
- Your concerns about the proposed activities.
- Other elements we should consider in the EPs.
- Any other individuals, groups, or organisations we should talk to about these activities.

We have considered the information you have already provided Woodside during previous consultation and also conducted reviews of available literature in relation to MAC's cultural values that we consider relevant to these activities, which is outlined in Attachment A. Please get in touch with us if you would like more information or references regarding the values outlined in the document. If there are any changes or additional information you would like Woodside to consider in the preparation of these EPs, please let us know by Tuesday 12 May 2026.

Please let us know your preferred method of consultation including whether you would like to meet face to face. We welcome the opportunity to speak with Elders, office holders and other interested parties about these activities. Woodside provides various forms of assistance to organisations, Traditional Custodian groups and individuals to support participation in consultation.

Woodside manages gender-restricted or other culturally sensitive information carefully and will work with you to understand how you would like your information to be managed. If you would prefer to provide the information directly to NOPSEMA, please do so by phoning (08) 6188 8700 or via email communications@nopsema.gov.au.

Information can be sent to IndigenousAffairs@woodside.com, via telephone on 1800 442 977 or directly to me.

Further information about NOPSEMA

The following NOPSEMA publications may be of assistance to support understanding of the requirements to participate in consultation for Commonwealth EPs:

- Brochure: Consultation on offshore petroleum environment plans brochure (nopsema.gov.au)
- Guideline: Consultation in the course of preparing an environment plan (nopsema.gov.au)
- Policy: Draft policy for managing gender-restricted information (nopsema.gov.au).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Ongoing Feedback

Feedback can continue to be provided during the life of the EPs, including after consultation for the EPs has closed, during EP assessment, and after the EPs has been accepted by NOPSEMA. Woodside continues to receive, assess and respond to claims and objections from relevant persons throughout the life of the EPs. Should a claim or objection be received following the acceptance of the EPs that Woodside assesses, and which identifies a measure or control that Woodside considers requires implementation or updates to meet the intended outcome of consultation, Woodside will apply its Management of Change and Review process as appropriate.

Please feel free to forward this email and the attached document to members, Traditional Owners and other people and organisations who may be interested.

I look forward to your response and please feel free to call or send through guidance on next steps.

Kind regards

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Attachment A

Cultural Values – Murujuga Aboriginal Corporation (MAC)

Cultural Value	Source	
	Consultation – identified during EP consultation	Literature review (publicly available)
The ecosystem and health of Mermaid Sound.		x
Marine species • Whales: totemic importance • Dolphins: cultural ceremonies • Dugongs: food source • Fish: cultural ceremonies • Sea Snakes: culturally important • Turtles: Songlines • Coral: attract fish and other species • Seagrass: provide protection for animals. Locations include Conzinc Island and between Angel and Gidley Islands. • Stingrays • Sharks • Crustaceans • Octopus • Sea stars • Sea urchins • Sponges • Molluscs	x	x
Marine eco-systems • Mangroves: would have provided shelter, crabbing, digging for shellfish and could be turtle nurseries. Locations include Conzinc Bay north end, Flying Foam Passage, Searipple Passage, North-East Bay of West Lewis Island. • Macroalgal (seaweed) communities: important habitats and food sources. • Subtidal soft bottom communities (ocean bottom): support invertebrate diversity. • Intertidal sand and mudflat communities: support invertebrate diversity and provide food for shorebirds. • Rocky shores: habitats for plants/animals and provide food for shorebirds.	x	x
Fish traps in Conzinc Bay and Angel and Gidley Islands.	x	x
Harvesting squid around Conzinc Bay		x

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

MAC is the appropriate cultural authority for Murujuga	x	
Submerged landscape: • Potential impact on Jinna (Songlines) • Potential impact to Aboriginal heritage, due to the submerged coastline at initial occupation of the region, landscape features that would have defined the first travel routes used to move through Country.	x	
Murujuga seasonal calendar: • Any change to the feeding, breeding or migratory behaviour of culturally significant species would impact significantly on subsistence, cultural and ceremonial activities.	x	

6.1.31 Email sent to Nganhurra Thanardi Garrbu Aboriginal Corporation (NTGAC) (via YMAC)– 13 April 2026

We are contacting you as the delegated representative for Yamatji Marlpa Aboriginal Corporation (YMAC), as well as the primary contact for the Nganhurra Thanardi Garrbu Aboriginal Corporation (NTGAC) and Nhuwala Claim Group.

Woodside would like to consult with YMAC, NTGAC and the Nhuwala Claim Group as a relevant stakeholder that may be affected by the:

- Goodwyn Alpha Facility Operations Environment Plan (EP).
- CK4 (Cossack-4H) and LH3 (Lambert-3) Well Intervention EP

Consultation for these activities closes on Tuesday 12 May 2026. Your feedback, opinions and comments provided by this date will be reflected in the EPs and considered by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA).

The purpose of this email is to:

- inform you about our plans for the activities,
- invite you to submit feedback for the activities,
- provide an opportunity to discuss the activities,
- discuss further ways to consult and engage for the activities.

Overview of the activities

The attached Summary Information Sheets have been developed for an Indigenous audience and provide a high-level overview of the activities, including the Environment that May Be Affected (EMBA) map. We have also linked Consultation Information Sheets here with further details including assessments of the potential impacts and risks relevant to these activities, as well as mitigation and management measures.

Consultation with Woodside

We'd like to gather your feedback about:

- How the activities could impact your cultural values, interests, and activities.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- Protection of the environment and its relationship to your cultural values.
- Your concerns about the proposed activities.
- Other elements we should consider in the EPs.
- Any other individuals, groups, or organisations we should talk to about these activities.

We have considered the information you have already provided Woodside during previous consultation and also conducted reviews of available literature in relation to NTGAC's cultural values that we consider relevant to these activities, which is outlined in Attachment A. Please get in touch with us if you would like more information or references regarding the values outlined in the document. If there are any changes or additional information you would like Woodside to consider in the preparation of these EPs, please let us know by Tuesday 12 May 2026.

Please let us know your preferred method of consultation including whether you would like to meet face to face. We welcome the opportunity to speak with Elders, office holders and other interested parties about these activities. Woodside provides various forms of assistance to organisations, Traditional Custodian groups and individuals to support participation in consultation.

Woodside manages gender-restricted or other culturally sensitive information carefully and will work with you to understand how you would like your information to be managed. If you would prefer to provide the information directly to NOPSEMA, please do so by phoning (08) 6188 8700 or via email communications@nopsema.gov.au.

Information can be sent to IndigenousAffairs@woodside.com, via telephone on 1800 442 977 or directly to me.

Further information about NOPSEMA

The following NOPSEMA publications may be of assistance to support understanding of the requirements to participate in consultation for Commonwealth EPs:

- Brochure: Consultation on offshore petroleum environment plans brochure (nopsema.gov.au)
- Guideline: Consultation in the course of preparing an environment plan (nopsema.gov.au)
- Policy: Draft policy for managing gender-restricted information (nopsema.gov.au).

Ongoing Feedback

Feedback can continue to be provided during the life of the EPs, including after consultation for the EPs has closed, during EP assessment, and after the EPs has been accepted by NOPSEMA. Woodside continues to receive, assess and respond to claims and objections from relevant persons throughout the life of the EPs. Should a claim or objection be received following the acceptance of the EPs that Woodside assesses, and which identifies a measure or control that Woodside considers requires implementation or updates to meet the intended outcome of consultation, Woodside will apply its Management of Change and Review process as appropriate.

Please feel free to forward this email and the attached document to members, Traditional Owners and other people and organisations who may be interested.

I look forward to your response and please feel free to call or send through guidance on next steps.

Kind regards

Attachment A

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Cultural Values - Nganhurra Thanardi Garrbu Aboriginal Corporation (NTGAC)

Cultural Value	Source	
	Consultation	Literature review (publicly available)
Marine ecosystems and species • Interest in invasive marine species • Interest in chemicals released into water – ballast water discharge • Marine parks – risks • Whales • Whale Sharks	x	

6.1.32 Email sent to Ngarluma Aboriginal Corporation (NAC) – 13 April 2026

Woodside would like to consult with NAC as a relevant stakeholder that may be affected by the:

- Goodwyn Alpha Facility Operations Environment Plan (EP).
- CK4 (Cossack-4H) and LH3 (Lambert-3) Well Intervention EP

Consultation for these activities closes on Tuesday 12 May 2026. Your feedback, opinions and comments provided by this date will be reflected in the EPs and considered by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA).

The purpose of this email is to:

- inform you about our plans for the activities,
- invite you to submit feedback for the activities,
- provide an opportunity to discuss the activities,
- discuss further ways to consult and engage for the activities.

Overview of the activities

The attached Summary Information Sheets have been developed for an Indigenous audience and provide a high-level overview of the activities, including the Environment that May Be Affected (EMBA) map. We have also linked Consultation Information Sheets here with further details including assessments of the potential impacts and risks relevant to these activities, as well as mitigation and management measures.

Consultation with Woodside

We'd like to gather your feedback about:

- How the activities could impact your cultural values, interests, and activities.
- Protection of the environment and its relationship to your cultural values.
- Your concerns about the proposed activities.
- Other elements we should consider in the EPs.
- Any other individuals, groups, or organisations we should talk to about these activities

We have considered the information you have already provided Woodside during previous consultation and also conducted reviews of available literature in relation to NAC's cultural values that we consider relevant to these activities, which is outlined in Attachment A. Please get in touch with us if you would like more information or references regarding the values outlined in the document. If there are any changes or

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

additional information you would like Woodside to consider in the preparation of these EPs, please let us know by Tuesday 12 May 2026.

Please let us know your preferred method of consultation including whether you would like to meet face to face. We welcome the opportunity to speak with Elders, office holders and other interested parties about these activities. Woodside provides various forms of assistance to organisations, Traditional Custodian groups and individuals to support participation in consultation.

Woodside manages gender-restricted or other culturally sensitive information carefully and will work with you to understand how you would like your information to be managed. If you would prefer to provide the information directly to NOPSEMA, please do so by phoning (08) 6188 8700 or via email communications@nopsema.gov.au.

Information can be sent to IndigenousAffairs@woodside.com, via telephone on 1800 442 977 or directly to me.

Further information about NOPSEMA

The following NOPSEMA publications may be of assistance to support understanding of the requirements to participate in consultation for Commonwealth EPs:

- Brochure: Consultation on offshore petroleum environment plans brochure (nopsema.gov.au)
- Guideline: Consultation in the course of preparing an environment plan (nopsema.gov.au)
- Policy: Draft policy for managing gender-restricted information (nopsema.gov.au)

Ongoing Feedback

Feedback can continue to be provided during the life of the EPs, including after consultation for the EPs has closed, during EP assessment, and after the EPs has been accepted by NOPSEMA. Woodside continues to receive, assess and respond to claims and objections from relevant persons throughout the life of the EPs. Should a claim or objection be received following the acceptance of the EPs that Woodside assesses, and which identifies a measure or control that Woodside considers requires implementation or updates to meet the intended outcome of consultation, Woodside will apply its Management of Change and Review process as appropriate.

Please feel free to forward this email and the attached document to members, Traditional Owners and other people and organisations who may be interested.

We also acknowledge our discussions relating to the framework agreement have been ongoing and appreciate that these discussions will progress in parallel with consultation for this EP.

I look forward to your response and please feel free to call or send through guidance on next steps.

Kind regards

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Attachment A

Cultural Values – Ngarluma Aboriginal Corporation (NAC)

Cultural Value	Source	
	Consultation	Literature review (publicly available)
Onshore heritage: interest in management of heritage sites.	x	
Potential submerged heritage.	x	
Manggan - (creative beings) used supernatural force to shape the hills, rivers, seas and landforms.		x

6.1.33 Email sent to Nhuwala Claim Group (via YMAC) – 13 April 2026

We are contacting you as the delegated representative for Yamatji Marlpa Aboriginal Corporation (YMAC), as well as the primary contact for the Nganhurra Thanardi Garrbu Aboriginal Corporation (NTGAC) and Nhuwala Claim Group.

Woodside would like to consult with YMAC, NTGAC and the Nhuwala Claim Group as a relevant stakeholder that may be affected by the:

- Goodwyn Alpha Facility Operations Environment Plan (EP).
- CK4 (Cossack-4H) and LH3 (Lambert-3) Well Intervention EP

Consultation for these activities closes on Tuesday 12 May 2026. Your feedback, opinions and comments provided by this date will be reflected in the EPs and considered by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA).

The purpose of this email is to:

- inform you about our plans for the activities,
- invite you to submit feedback for the activities,
- provide an opportunity to discuss the activities,
- discuss further ways to consult and engage for the activities.

Overview of the activities

The attached Summary Information Sheets have been developed for an Indigenous audience and provide a high-level overview of the activities, including the Environment that May Be Affected (EMBA) map. We have also linked Consultation Information Sheets here with further details including assessments of the potential impacts and risks relevant to these activities, as well as mitigation and management measures.

Consultation with Woodside

We'd like to gather your feedback about:

- How the activities could impact your cultural values, interests, and activities.
- Protection of the environment and its relationship to your cultural values.
- Your concerns about the proposed activities.
- Other elements we should consider in the EPs.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- Any other individuals, groups, or organisations we should talk to about these activities.

We have considered the information you have already provided Woodside during previous consultation and also conducted reviews of available literature in relation to NTGAC's cultural values that we consider relevant to these activities, which is outlined in Attachment A. Please get in touch with us if you would like more information or references regarding the values outlined in the document. If there are any changes or additional information you would like Woodside to consider in the preparation of these EPs, please let us know by Tuesday 12 May 2026.

Please let us know your preferred method of consultation including whether you would like to meet face to face. We welcome the opportunity to speak with Elders, office holders and other interested parties about these activities. Woodside provides various forms of assistance to organisations, Traditional Custodian groups and individuals to support participation in consultation.

Woodside manages gender-restricted or other culturally sensitive information carefully and will work with you to understand how you would like your information to be managed. If you would prefer to provide the information directly to NOPSEMA, please do so by phoning (08) 6188 8700 or via email communications@nopsema.gov.au.

Information can be sent to IndigenousAffairs@woodside.com, via telephone on 1800 442 977 or directly to me.

Further information about NOPSEMA

The following NOPSEMA publications may be of assistance to support understanding of the requirements to participate in consultation for Commonwealth EPs:

- Brochure: Consultation on offshore petroleum environment plans brochure (nopsema.gov.au)
- Guideline: Consultation in the course of preparing an environment plan (nopsema.gov.au)
- Policy: Draft policy for managing gender-restricted information (nopsema.gov.au)

Ongoing Feedback

Feedback can continue to be provided during the life of the EPs, including after consultation for the EPs has closed, during EP assessment, and after the EPs has been accepted by NOPSEMA. Woodside continues to receive, assess and respond to claims and objections from relevant persons throughout the life of the EPs. Should a claim or objection be received following the acceptance of the EPs that Woodside assesses, and which identifies a measure or control that Woodside considers requires implementation or updates to meet the intended outcome of consultation, Woodside will apply its Management of Change and Review process as appropriate.

Please feel free to forward this email and the attached document to members, Traditional Owners and other people and organisations who may be interested.

I look forward to your response and please feel free to call or send through guidance on next steps.

Kind regards

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Attachment A

Cultural Values - Nganhurra Thanardi Garrbu Aboriginal Corporation (NTGAC)

Cultural Value	Source	
	Consultation	Literature review (publicly available)
Marine ecosystems and species • Interest in invasive marine species • Interest in chemicals released into water – ballast water discharge • Marine parks – risks • Whales • Whale Sharks	x	

6.1.34 Email sent to Nhuwala / Thalanyji People (via BTAC) – 13 April 2026

We are contacting you as the delegated representative for Buurabalayji Thalanyji Aboriginal Corporation (BTAC), as well as the primary contact for the Thalanyji / Nhuwala People.

Woodside would like to consult with BTAC and the Thalanyji / Nhuwala People as a relevant stakeholder that may be affected by the:

- Goodwyn Alpha Facility Operations Environment Plan (EP).
- CK4 (Cossack-4H) and LH3 (Lambert-3) Well Intervention EP

Consultation for these activities closes on Tuesday 12 May 2026. Your feedback, opinions and comments provided by this date will be reflected in the EPs and considered by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA).

The purpose of this email is to:

- inform you about our plans for the activities,
- invite you to submit feedback for the activities,
- provide an opportunity to discuss the activities,
- discuss further ways to consult and engage for the activities.

Overview of the activities

The attached Summary Information Sheets have been developed for an Indigenous audience and provide a high-level overview of the activities, including the Environment that May Be Affected (EMBA) map. We have also linked Consultation Information Sheets here with further details including assessments of the potential impacts and risks relevant to these activities, as well as mitigation and management measures.

Consultation with Woodside

We'd like to gather your feedback about:

- How the activities could impact your cultural values, interests, and activities.
- Protection of the environment and its relationship to your cultural values.
- Your concerns about the proposed activities.
- Other elements we should consider in the EPs.
- Any other individuals, groups, or organisations we should talk to about these activities.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

We have considered the information you have already provided Woodside during previous consultation and also conducted reviews of available literature in relation to BTAC's cultural values that we consider relevant to these activities, which is outlined in Attachment A. Please get in touch with us if you would like more information or references regarding the values outlined in the document. If there are any changes or additional information you would like Woodside to consider in the preparation of these EPs, please let us know by Tuesday 12 May 2026.

Please let us know your preferred method of consultation including whether you would like to meet face to face. We welcome the opportunity to speak with Elders, office holders and other interested parties about these activities. Woodside provides various forms of assistance to organisations, Traditional Custodian groups and individuals to support participation in consultation.

Woodside manages gender-restricted or other culturally sensitive information carefully and will work with you to understand how you would like your information to be managed. If you would prefer to provide the information directly to NOPSEMA, please do so by phoning (08) 6188 8700 or via email communications@nopsema.gov.au.

Information can be sent to IndigenousAffairs@woodside.com, via telephone on 1800 442 977 or directly to me.

Further information about NOPSEMA

The following NOPSEMA publications may be of assistance to support understanding of the requirements to participate in consultation for Commonwealth EPs:

- Brochure: Consultation on offshore petroleum environment plans brochure (nopsema.gov.au)
- Guideline: Consultation in the course of preparing an environment plan (nopsema.gov.au)
- Policy: Draft policy for managing gender-restricted information (nopsema.gov.au).

Ongoing Feedback

Feedback can continue to be provided during the life of the EPs, including after consultation for the EPs has closed, during EP assessment, and after the EPs has been accepted by NOPSEMA. Woodside continues to receive, assess and respond to claims and objections from relevant persons throughout the life of the EPs. Should a claim or objection be received following the acceptance of the EPs that Woodside assesses, and which identifies a measure or control that Woodside considers requires implementation or updates to meet the intended outcome of consultation, Woodside will apply its Management of Change and Review process as appropriate.

Please feel free to forward this email and the attached document to members, Traditional Owners and other people and organisations who may be interested.

We also acknowledge our discussions relating to a consultation framework agreement have been ongoing and appreciate that these discussions will progress in parallel with consultation for these EPs.

I look forward to your response and please feel free to call or send through guidance on next steps.

Kind regards

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Attachment A

Cultural Values – Buurabalayji Thalanyji Aboriginal Corporation (BTAC)

Cultural Value	Source	
	Consultation	Literature review (publicly available)
Sea Country – connection to, access to and transfer of knowledge: • Enduring deep connection north of Onslow, extending out to Islands off the Pilbara coast including Montebello, Barrow and Mackerel Islands. • Cultural obligation to care for environment and values of Sea Country. • Resources including fish, shellfish, crabs, crustaceans, sea urchins, eggs, turtles, dugongs, flora and fauna associated with mangrove communities. • Artefacts and burials in coastal sand dunes. • Archaeological sites on Barrow and Montebello Islands. • Archaeological evidence of use of resources including fish, turtles, marine mammals, crocodiles, crabs and sea urchins. • Ceremonial sites (Thalu) for the increase of turtle, shark, ray, fish, squid, octopus, hill kangaroo and emu.	x	x

6.1.35 Email sent to Nyangumarta Karajarri Aboriginal Corporation (NKAC) (via KLC) – 13 April 2026

We are contacting you as the delegated representative for Nyangumarta Karajarri Aboriginal Corporation (NKAC).

Woodside would like to consult with NKAC as a relevant stakeholder that may be affected by the CK4 (Cossack-4H) and LH3 (Lambert-3) Well Intervention (the activity) Environment Plan (EP).

Consultation for this activity closes on Tuesday 12 May 2026. Your feedback, opinions and comments provided by this date will be reflected in the EP and considered by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA).

The purpose of this email is to:

- inform you about our plans for the activity
- invite you to submit feedback for the activity
- provide an opportunity to discuss the activity
- discuss further ways to consult and engage for the activity.

Overview of the activity

The attached Summary Information Sheet has been developed for a First Nations audience and provides a high-level overview of the activity, including the Environment that May Be Affected (EMBA) map. We have linked a Consultation Information Sheet here with further details including an assessment of the potential impacts and risks relevant to the activity, as well as mitigation and management measures.

Consultation with Woodside

We'd like to gather your feedback about:

How the activity could impact your cultural values, interests, and activities

Protection of the environment and its relationship to your cultural values

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Your concerns about the proposed activity
Other elements we should consider in the EP
Any other individuals, groups, or organisations we should talk to about this activity

Please let us know your preferred method of consultation including whether you would like to meet face to face. We welcome the opportunity to speak with Elders, office holders and other interested parties about this activity. Woodside provides various forms of assistance to organisations, Traditional Custodian groups and individuals to support participation in consultation.

Woodside manages gender-restricted or other culturally sensitive information carefully and will work with you to understand how you would like your information to be managed. If you would prefer to provide the information directly to NOPSEMA, please do so by phoning (08) 6188 8700 or via email communications@nopsema.gov.au.

Information can be sent to IndigenousAffairs@woodside.com, via telephone on 1800 442 977 or directly to me.

Further information about NOPSEMA

The following NOPSEMA publications may be of assistance to support understanding of the requirements to participate in consultation for Commonwealth EPs:

- Brochure: Consultation on offshore petroleum environment plans brochure (nopsema.gov.au)
- Guideline: Consultation in the course of preparing an environment plan (nopsema.gov.au)
- Policy: Draft policy for managing gender-restricted information (nopsema.gov.au).

Ongoing Feedback

Feedback can continue to be provided during the life of an EP, including after consultation for the EP has closed, during EP assessment, and after an EP has been accepted by NOPSEMA. Woodside continues to receive, assess and respond to claims and objections from relevant persons throughout the life of the EP. Should a claim or objection be received following the acceptance of an EP that Woodside assesses, and which identifies a measure or control that Woodside considers requires implementation or updates to meet the intended outcome of consultation, Woodside will apply its Management of Change and Review process as appropriate.

Please feel free to forward this email and the attached document to members, Traditional Owners and other people and organisations who may be interested.

I look forward to your response and please feel free to call or send through guidance on next steps.

Kind regards

6.1.36 Email sent to Nyangumarta Warrarn Aboriginal Corporation (NWAC) – 13 April 2026

Woodside would like to consult with NWAC as a relevant stakeholder that may be affected by the:

- Goodwyn Alpha Facility Operations Environment Plan (EP).
- CK4 (Cossack-4H) and LH3 (Lambert-3) Well Intervention EP

Consultation for these activities closes on Tuesday 12 May 2026. Your feedback, opinions and comments provided by this date will be reflected in the EPs and considered by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA).

The purpose of this email is to:

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- inform you about our plans for the activities,
- invite you to submit feedback for the activities,
- provide an opportunity to discuss the activities,
- discuss further ways to consult and engage for the activities.

Overview of the activities

The attached Summary Information Sheets have been developed for an Indigenous audience and provide a high-level overview of the activities, including the Environment that May Be Affected (EMBA) map. We have also linked Consultation Information Sheets here with further details including assessments of the potential impacts and risks relevant to these activities, as well as mitigation and management measures.

Consultation with Woodside

We'd like to gather your feedback about:

- How the activities could impact your cultural values, interests, and activities.
- Protection of the environment and its relationship to your cultural values.
- Your concerns about the proposed activities.
- Other elements we should consider in the EPs.

Any other individuals, groups, or organisations we should talk to about these activities.

We have considered the information you have already provided Woodside during previous consultation and also conducted reviews of available literature in relation to NWAC's cultural values that we consider relevant to these activities, which is outlined in Attachment A. Please get in touch with us if you would like more information or references regarding the values outlined in the document. If there are any changes or additional information you would like Woodside to consider in the preparation of these EPs, please let us know by Tuesday 12 May 2026.

Please let us know your preferred method of consultation including whether you would like to meet face to face. We welcome the opportunity to speak with Elders, office holders and other interested parties about these activities. Woodside provides various forms of assistance to organisations, Traditional Custodian groups and individuals to support participation in consultation.

Woodside manages gender-restricted or other culturally sensitive information carefully and will work with you to understand how you would like your information to be managed. If you would prefer to provide the information directly to NOPSEMA, please do so by phoning (08) 6188 8700 or via email communications@nopsema.gov.au.

Information can be sent to IndigenousAffairs@woodside.com, via telephone on 1800 442 977 or directly to me.

Further information about NOPSEMA

The following NOPSEMA publications may be of assistance to support understanding of the requirements to participate in consultation for Commonwealth EPs:

- Brochure: Consultation on offshore petroleum environment plans brochure (nopsema.gov.au)
- Guideline: Consultation in the course of preparing an environment plan (nopsema.gov.au)
- Policy: Draft policy for managing gender-restricted information (nopsema.gov.au).

Ongoing Feedback

Feedback can continue to be provided during the life of the EPs, including after consultation for the EPs has closed, during EP assessment, and after the EPs has been accepted by NOPSEMA. Woodside continues to

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

receive, assess and respond to claims and objections from relevant persons throughout the life of the EPs. Should a claim or objection be received following the acceptance of the EPs that Woodside assesses, and which identifies a measure or control that Woodside considers requires implementation or updates to meet the intended outcome of consultation, Woodside will apply its Management of Change and Review process as appropriate.

Please feel free to forward this email and the attached document to members, Traditional Owners and other people and organisations who may be interested.

I look forward to your response and please feel free to call or send through guidance on next steps.

Kind regards

Attachment A

Cultural Values – Nyangumarta Warrarn Aboriginal Corporation (NWAC)

Cultural Value	Source	
	Consultation	Literature review (publicly available)
Eighty Mile Beach has cultural and ecological value to the Nyangumarta Custodians.	x	
Resource collection • Impacts to migrating birds, whales, turtles and vegetation.	x	

6.1.37 Email sent to Robe River Kuruma Aboriginal Corporation (RRKAC) – 13 April 2026

Woodside would like to consult with RRKAC as a relevant stakeholder that may be affected by the:

- Goodwyn Alpha Facility Operations Environment Plan (EP).
- CK4 (Cossack-4H) and LH3 (Lambert-3) Well Intervention EP

Consultation for these activities closes on Tuesday 12 May 2026. Your feedback, opinions and comments provided by this date will be reflected in the EPs and considered by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA).

The purpose of this email is to:

- inform you about our plans for the activities,
- invite you to submit feedback for the activities,
- provide an opportunity to discuss the activities,
- discuss further ways to consult and engage for the activities.

Overview of the activities

The attached Summary Information Sheets have been developed for an Indigenous audience and provide a high-level overview of the activities, including the Environment that May Be Affected (EMBA) map. We have also linked Consultation Information Sheets here with further details including assessments of the potential impacts and risks relevant to these activities, as well as mitigation and management measures.

Consultation with Woodside

We'd like to gather your feedback about:

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- How the activities could impact your cultural values, interests, and activities.
- Protection of the environment and its relationship to your cultural values.
- Your concerns about the proposed activities.
- Other elements we should consider in the EPs.
- Any other individuals, groups, or organisations we should talk to about these activities.

We have considered the information you have already provided Woodside during previous consultation and also conducted reviews of available literature in relation to RRKAC's cultural values that we consider relevant to these activities, which is outlined in Attachment A. Please get in touch with us if you would like more information or references regarding the values outlined in the document. If there are any changes or additional information you would like Woodside to consider in the preparation of these EPs, please let us know by Tuesday 12 May 2026.

Please let us know your preferred method of consultation including whether you would like to meet face to face. We welcome the opportunity to speak with Elders, office holders and other interested parties about these activities. Woodside provides various forms of assistance to organisations, Traditional Custodian groups and individuals to support participation in consultation.

Woodside manages gender-restricted or other culturally sensitive information carefully and will work with you to understand how you would like your information to be managed. If you would prefer to provide the information directly to NOPSEMA, please do so by phoning (08) 6188 8700 or via email communications@nopsema.gov.au.

Information can be sent to IndigenousAffairs@woodside.com, via telephone on 1800 442 977 or directly to me.

Further information about NOPSEMA

The following NOPSEMA publications may be of assistance to support understanding of the requirements to participate in consultation for Commonwealth EPs:

- Brochure: Consultation on offshore petroleum environment plans brochure (nopsema.gov.au)
- Guideline: Consultation in the course of preparing an environment plan (nopsema.gov.au)
- Policy: Draft policy for managing gender-restricted information (nopsema.gov.au).

Ongoing Feedback

Feedback can continue to be provided during the life of the EPs, including after consultation for the EPs has closed, during EP assessment, and after the EPs has been accepted by NOPSEMA. Woodside continues to receive, assess and respond to claims and objections from relevant persons throughout the life of the EPs. Should a claim or objection be received following the acceptance of the EPs that Woodside assesses, and which identifies a measure or control that Woodside considers requires implementation or updates to meet the intended outcome of consultation, Woodside will apply its Management of Change and Review process as appropriate.

Please feel free to forward this email and the attached document to members, Traditional Owners and other people and organisations who may be interested.

I look forward to your response and please feel free to call or send through guidance on next steps.

Kind regards

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Attachment A

Cultural Values - Robe River Kuruma Aboriginal Corporation (RRKAC)

Cultural Value	Source	
	Consultation	Literature review (publicly available)
Underwater heritage – concerns about impacts to heritage at shoreline.	x	
Coastline	x	

6.1.38 Email sent to Wanparta Aboriginal Corporation (Wanparta) – 13 April 2026

Woodside would like to consult with Wanparta as a relevant stakeholder that may be affected by the:

- Goodwyn Alpha Facility Operations Environment Plan (EP).
- CK4 (Cossack-4H) and LH3 (Lambert-3) Well Intervention EP

Consultation for these activities closes on Tuesday 12 May 2026. Your feedback, opinions and comments provided by this date will be reflected in the EPs and considered by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA).

The purpose of this email is to:

- inform you about our plans for the activities,
- invite you to submit feedback for the activities,
- provide an opportunity to discuss the activities,
- discuss further ways to consult and engage for the activities.

Overview of the activities

The attached Summary Information Sheets have been developed for an Indigenous audience and provide a high-level overview of the activities, including the Environment that May Be Affected (EMBA) map. We have also linked Consultation Information Sheets here with further details including assessments of the potential impacts and risks relevant to these activities, as well as mitigation and management measures.

Consultation with Woodside

We'd like to gather your feedback about:

- How the activities could impact your cultural values, interests, and activities.
- Protection of the environment and its relationship to your cultural values.
- Your concerns about the proposed activities.
- Other elements we should consider in the EPs.
- Any other individuals, groups, or organisations we should talk to about these activities.

We have considered the information you have already provided Woodside during previous consultation and also conducted reviews of available literature in relation to Wanparta's cultural values that we consider relevant to these activities, which is outlined in Attachment A. Please get in touch with us if you would like more information or references regarding the values outlined in the document. If there are any changes or additional information you would like Woodside to consider in the preparation of these EPs, please let us know by Tuesday 12 May 2026.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Please let us know your preferred method of consultation including whether you would like to meet face to face. We welcome the opportunity to speak with Elders, office holders and other interested parties about these activities. Woodside provides various forms of assistance to organisations, Traditional Custodian groups and individuals to support participation in consultation.

Woodside manages gender-restricted or other culturally sensitive information carefully and will work with you to understand how you would like your information to be managed. If you would prefer to provide the information directly to NOPSEMA, please do so by phoning (08) 6188 8700 or via email communications@nopsema.gov.au.

Information can be sent to IndigenousAffairs@woodside.com, via telephone on 1800 442 977 or directly to me.

Further information about NOPSEMA

The following NOPSEMA publications may be of assistance to support understanding of the requirements to participate in consultation for Commonwealth EPs:

- Brochure: Consultation on offshore petroleum environment plans brochure (nopsema.gov.au)
- Guideline: Consultation in the course of preparing an environment plan (nopsema.gov.au)
- Policy: Draft policy for managing gender-restricted information (nopsema.gov.au).

Ongoing Feedback

Feedback can continue to be provided during the life of the EPs, including after consultation for the EPs has closed, during EP assessment, and after the EPs has been accepted by NOPSEMA. Woodside continues to receive, assess and respond to claims and objections from relevant persons throughout the life of the EPs. Should a claim or objection be received following the acceptance of the EPs that Woodside assesses, and which identifies a measure or control that Woodside considers requires implementation or updates to meet the intended outcome of consultation, Woodside will apply its Management of Change and Review process as appropriate.

Please feel free to forward this email and the attached document to members, Traditional Owners and other people and organisations who may be interested.

I look forward to your response and please feel free to call or send through guidance on next steps.

Kind regards

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Attachment A

Cultural Values – Wanparta Aboriginal Corporation

Cultural Value	Source	
	Consultation	Literature review (publicly available)
Sea Country • Spiritual connection • Cultural obligation to look after Sea Country • A healthy Sea Country leads to healthy marine life and healthy Ngarla People • Importance of fish stocks.	x	
Nearshore Islands (particularly Solitary Island/Jarrkunpungu) • Dreaming stories through the interconnecting islands • Dreamtime stories through the nearshore islands. • There is ethnohistorical evidence of Ngarla occupation on these islands.	x	
Sea (fresh and salt water) • Dreaming stories • A responsibility to look after the ocean (law and culture)	x	
Totemic species • Kestrel • Octopus • Spiny Brim • Sting Ray	x	

6.1.39 Email sent to Wirrawandi Aboriginal Corporation (WAC) – 13 April 2026

Woodside would like to consult with WAC as a relevant stakeholder that may be affected by the:

- Goodwyn Alpha Facility Operations Environment Plan (EP).
- CK4 (Cossack-4H) and LH3 (Lambert-3) Well Intervention EP

Consultation for these activities closes on Tuesday 12 May 2026. Your feedback, opinions and comments provided by this date will be reflected in the EPs and considered by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA).

The purpose of this email is to:

- inform you about our plans for the activities,
- invite you to submit feedback for the activities,
- provide an opportunity to discuss the activities,
- discuss further ways to consult and engage for the activities.

Overview of the activities

The attached Summary Information Sheets have been developed for an Indigenous audience and provide a high-level overview of the activities, including the Environment that May Be Affected (EMBA) map. We have also linked Consultation Information Sheets here with further details including assessments of the potential impacts and risks relevant to these activities, as well as mitigation and management measures.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Consultation with Woodside

We'd like to gather your feedback about:

- How the activities could impact your cultural values, interests, and activities.
- Protection of the environment and its relationship to your cultural values.
- Your concerns about the proposed activities.
- Other elements we should consider in the EPs.
- Any other individuals, groups, or organisations we should talk to about these activities.

We have considered the information you have already provided Woodside during previous consultation and also conducted reviews of available literature in relation to WAC's cultural values that we consider relevant to these activities, which is outlined in Attachment A. Please get in touch with us if you would like more information or references regarding the values outlined in the document. If there are any changes or additional information you would like Woodside to consider in the preparation of these EPs, please let us know by Tuesday 12 May 2026.

Please let us know your preferred method of consultation including whether you would like to meet face to face. We welcome the opportunity to speak with Elders, office holders and other interested parties about these activities. Woodside provides various forms of assistance to organisations, Traditional Custodian groups and individuals to support participation in consultation.

Woodside manages gender-restricted or other culturally sensitive information carefully and will work with you to understand how you would like your information to be managed. If you would prefer to provide the information directly to NOPSEMA, please do so by phoning (08) 6188 8700 or via email communications@nopsema.gov.au.

Information can be sent to IndigenousAffairs@woodside.com, via telephone on 1800 442 977 or directly to me.

Further information about NOPSEMA

The following NOPSEMA publications may be of assistance to support understanding of the requirements to participate in consultation for Commonwealth EPs:

- Brochure: Consultation on offshore petroleum environment plans brochure (nopsema.gov.au)
- Guideline: Consultation in the course of preparing an environment plan (nopsema.gov.au)
- Policy: Draft policy for managing gender-restricted information (nopsema.gov.au).

Ongoing Feedback

Feedback can continue to be provided during the life of the EPs, including after consultation for the EPs has closed, during EP assessment, and after the EPs has been accepted by NOPSEMA. Woodside continues to receive, assess and respond to claims and objections from relevant persons throughout the life of the EPs. Should a claim or objection be received following the acceptance of the EPs that Woodside assesses, and which identifies a measure or control that Woodside considers requires implementation or updates to meet the intended outcome of consultation, Woodside will apply its Management of Change and Review process as appropriate.

Please feel free to forward this email and the attached document to members, Traditional Owners and other people and organisations who may be interested.

I look forward to your response and please feel free to call or send through guidance on next steps.

Kind regards

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Attachment A

Cultural Values – Wirrawandi Aboriginal Corporation (WAC)

Cultural Value	Source	
	Consultation	Literature review (publicly available)
Marine Species • Whales: migration and potential impact of noise on whale communication • Turtles: general interest around management and monitoring.	x	
Rock art: potential impact of emissions from activities.	x	
Underwater heritage: impacts particularly given recent finding of artefacts.	x	
Onshore heritage: management of sites.	x	

6.1.40 Email sent to Wong-Goo-Tt-Oo – 24 April 2026

We are contacting you as the delegated representative for the Wong-Goo-Tt-Oo people (Wong-Goo-Tt-Oo). Woodside would like to consult with Wong-Goo-Tt-Oo as a stakeholder that may be affected by the:

- Goodwyn Alpha Facility Operations Environment Plan (EP).
- CK4 (Cossack-4H) and LH3 (Lambert-3) Well Intervention EP

Consultation for these activities closes on Tuesday 25 May 2026. Your feedback, opinions and comments provided by this date will be reflected in the EPs and considered by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA).

The purpose of this email is to:

- inform you about our plans for the activities,
- invite you to submit feedback for the activities,
- provide an opportunity to discuss the activities,
- discuss further ways to consult and engage for the activities.

Overview of the activities

The attached Summary Information Sheets have been developed for an Indigenous audience and provide a high-level overview of the activities, including the Environment that May Be Affected (EMBA) map. We have also linked Consultation Information Sheets here with further details including assessments of the potential impacts and risks relevant to these activities, as well as mitigation and management measures.

Consultation with Woodside

We'd like to gather your feedback about:

1. How the activities could impact your cultural values, interests, and activities.
2. Protection of the environment and its relationship to your cultural values.
3. Your concerns about the proposed activities.
4. Other elements we should consider in the EPs.
5. Any other individuals, groups, or organisations we should talk to about these activities.

We have considered the information Murujuga Aboriginal Corporation (MAC) has already provided Woodside during previous consultation and also conducted reviews of available literature in relation to MAC's cultural

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

values that we consider relevant to these activities, which is outlined in Attachment A. Please get in touch with us if you would like more information or references regarding the values outlined in the document. If there are any changes or additional information you would like Woodside to consider in the preparation of these EPs, please let us know by Tuesday 25 May 2026.

Please let us know your preferred method of consultation including whether you would like to meet face to face. We welcome the opportunity to speak with Elders, office holders and other interested parties about these activities. Woodside provides various forms of assistance to organisations, Traditional Custodian groups and individuals to support participation in consultation.

Woodside manages gender-restricted or other culturally sensitive information carefully and will work with you to understand how you would like your information to be managed. If you would prefer to provide the information directly to NOPSEMA, please do so by phoning (08) 6188 8700 or via email communications@nopsema.gov.au.

Information can be sent to IndigenousAffairs@woodside.com, via telephone on 1800 442 977 or directly to me.

Further information about NOPSEMA

The following NOPSEMA publications may be of assistance to support understanding of the requirements to participate in consultation for Commonwealth EPs:

- Brochure: Consultation on offshore petroleum environment plans brochure (nopsema.gov.au)
- Guideline: Consultation in the course of preparing an environment plan (nopsema.gov.au)
- Policy: Draft policy for managing gender-restricted information (nopsema.gov.au).

Ongoing Feedback

Feedback can continue to be provided during the life of the EPs, including after consultation for the EPs has closed, during EP assessment, and after the EPs has been accepted by NOPSEMA. Woodside continues to receive, assess and respond to claims and objections from relevant persons throughout the life of the EPs. Should a claim or objection be received following the acceptance of the EPs that Woodside assesses, and which identifies a measure or control that Woodside considers requires implementation or updates to meet the intended outcome of consultation, Woodside will apply its Management of Change and Review process as appropriate.

Please feel free to forward this email and the attached document to members, Traditional Owners and other people and organisations who may be interested.

I look forward to your response and please feel free to call or send through guidance on next steps.
Kind regards

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Attachment A

Cultural Values – Murujuga Aboriginal Corporation (MAC)

Cultural Value	Source	
	Consultation – identified during EP consultation	Literature review (publicly available)
The ecosystem and health of Mermaid Sound.		x
Marine species • Whales: totemic importance • Dolphins: cultural ceremonies • Dugongs: food source • Fish: cultural ceremonies • Sea Snakes: culturally important • Turtles: Songlines • Coral: attract fish and other species • Seagrass: provide protection for animals. Locations include Conzinc Island and between Angel and Gidley Islands. • Stingrays • Sharks • Crustaceans • Octopus • Sea stars • Sea urchins • Sponges • Molluscs	x	x
Marine eco-systems • Mangroves: would have provided shelter, crabbing, digging for shellfish and could be turtle nurseries. Locations include Conzinc Bay north end, Flying Foam Passage, Searipple Passage, North-East Bay of West Lewis Island. • Macroalgal (seaweed) communities: important habitats and food sources. • Subtidal soft bottom communities (ocean bottom): support invertebrate diversity. • Intertidal sand and mudflat communities: support invertebrate diversity and provide food for shorebirds. • Rocky shores: habitats for plants/animals and provide food for shorebirds.	x	x
Fish traps in Conzinc Bay and Angel and Gidley Islands.	x	x
Harvesting squid around Conzinc Bay		x

MAC is the appropriate cultural authority for Murujuga	x	
Submerged landscape: • Potential impact on Jinna (Songlines) • Potential impact to Aboriginal heritage, due to the submerged coastline at initial occupation of the region, landscape features that would have defined the first travel routes used to move through Country.	x	
Murujuga seasonal calendar: • Any change to the feeding, breeding or migratory behaviour of culturally significant species would impact significantly on subsistence, cultural and ceremonial activities.	x	

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.1.41 Email sent to Yindjibarndi Aboriginal Corporation (Yindjibarndi) (via NYFL) – 13 April 2026

We are contacting you as the delegated representative for Yindjibarndi Aboriginal Corporation and Ngarluma Yindjibarndi Foundation Ltd (NYFL).

Woodside would like to consult with NYFL and Yindjibarndi as a relevant stakeholder that may be affected by the:

- Goodwyn Alpha Facility Operations Environment Plan (EP).
- CK4 (Cossack-4H) and LH3 (Lambert-3) Well Intervention EP

Consultation for these activities closes on Tuesday 21 May 2026. Your feedback, opinions and comments provided by this date will be reflected in the Eps and considered by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA).

The purpose of this email is to:

- inform you about our plans for the activities,
- invite you to submit feedback for the activities,
- provide an opportunity to discuss the activities,
- discuss further ways to consult and engage for the activities.

Overview of the activities

The attached Summary Information Sheets have been developed for an Indigenous audience and provide a high-level overview of the activities, including the Environment that May Be Affected (EMBA) map. We have also linked Consultation Information Sheets here with further details including assessments of the potential impacts and risks relevant to these activities, as well as mitigation and management measures.

Consultation with Woodside

We'd like to gather your feedback about:

- How the activities could impact your cultural values, interests, and activities.
- Protection of the environment and its relationship to your cultural values.
- Your concerns about the proposed activities.
- Other elements we should consider in the EPs.
- Any other individuals, groups, or organisations we should talk to about these activities

Please let us know your preferred method of consultation including whether you would like to meet face to face. We welcome the opportunity to speak with Elders, office holders and other interested parties about these activities. Woodside provides various forms of assistance to organisations, Traditional Custodian groups and individuals to support participation in consultation.

Woodside manages gender-restricted or other culturally sensitive information carefully and will work with you to understand how you would like your information to be managed. If you would prefer to provide the information directly to NOPSEMA, please do so by phoning (08) 6188 8700 or via email communications@nopsema.gov.au.

Information can be sent to IndigenousAffairs@woodside.com, via telephone on 1800 442 977 or directly to me.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Further information about NOPSEMA

The following NOPSEMA publications may be of assistance to support understanding of the requirements to participate in consultation for Commonwealth EPs:

- Brochure: Consultation on offshore petroleum environment plans brochure (nopsema.gov.au)
- Guideline: Consultation in the course of preparing an environment plan (nopsema.gov.au)
- Policy: Draft policy for managing gender-restricted information (nopsema.gov.au).

Ongoing Feedback

Feedback can continue to be provided during the life of the EPs, including after consultation for the EPs has closed, during EP assessment, and after the EPs has been accepted by NOPSEMA. Woodside continues to receive, assess and respond to claims and objections from relevant persons throughout the life of the EPs. Should a claim or objection be received following the acceptance of the EPs that Woodside assesses, and which identifies a measure or control that Woodside considers requires implementation or updates to meet the intended outcome of consultation, Woodside will apply its Management of Change and Review process as appropriate.

Please feel free to forward this email and the attached document to members, Traditional Owners and other people and organisations who may be interested.

We also acknowledge our discussions relating to the framework agreement have been ongoing and appreciate that these discussions will progress in parallel with consultation for this EP.

I look forward to your response and please feel free to call or send through guidance on next steps.

Kind regards

6.1.42 Email sent to Yinggarda Aboriginal Corporation (YAC) – 13 April 2026

Woodside would like to consult with YAC as a relevant stakeholder that may be affected by the:

- Goodwyn Alpha Facility Operations Environment Plan (EP).
- CK4 (Cossack-4H) and LH3 (Lambert-3) Well Intervention EP

Consultation for these activities closes on Tuesday 12 May 2026. Your feedback, opinions and comments provided by this date will be reflected in the EPs and considered by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA).

The purpose of this email is to:

- inform you about our plans for the activities,
- invite you to submit feedback for the activities,
- provide an opportunity to discuss the activities,
- discuss further ways to consult and engage for the activities.

Overview of the activities

The attached Summary Information Sheets have been developed for an Indigenous audience and provide a high-level overview of the activities, including the Environment that May Be Affected (EMBA) map. We have also linked Consultation Information Sheets here with further details including assessments of the potential impacts and risks relevant to these activities, as well as mitigation and management measures.

Consultation with Woodside

We'd like to gather your feedback about:

- How the activities could impact your cultural values, interests, and activities.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- Protection of the environment and its relationship to your cultural values.
- Your concerns about the proposed activities.
- Other elements we should consider in the EPs.
- Any other individuals, groups, or organisations we should talk to about these activities.

We have considered the information you have already provided Woodside during previous consultation and also conducted reviews of available literature in relation to YAC's cultural values that we consider relevant to these activities, which is outlined in Attachment A. Please get in touch with us if you would like more information or references regarding the values outlined in the document. If there are any changes or additional information you would like Woodside to consider in the preparation of these EPs, please let us know by Tuesday 12 May 2026.

Please let us know your preferred method of consultation including whether you would like to meet face to face. We welcome the opportunity to speak with Elders, office holders and other interested parties about these activities. Woodside provides various forms of assistance to organisations, Traditional Custodian groups and individuals to support participation in consultation.

Woodside manages gender-restricted or other culturally sensitive information carefully and will work with you to understand how you would like your information to be managed. If you would prefer to provide the information directly to NOPSEMA, please do so by phoning (08) 6188 8700 or via email communications@nopsema.gov.au.

Information can be sent to IndigenousAffairs@woodside.com, via telephone on 1800 442 977 or directly to me.

Further information about NOPSEMA

The following NOPSEMA publications may be of assistance to support understanding of the requirements to participate in consultation for Commonwealth EPs:

- Brochure: Consultation on offshore petroleum environment plans brochure (nopsema.gov.au)
- Guideline: Consultation in the course of preparing an environment plan (nopsema.gov.au)
- Policy: Draft policy for managing gender-restricted information (nopsema.gov.au).

Ongoing Feedback

Feedback can continue to be provided during the life of the EPs, including after consultation for the EPs has closed, during EP assessment, and after the EPs has been accepted by NOPSEMA. Woodside continues to receive, assess and respond to claims and objections from relevant persons throughout the life of the EPs. Should a claim or objection be received following the acceptance of the EPs that Woodside assesses, and which identifies a measure or control that Woodside considers requires implementation or updates to meet the intended outcome of consultation, Woodside will apply its Management of Change and Review process as appropriate.

Please feel free to forward this email and the attached document to members, Traditional Owners and other people and organisations who may be interested.

I look forward to your response and please feel free to call or send through guidance on next steps.

Kind regards

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Attachment A

Cultural Values - Yinggarda Aboriginal Corporation (YAC)

Cultural Value	Source	
	Consultation	Literature review (publicly available)
Right and responsibility to speak and care for Country		x
Contemporary use of Country for cultural activities • Fishing including for Shark Bay mullet. • Camping • Hunting and gathering	x	x
Ecosystem health • Plants, animals and the environment are inexorably linked to culture. • Seagrass important food source for dugongs.	x	
Marine Mammals • Dugongs • Whales: potential impact to migration patterns and potential collisions with vessels. • Turtles	x	

6.1.43 Email sent to Kimberley Land Council (KLC) – 13 April 2026

- Woodside would like to consult with KLC as a relevant stakeholder that may be affected by the:
- Goodwyn Alpha Facility Operations Environment Plan (EP).
- CK4 (Cossack-4H) and LH3 (Lambert-3) Well Intervention EP

Consultation for these activities closes on Tuesday 12 May 2026. Your feedback, opinions and comments provided by this date will be reflected in the EPs and considered by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA).

The purpose of this email is to:

- inform you about our plans for the activities,
- invite you to submit feedback for the activities,
- provide an opportunity to discuss the activities,
- discuss further ways to consult and engage for the activities.

Overview of the activities

The attached Summary Information Sheets have been developed for an Indigenous audience and provide a high-level overview of the activities, including the Environment that May Be Affected (EMBA) map. We have also linked Consultation Information Sheets here with further details including assessments of the potential impacts and risks relevant to these activities, as well as mitigation and management measures.

Consultation with Woodside

We'd like to gather your feedback about:

- How the activities could impact your cultural values, interests, and activities.
- Protection of the environment and its relationship to your cultural values.
- Your concerns about the proposed activities.
- Other elements we should consider in the EPs.
- Any other individuals, groups, or organisations we should talk to about these activities.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Please let us know your preferred method of consultation including whether you would like to meet face to face. We welcome the opportunity to speak with Elders, office holders and other interested parties about these activities. Woodside provides various forms of assistance to organisations, Traditional Custodian groups and individuals to support participation in consultation.

Woodside manages gender-restricted or other culturally sensitive information carefully and will work with you to understand how you would like your information to be managed. If you would prefer to provide the information directly to NOPSEMA, please do so by phoning (08) 6188 8700 or via email communications@nopsema.gov.au.

Information can be sent to IndigenousAffairs@woodside.com, via telephone on 1800 442 977 or directly to me.

Further information about NOPSEMA

The following NOPSEMA publications may be of assistance to support understanding of the requirements to participate in consultation for Commonwealth EPs:

- Brochure: Consultation on offshore petroleum environment plans brochure (nopsema.gov.au)
- Guideline: Consultation in the course of preparing an environment (nopsema.gov.au)
- Policy: Draft policy for managing gender-restricted information (nopsema.gov.au).

Ongoing Feedback

Feedback can continue to be provided during the life of the EPs, including after consultation for the EPs has closed, during EP assessment, and after the EPs has been accepted by NOPSEMA. Woodside continues to receive, assess and respond to claims and objections from relevant persons throughout the life of the EPs. Should a claim or objection be received following the acceptance of the EPs that Woodside assesses, and which identifies a measure or control that Woodside considers requires implementation or updates to meet the intended outcome of consultation, Woodside will apply its Management of Change and Review process as appropriate.

Please feel free to forward this email and the attached document to members, Traditional Owners and other people and organisations who may be interested.

I look forward to your response and please feel free to call or send through guidance on next steps.

Kind regards

6.1.44 Email sent to Yamatji Marlpa Aboriginal Corporation (YMAC)– 13 April 2026

We are contacting you as the delegated representative for Yamatji Marlpa Aboriginal Corporation (YMAC), as well as the primary contact for the Nganhurra Thanardi Garrbu Aboriginal Corporation (NTGAC) and Nhuwala Claim Group.

Woodside would like to consult with YMAC, NTGAC and the Nhuwala Claim Group as a relevant stakeholder that may be affected by the:

- Goodwyn Alpha Facility Operations Environment Plan (EP).
- CK4 (Cossack-4H) and LH3 (Lambert-3) Well Intervention EP

Consultation for these activities closes on Tuesday 12 May 2026. Your feedback, opinions and comments provided by this date will be reflected in the EPs and considered by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA).

The purpose of this email is to:

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- inform you about our plans for the activities,
- invite you to submit feedback for the activities,
- provide an opportunity to discuss the activities,
- discuss further ways to consult and engage for the activities.

Overview of the activities

The attached Summary Information Sheets have been developed for an Indigenous audience and provide a high-level overview of the activities, including the Environment that May Be Affected (EMBA) map. We have also linked Consultation Information Sheets here with further details including assessments of the potential impacts and risks relevant to these activities, as well as mitigation and management measures.

Consultation with Woodside

We'd like to gather your feedback about:

- How the activities could impact your cultural values, interests, and activities.
- Protection of the environment and its relationship to your cultural values.
- Your concerns about the proposed activities.
- Other elements we should consider in the EPs.
- Any other individuals, groups, or organisations we should talk to about these activities.

We have considered the information you have already provided Woodside during previous consultation and also conducted reviews of available literature in relation to NTGAC's cultural values that we consider relevant to these activities, which is outlined in Attachment A. Please get in touch with us if you would like more information or references regarding the values outlined in the document. If there are any changes or additional information you would like Woodside to consider in the preparation of these EPs, please let us know by Tuesday 12 May 2026.

Please let us know your preferred method of consultation including whether you would like to meet face to face. We welcome the opportunity to speak with Elders, office holders and other interested parties about these activities. Woodside provides various forms of assistance to organisations, Traditional Custodian groups and individuals to support participation in consultation.

Woodside manages gender-restricted or other culturally sensitive information carefully and will work with you to understand how you would like your information to be managed. If you would prefer to provide the information directly to NOPSEMA, please do so by phoning (08) 6188 8700 or via email communications@nopsema.gov.au.

Information can be sent to IndigenousAffairs@woodside.com, via telephone on 1800 442 977 or directly to me.

Further information about NOPSEMA

The following NOPSEMA publications may be of assistance to support understanding of the requirements to participate in consultation for Commonwealth EPs:

- Brochure: Consultation on offshore petroleum environment plans brochure (nopsema.gov.au)
- Guideline: Consultation in the course of preparing an environment plan (nopsema.gov.au)
- Policy: Draft policy for managing gender-restricted information (nopsema.gov.au).

Ongoing Feedback

Feedback can continue to be provided during the life of the EPs, including after consultation for the EPs has closed, during EP assessment, and after the EPs has been accepted by NOPSEMA. Woodside continues to

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

receive, assess and respond to claims and objections from relevant persons throughout the life of the EPs. Should a claim or objection be received following the acceptance of the EPs that Woodside assesses, and which identifies a measure or control that Woodside considers requires implementation or updates to meet the intended outcome of consultation, Woodside will apply its Management of Change and Review process as appropriate.

Please feel free to forward this email and the attached document to members, Traditional Owners and other people and organisations who may be interested.

I look forward to your response and please feel free to call or send through guidance on next steps.

Kind regards

6.1.45 Email sent to Ngarluma Yindjibarndi Foundation Ltd (NYFL) – 13 April 2026

We are contacting you as the delegated representative for Yindjibarndi Aboriginal Corporation and Ngarluma Yindjibarndi Foundation Ltd (NYFL).

Woodside would like to consult with NYFL and Yindjibarndi as a relevant stakeholder that may be affected by the:

- Goodwyn Alpha Facility Operations Environment Plan (EP).
- CK4 (Cossack-4H) and LH3 (Lambert-3) Well Intervention EP

Consultation for these activities closes on Tuesday 12 May 2026. Your feedback, opinions and comments provided by this date will be reflected in the EPs and considered by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA).

The purpose of this email is to:

- inform you about our plans for the activities,
- invite you to submit feedback for the activities,
- provide an opportunity to discuss the activities,
- discuss further ways to consult and engage for the activities.

Overview of the activities

The attached Summary Information Sheets have been developed for an Indigenous audience and provide a high-level overview of the activities, including the Environment that May Be Affected (EMBA) map. We have also linked Consultation Information Sheets here with further details including assessments of the potential impacts and risks relevant to these activities, as well as mitigation and management measures.

Consultation with Woodside

We'd like to gather your feedback about:

- How the activities could impact your cultural values, interests, and activities.
- Protection of the environment and its relationship to your cultural values.
- Your concerns about the proposed activities.
- Other elements we should consider in the EPs.
- Any other individuals, groups, or organisations we should talk to about these activities

Please let us know your preferred method of consultation including whether you would like to meet face to face. We welcome the opportunity to speak with Elders, office holders and other interested parties about these activities. Woodside provides various forms of assistance to organisations, Traditional Custodian

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

groups and individuals to support participation in consultation.

Woodside manages gender-restricted or other culturally sensitive information carefully and will work with you to understand how you would like your information to be managed. If you would prefer to provide the information directly to NOPSEMA, please do so by phoning (08) 6188 8700 or via email communications@nopsema.gov.au.

Information can be sent to IndigenousAffairs@woodside.com, via telephone on 1800 442 977 or directly to me.

Further information about NOPSEMA

The following NOPSEMA publications may be of assistance to support understanding of the requirements to participate in consultation for Commonwealth EPs:

- Brochure: Consultation on offshore petroleum environment plans brochure (nopsema.gov.au)
- Guideline: Consultation in the course of preparing an environment plan (nopsema.gov.au)
- Policy: Draft policy for managing gender-restricted information (nopsema.gov.au).

Ongoing Feedback

Feedback can continue to be provided during the life of the EPs, including after consultation for the EPs has closed, during EP assessment, and after the EPs has been accepted by NOPSEMA. Woodside continues to receive, assess and respond to claims and objections from relevant persons throughout the life of the EPs. Should a claim or objection be received following the acceptance of the EPs that Woodside assesses, and which identifies a measure or control that Woodside considers requires implementation or updates to meet the intended outcome of consultation, Woodside will apply its Management of Change and Review process as appropriate.

Please feel free to forward this email and the attached document to members, Traditional Owners and other people and organisations who may be interested.

We also acknowledge our discussions relating to the framework agreement have been ongoing and appreciate that these discussions will progress in parallel with consultation for this EP.

I look forward to your response and please feel free to call or send through guidance on next steps.

Kind regards

6.1.46 Email sent to Save Our Songlines (SOS) (via legal representative) – 13 April 2026

Woodside would like to consult with SOS as a relevant stakeholder that may be affected by the:

- Goodwyn Alpha Facility Operations Environment Plan (EP).
- CK4 (Cossack-4H) and LH3 (Lambert-3) Well Intervention EP

Consultation for these activities closes on Tuesday 12 May 2026. Your feedback, opinions and comments provided by this date will be reflected in the EPs and considered by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA).

The purpose of this email is to:

- inform you about our plans for the activities,
- invite you to submit feedback for the activities,
- provide an opportunity to discuss the activities,
- discuss further ways to consult and engage for the activities.

Overview of the activities

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

The attached Summary Information Sheets have been developed for an Indigenous audience and provide a high-level overview of the activities, including the Environment that May Be Affected (EMBA) map. We have also linked Consultation Information Sheets here with further details including assessments of the potential impacts and risks relevant to these activities, as well as mitigation and management measures.

Consultation with Woodside

We'd like to gather your feedback about:

- How the activities could impact your cultural values, interests, and activities.
- Protection of the environment and its relationship to your cultural values.
- Your concerns about the proposed activities.
- Other elements we should consider in the EPs.
- Any other individuals, groups, or organisations we should talk to about these activities.

Please let us know your preferred method of consultation including whether you would like to meet face to face. We welcome the opportunity to speak with Elders, office holders and other interested parties about these activities. Woodside provides various forms of assistance to organisations, Traditional Custodian groups and individuals to support participation in consultation.

Woodside manages gender-restricted or other culturally sensitive information carefully and will work with you to understand how you would like your information to be managed. If you would prefer to provide the information directly to NOPSEMA, please do so by phoning (08) 6188 8700 or via email communications@nopsema.gov.au.

Information can be sent to IndigenousAffairs@woodside.com, via telephone on 1800 442 977 or directly to me.

Further information about NOPSEMA

The following NOPSEMA publications may be of assistance to support understanding of the requirements to participate in consultation for Commonwealth EPs:

- Brochure: Consultation on offshore petroleum environment plans brochure (nopsema.gov.au)
- Guideline: Consultation in the course of preparing an environment plan (nopsema.gov.au)
- Policy: Draft policy for managing gender-restricted information (nopsema.gov.au)

Ongoing Feedback

Feedback can continue to be provided during the life of the EPs, including after consultation for the EPs has closed, during EP assessment, and after the EPs has been accepted by NOPSEMA. Woodside continues to receive, assess and respond to claims and objections from relevant persons throughout the life of the EPs. Should a claim or objection be received following the acceptance of the EPs that Woodside assesses, and which identifies a measure or control that Woodside considers requires implementation or updates to meet the intended outcome of consultation, Woodside will apply its Management of Change and Review process as appropriate.

Please feel free to forward this email and the attached document to members, Traditional Owners and other people and organisations who may be interested.

I look forward to your response and please feel free to call or send through guidance on next steps.

Kind regards

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.2 Follow-up to initial consultation

6.2.1 Email to Australian Border Force, Australian Energy Producers (AEP), Australian Marine Conservation Society (AMCS), Australian Maritime Safety Authority (AMSA)–Marine Pollution, Beagle No. 1, Broome Chamber of Commerce and Industry (BCCI), Cape Conservation Group (CCG), Carbon CQ, Carnarvon Energy Ltd, City of Karratha, Conservation Council of WA (CCWA), Department of Defence (DoD), Department of Industry, Science and Resources (DISR), Department of Mines, Petroleum and Exploration (DMPE), Department of Transport and Major Infrastructure (DTMI), Department of Water and Environmental Regulation (DWER), Director of National Parks Exmouth Chamber of Commerce and Industry (Exmouth CCI), Exmouth Community Liaison Group (Exmouth CLG), Chevron, Finder Energy, Greenpeace Australia Pacific (GPAP), INPEX, JX Nippon, KATO Energy (WA), Karratha & Districts Chamber of Commerce and Industry (KDCCI), Karratha Community Liaison Group (Karratha CLG), Kuwait Foreign Petroleum Exploration Company (KUFPEC), Kyushu Electric Wheatstone, Longreach Capital Investments, Marine Tourism WA, Ningaloo Coast World Heritage Advisory Committee (NCWHAC), OPIC Australia Pty Limited, PE Wheatstone, Pelsart Resources N.L., Pilbara Ports, Protect Ningaloo, Recfishwest, SK Earthon, Shire of Ashburton, Shire of Broome, Shire of Exmouth, Skye Resources Pty Ltd, Tanami Energy, WA Game Fishing Association, Western Gas, Aquaculture Council of Western Australia (ACWA), Department of Biodiversity, Conservation and Attractions (DBCA), Department of Planning, Lands and Heritage (DPLH) Department of Agriculture, Fisheries and Forestry (DAFF) – Biosecurity, marine pests, vessels, aircraft and personnel, Telstra, Commonwealth Fisheries Association (CFA), Department of Agriculture, Fisheries and Forestry (DAFF)–Fisheries, Australian Southern Bluefin Tuna Fishery, Australian Southern Bluefin Tuna Industry Association (ASBTIA), Gascoyne Recreational Marine Users, Pilbara/Kimberley Recreational Marine Users, North West Slope Trawl Fishery, Western Deepwater Trawl Fishery, Western Skipjack Fishery, Western Tuna and Billfish Fishery. Department of Primary Industries and Regional Development (DPIRD), Australian Institute of Marine Science (AIMS), Commonwealth Scientific and Industrial Research Organisation (CSIRO), Curtin University, Edith Cowan University (ECU), Murdoch University, University of Western Australia (UWA), Western Australian Marine Science Institution (WAMSI), Department of Climate Change, Energy, the Environment and Water (DCCEEW), Western Australian Museum (WAM), Shire of Ashburton, Chevron – 7 May 2026

Woodside previously consulted you on its plans to submit the CK4 and LH3 Well Intervention Environment Plan (EP). The Cossack-4H (CK4) and Lambert-3 (LH3) well intervention is within the Woodside Burrup Pty Ltd Petroleum Licence Area WA-9-L and WA-16-L, located within Commonwealth waters ~135 km north-west of Dampier.

Overview

- CK4 and LH3 EP covers:
- Light well intervention activities on the CK4 and LH3 wells using a light well intervention vessel (LWIV). The two wells produce oil and gas through the Okha FPSO facility which commenced production from the fields in 2011.
- Support vessel and helicopter operations.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Additional information on the EP is provided in the email below and in the Consultation Information Sheet attached, which is also available on Woodside's website.

Feedback

If you have feedback specific to the proposed activities, we welcome your feedback at feedback@woodside.com or 1800 442 977 by **18 May 2026**.

Your feedback and our response will be included in our EP, which will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for acceptance in accordance with the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (Cth). Your feedback may also be used to support other regulatory processes associated with the planned activities (which may or may not be confidential).

You may request that particular information you provide during consultation not be published in the Environment Plan made available on the NOPSEMA website. Please let us know if you request that particular information not be published, and we will make your request known to NOPSEMA.

Personal information collected in the course of consultation will be handled in accordance with Woodside's Environment Plan Privacy Collection Notice. To understand how personal information will be handled, please visit our website.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.3 Activity Update: Okha LWI EP

6.3.1 Consultation Information Sheet

Woodside Energy

Consultation Information Sheet
Activity Update – July 2026

Okha Light Well Intervention Environment Plan (former CK4 and LH3 Well Intervention)

Carnarvon Basin, North-West Australia

Activity update

The CK4 and LH3 Well Intervention Environment Plan (EP) has been updated since the original consultation materials were issued in April 2026 to include light well intervention (LWI) at two additional wells, located in the Wanaea field: Wanaea 7 (WA7) and Wanaea 8 (WA8). The inclusion of LWI activities at WA7 and WA8 is based on synergies with vessel availability for the proposed activity. Reflecting this update, the EP has been renamed the Okha Light Well Intervention EP. The EP covers:

- Light well intervention activities on the Cossack-4H (CK4), Lambert-3 (LH3), Wanaea 7 (WA7) and Wanaea 8 (WA8), using a light well intervention vessel (LWIV).
- Support vessels and helicopter operations.

Context

The four wells operate under the accepted Okha Floating, Production, Storage and Offloading (FPSO) Facility Operations EP, and are part of the Cossack, Wanaea, Lambert and Hermes (CWLH) fields, on the North West Shelf (NWS).

- Light well intervention activity on the CK4, LH3, WA7 and WA8 wells requires a new standalone EP. On completion of the activity, the wells will continue to operate under the accepted Okha FPSO Facility Operations EP.

Location

- In Commonwealth waters, ~ 120 km north-west of Dampier **(Figure 2).**

Water depths of wells

- ~ 81 m (CK4), ~ 128 m (LH3), ~ 82 m (WA7) and ~ 83 m (WA8) deep.

Timing and duration

- Light well intervention may occur between Q2 2027 and 2031, in a single campaign or over multiple campaigns.
- Activities are expected to take between 14 to 35 days for CK4, between 14 to 21 days for LH3, between 10 to 15 days for WA7 and WA8.
- When activities occur, they will run 24 hours a day, 7 days a week.
- Timing and duration are subject to change due to factors including approvals, weather, project vessel availability and other unforeseen circumstances.

Joint Venture

- Operator – Woodside Burrup Pty Ltd.
- Joint Venture – Chevron Australia Pty Ltd, Woodside Energy (North West Shelf) Pty Ltd, Jadestone Energy (CWLH) Pty Ltd.

We would like to hear from you

We would like relevant persons whose functions, interests or activities may be affected by the proposed activity to have the opportunity to provide feedback on our proposed activity, in accordance with the intended outcome of consultation.

Woodside consults relevant persons when developing an Environment Plan (EP) to confirm current measures or identify additional measures, which could lessen or avoid potential adverse effects of the proposed activity on the environment.

Woodside aims to ensure the proposed activity is carried out in a manner consistent with the principles of ecologically sustainable development, and by which the environmental impacts and risks of the activity are reduced to as low as reasonably practicable (ALARP) and of an acceptable level.

If you are an individual, organisation or community group and believe your functions, interests or activities may be impacted by the activities under this EP, we would like to hear from you by **24 August 2026.**

Feedback@woodside.com
Toll free: 1800 442 977
woodside.com

A summary of the activity and location is found in **Table 1** and **2.**



Figure 1: Example of a Light Well Intervention Vessel (LWIV) with equipment on deck for well intervention activities. Photo credit: Sapura Energy.

Woodside acknowledges Indigenous Peoples as the Traditional Custodians of lands and waters across the world.
We recognise their enduring cultures, knowledge, and connection to Country. We pay our respects to Elders past and present.

1 Okha Light Well Intervention Environment Plan | July 2026

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Activity Location

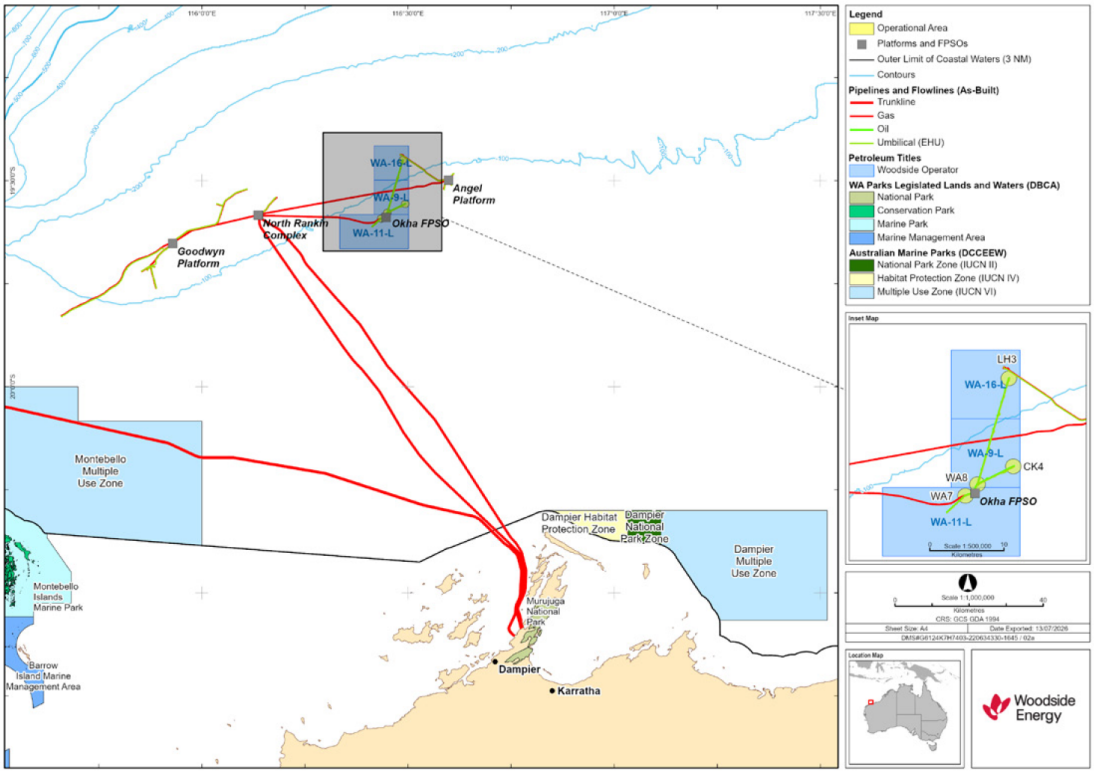


Figure 2. Location of the Okha Light Well Intervention Operational Area

Table 1 – Activity and location summary

Okha Light Well Intervention Environment Plan	
Activity details	• Light well intervention activities on the CK4, LH3, WA7 and WA8 wells. • CK4 and LH3 wells may require temporary well suspension, Xmas tree (XT) changeout and recommissioning. The wells may also require Tubing Retrievable Safety Valve (TRSV) remediation. • WA7 and WA8 wells will have temporary plugs installed for temporary well suspension. • Preparation and support activities (e.g. inspections, cleaning). • Well start-up and production following intervention activities for CK4 and LH3 will be managed under the accepted Okha FPSO Facility Operations EP. The temporarily suspended WA7 and WA8 will also be managed under the accepted Okha FPSO Facility Operations EP.
Titles	• WA-9-L (CK4 and WA8). • WA-16-L (LH3). • WA-11-L (WA7).
Infrastructure	• CK4, LH3, WA7 and WA8 subsea production wells and associated manifolds.
Vessels	• Light well intervention vessel (LWIV). • Additional support vessels. • Helicopter to transport personnel and/or freight.
Operational Area and exclusion zones	• Operational Area: 1 km around each well. • Temporary exclusion zone: 500 m around the LWIV during light well intervention activities.
Communication with mariners	• Marine notices will be issued prior to the commencement of activities within the Operational Area. • Other marine users are permitted to use the Operational Area. • A 500 m temporary exclusion zone will be in place around the LWIV.
Distance to nearest marine park/nature reserve	• Montebello Marine Park – Multiple Use Zone (Cth) is 70 km south-west of the Operational Area. • Dampier Marine Park – Habitat Protection Zone (Cth) is 88 km south-east of the Operational Area.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 2 – Approximate locations of key infrastructure within the scope of the Okha Light Well Intervention EP

Production well centre locations	Water Depth (m)	Latitude (WGS84)	Longitude (WGS84)	Title
Cossack-4H (CK4)	~ 81	19° 33 22.909 S	116° 29 35.754 E	WA-9-L
Lambert-3 (LH3)	~ 128	19° 26 58.469 S	116° 29 16.227 E	WA-16-L
Wanaea-7 (WA7)	~ 82	19° 35 31.586 S	116° 26 6.622 E	WA-11-L
Wanaea-8 (WA8)	~ 83	19° 34 40.796 S	116° 26 59.438 E	WA-9-11

Environment that May Be Affected (EMBA)

The EMBA is the largest geographic area where an unplanned event could potentially have an environmental consequence. The broadest extent of the EMBA takes into consideration planned activities and unplanned events. The EMBA was developed combining numerous modelling outputs based on highly unlikely releases of hydrocarbons to the environment. The modelling scenarios that inform the EMBA are a loss of well containment and a vessel collision. The EMBA is depicted in **Figure 3.**

The EMBA does not represent the extent of the predicted impact of a highly unlikely hydrocarbon release. Rather, the EMBA represents the merged area of many possible paths that a highly unlikely hydrocarbon release could travel, which depends on the weather and ocean conditions at the time of a release. This means that in the highly unlikely event that a hydrocarbon release does occur, the whole EMBA would not be affected. The specific and minimal part of the EMBA that is affected will only be known if there is a release. To learn more about an EMBA, please see the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) video on oil spill modelling at **www.nopsema.gov.au.**

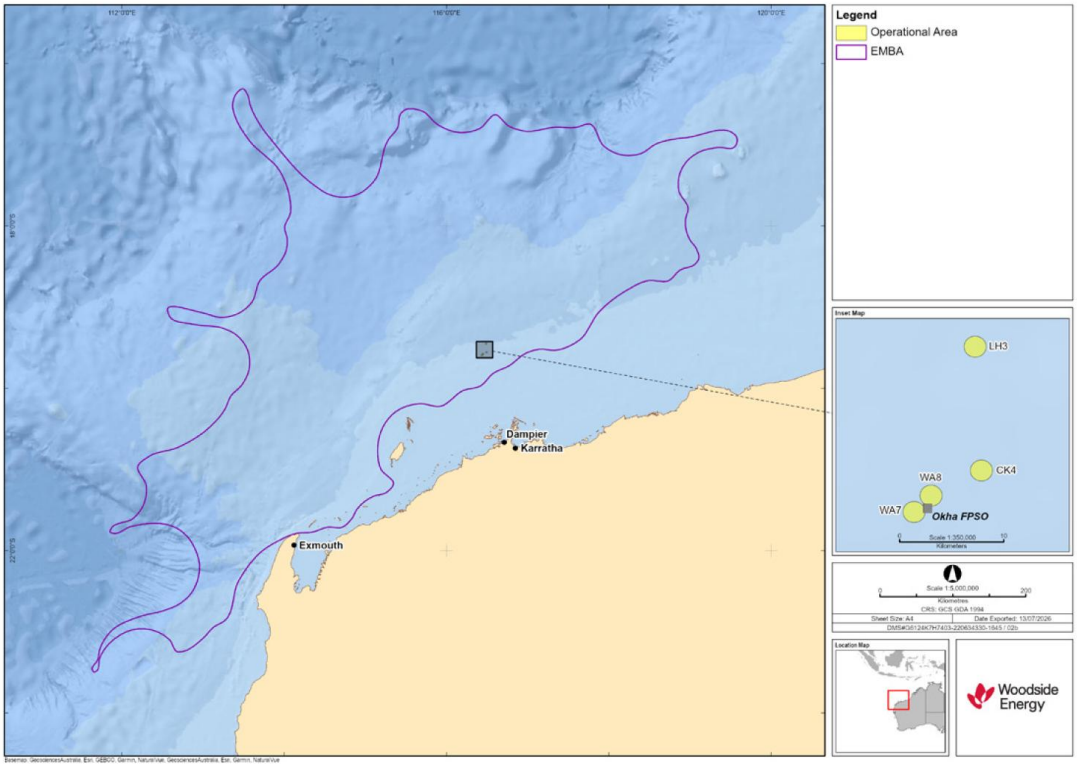


Figure 3. Location of the Okha Light Well Intervention EP EMBA

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Impacts/Risks, and Mitigation and/or Management Measures

Woodside assessed the impacts and risks to the environment arising from the planned activities and unplanned events. This assessment considers the timing, duration and location of the activities. Proposed mitigation and management measures will be implemented and are summarised in **Table 3**. Further details will be provided in the EP.

In preparing the EP, Woodside's intent is to minimise environmental, social and cultural impacts and risks associated with the proposed activities, and Woodside seeks your feedback to inform our decision-making.

Table 3 – Summary of key impacts and risks and proposed management measures

Impact/Risk	Description of Source of Impact/Risk	Description of Impact/Risk	Proposed Mitigation and/or Management Measure
Planned activities (routine and non-routine)			
Physical presence: ***interaction with other marine users***	• Physical presence of the LWIV and support vessels within the Operational Area.	• Potential temporary displacement of other marine users. - Due to the offshore location and the localised nature of the activity, if there is an interaction, it is expected to be localised with no lasting effect.	• Vessels adhere to regulatory requirements for navigational safety. • Establish a temporary 500 m exclusion zone around the LWIV which other marine users are notified of. - Notify relevant persons of activity commencement as requested. - Notify the Australian Hydrographic Office prior to commencement of the activity so that marine users are aware of the activity. - Consult with relevant persons so they are informed of the proposed activities.
Physical presence: ***disturbance to seabed***	• Seabed disturbance may result from the following activities: - Wellhead cleaning and removal will cause localised seabed disturbance around the wellhead. - Use of a remotely operated vehicle near the seabed and temporary placement of equipment on the seabed will disturb small areas of seabed habitat.	• Localised impact with no lasting effect to seabed and associated benthic communities, arising from: - Localised modification of seabed habitat within the Operational Area. - Localised change in habitat, water quality, and sediment quality, which may affect marine fauna.	• Equipment temporarily placed on the seabed will be tracked and removed. • Comply with requirements of Underwater Cultural Heritage Act 2018 (Cth). • Manage unexpected finds of potential underwater cultural heritage sites/features, including Indigenous Peoples underwater cultural heritage in accordance with Woodside's Unexpected Finds Procedure.
Routine and non-routine acoustic emissions	• Noise generated within the Operational Area from LWIV, support vessels, and helicopters.	• Localised behavioural impacts to marine fauna around vessels, with no lasting impact.	• Comply with regulatory requirements for interactions with marine fauna. • Environmental induction of all relevant marine crew.
Routine and non-routine discharges: ***subsea fluids***	• Light well intervention will result in subsea chemical and fluid discharge.	• Localised decrease in water quality at the well location with no lasting impact.	• Assessment of all chemicals used following Woodside's Environment Chemical Selection and Assessment Procedure – Australia. • Chemicals selected with the lowest reasonably practicable environmental impacts and risks subject to technical constraints and approved through the Woodside chemical assessment process.
Routine and non-routine discharges: ***vessel utility systems (bilge water, greywater, sewage, putrescible wastes and deck drainage water)***	• Discharges from vessel utility systems including: - Sewage, greywater and organic solid waste. - Deck water, drainage systems and bilge water. - Brine and cooling water.	• Localised impact with no lasting effect arising from: - Change in marine water quality, which may affect marine fauna.	• LWIV and support vessels will comply with relevant Marine Orders.
Routine and non-routine atmospheric and Greenhouse Gas (GHG) emissions	• Atmospheric and GHG emissions associated with: - Use of internal combustion engines and incinerators on the LWIV and support vessels.	• Emissions associated with vessels could result in temporary, localised reductions in air quality in the immediate vicinity.	• Comply with regulatory requirements relating to GHG emissions and reporting. • Vessels comply with relevant Marine Orders regarding pollution prevention to air.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Impact/Risk	Description of Source of Impact/Risk	Description of Impact/Risk	Proposed Mitigation and/or Management Measure
Routine and non-routine light emissions: ***light emissions from vessel operations***	• Light emissions from the LWIV and support vessels.	• Slight and low level impact arising from: - Change in ambient light resulting in change in fauna behaviour.	• Lighting is limited to the minimum required for navigational and safety requirements except for emergency events. • Implementation of Woodside's Seabird Management Plan.
Unplanned events (accidents / incidents / emergency situations)			
Unplanned hydrocarbon release: ***loss of well containment***	• Loss of well containment resulting in release of hydrocarbons to the environment.	• In the highly unlikely event of a loss of well containment causing a release of crude oil, impacts to water quality and marine ecosystems could occur. • Modelling of a subsea release of crude oil was used to understand potential impacts. • Potential to result in a reduction in water quality. • Potential disruption to marine fauna, including protected species. • Potential interference with or displacement of other marine users including fisheries, tourism and recreation.	**Preventing loss of well containment** • Wells in compliance with accepted well operation management plan (WOMP) including implementation of barriers to prevent a loss of well containment. • Checks completed to establish minimum acceptable standard of well integrity. **Spill response arrangements** • In the event of a spill emergency response activities implemented in accordance with the Oil Pollution Emergency Plan (OPEP). • First Strike Plan. • Arrangements supporting the activities in the OPEP will be tested so that the OPEP can be implemented as planned.
Unplanned hydrocarbon release: ***loss of control of suspended load from lifting operations***	• Loss of control of suspended load from lifting operations resulting in release of hydrocarbons to the environment.	• In the highly unlikely event of a loss of control of a suspended load impacting subsea infrastructure causing a release of crude oil, impacts to water quality and marine ecosystems could occur. • Modelling of a subsea release of crude oil was used to understand potential impacts. • Potential to result in a reduction in water quality. • Potential disruption to marine fauna, including protected species. • Potential interference with or displacement of other marine users including fisheries, tourism and recreation.	**Preventing subsea equipment loss of well containment** • Lifting procedures applied to minimise risk of dropped objects. • Simultaneous operations management plan implemented. **Spill response arrangements** • In the event of a spill emergency response, activities implemented in accordance with the Oil Pollution Emergency Plan (OPEP). • First Strike Plan. • Arrangements supporting the activities in the OPEP will be tested so that the OPEP can be implemented as planned.
Unplanned hydrocarbon release: ***vessel collision***	• Vessel collision resulting in release of hydrocarbons to the environment.	• In the highly unlikely event of a vessel collision causing a release of marine diesel, impacts to water quality and marine ecosystems could occur. • Modelling of a surface release of marine diesel was used to understand potential impacts. • Marine diesel is a relatively volatile, non-persistent nature hydrocarbon with up to 26% evaporating within the first 24 hours. • Potential to result in a reduction in water quality. • Potential disruption to marine fauna, including protected species. • Potential interference with or displacement of other marine users including fisheries, tourism and recreation.	**Preventing marine vessel collisions** • Vessels adhere to regulatory requirements for navigational safety and the prevention of vessel collisions. • Notify relevant persons of activity commencement as requested. • Notify the Australian Hydrographic Office prior to commencement of the activity so that marine users are notified of the activity. • Consult with relevant persons so they are informed of the proposed activities. • Establish a temporary 500 m exclusion zone around the LWIV which is communicated to marine users. • Develop a Concurrent Operations (CONOPS) Plan to manage interactions with the Okha FPSO. **Spill response arrangements** • In the event of a spill emergency response activities implemented in accordance with the OPEP. • Arrangements supporting the activities in the OPEP will be tested so that the OPEP can be implemented as planned.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Impact/Risk	Description of Source of Impact/Risk	Description of Impact/Risk	Proposed Mitigation and/or Management Measure
Unplanned release: ***hydrocarbon and chemical spills from vessel and subsea activities***	• Loss of hydrocarbons and chemicals to the environment during: - Refuelling and chemical transfer. - Chemical storage and use. - Deck activities and equipment. - Subsea equipment and ROV leaks.	• Potential to result in a reduction to water quality; - Potential disruption to marine fauna, including protected species. - Potential interference with or displacement of other marine users including fisheries, tourism and recreation.	• Comply with Marine Orders to prevent pollution events. • Implement bunkering and transfer procedures. • Assessment of all chemicals used following Woodside's Environment Chemical Selection and Assessment Procedure – Australia. • Safe storage of diesel and chemicals. • Spill kits positioned in high-risk locations around the vessel. • In the event of a spill emergency response activities implemented in accordance with the OPEP. • Arrangements supporting the activities in the OPEP will be tested so that the OPEP can be implemented as planned.
Unplanned release: ***hazardous and non-hazardous solid waste management***	• Accidental loss of solid wastes generated by vessels including packaging, domestic wastes and hazardous wastes such as oil rags, batteries and waste oil.	• The potential impacts of hazardous or non hazardous solid wastes and equipment accidentally released to the marine environment include contamination of the environment as well as secondary impacts relating to potential contact of marine fauna with wastes. • The temporary or permanent loss of waste materials/equipment into the marine environment is not likely to have a significant environmental impact based on the types, size and low likelihood of waste loss that could occur.	• Comply with the relevant Marine Orders to prevent pollution events. • If safe and practicable to do so, solid waste is to be recovered. • Implementation of vessel waste management plans.
Physical presence: ***interactions with marine fauna***	• Accidental collision between vessels and marine fauna.	• Vessel movements have the potential to result in accidental collisions between the vessel (hull and propellers) and marine fauna. • Given the short duration of activities and the slow speeds at which vessels operate in the Operational Area, collisions with cetaceans are considered unlikely.	• Comply with regulatory requirements for interactions with marine fauna to reduce the likelihood of a collision occurring.
Physical presence: ***introduction of invasive marine species (IMS)***	• Vessels and immersible equipment have the potential to introduce IMS to the Operational Area through marine biofouling (containing IMS), as well as within high-risk ballast water exchange.	• In the highly unlikely event of IMS being introduced and establishing viable populations within the Operational Area or immediate surrounds, this may result in changes to the ecology of the Operational Area and competition with existing biota.	• Ballast water and biofouling will be managed according to the Australian Ballast Water Management Requirements and the Australian Biofouling Management Requirements, as applicable. • Woodside's IMS risk assessment process will be applied to vessels and immersible equipment entering the Operational Area.

** These mitigation and management measures are subject to change through the consultation and subsequent assessment process and may not represent content in the publicly available EP or in the final plan once accepted.*

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Feedback

Woodside consults relevant persons in the course of preparing Environment Plans to notify them of the activity and to obtain relevant feedback to inform its planning for proposed petroleum activities.

If you would like to comment on the proposed activities outlined in this information sheet, please provide feedback to Woodside by **24 August 2026** via:

Feedback@woodside.com
Toll free: 1800 442 977

You can subscribe on our website to receive Consultation Information Sheets for proposed activities:
woodside.com/what-we-do/consultation-activities

Please note that feedback from relevant persons will be communicated to the NOPSEMA as required under legislation. Woodside will communicate any material changes to the proposed activity to relevant persons as relevant and appropriate.

Your feedback and our response will be included in our Environment Plan for the proposed activity, which will be submitted to NOPSEMA for acceptance in accordance with the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (Cth) and support other regulatory processes associated with the planned activities (which may or may not be confidential).

Relevant persons may request that particular information provided in the consultation not be published.

Personal information collected in the course of consultation will be handled in accordance with Woodside's Environment Plan Privacy Collection Notice. To understand how personal information will be handled, please visit:
woodside.com/what-we-do/consultation-activities



This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.3.2 Summary Information Sheet

Woodside Energy

Summary Consultation Information Sheet
Activity Update July 2026

Okha Light Well Intervention Environment Plan

(formerly CK4 and LH3 Well Intervention Environment Plan)

Carnarvon Basin, North-West Australia (Commonwealth Waters)

Woodside Energy recognises Aboriginal and Torres Strait Islander peoples as Australia's First Peoples. We acknowledge their connection to land, waters and the environment and pay our respects to ancestors and Elders, past and present. We extend this recognition and respect to First Nations peoples and communities around the world.

Have Your Say

We want to talk, share ideas, and yarn with local community who have a deep connection to the land and sea. Your knowledge helps us do our work better!

We want to understand the environments we want to work in. We want to work in a way which manages the environmental impacts and risks of the activities appropriately. By working together, we want to help protect cultural heritage and keep the Land and Sea Country healthy.

We welcome feedback from Indigenous communities and stakeholders whose functions, interests and activities may be affected by our activities under this Environment Plan (EP). If you'd like to share your views, please contact us before **26 August 2026**.

Email: **IndigenousAffairs@woodside.com**
Call: **1800 442 977 (toll-free)**
Visit: **woodside.com/what-we-do/consultation-activities**

Your feedback will be included in our EP submissions to NOPSEMA (National Offshore Petroleum Safety and Environmental Management Authority) and will help guide responsible environmental decision-making.



Figure 1: Example of a Light Well Intervention Vessel (LWIV) with equipment on deck for well intervention activities. Photo credit: Sapura Energy.

Joint Venture

- Operator – Woodside Burrup Pty Ltd.
- Joint Venture – Chevron Australia Pty Ltd, Woodside Energy (North… (CWLH) Pty…

Activity Update

The Cossack-4H (CK4) and Lambert-3 (LH3) Well Intervention EP has been updated since the original consultation materials were issued in April 2026. It will now include light well intervention (LWI) at two additional wells, located in the Wanaea field: Wanaea 7 (WA7) and Wanaea 8 (WA8). The inclusion of LWI activities at WA7 and WA8 is based on vessel availability for the proposed activity.

The EP has been renamed the Okha Light Well Intervention EP to reflect this addition. The EP covers LWI activities on the above fields using a light well intervention vessel (LWIV), as well as support vessels and helicopter operations.

Context

The four wells operate under the accepted Okha Floating, Production, Storage and Offloading (FPSO) Facility Operations EP.

This EP relates to the LWI activities for the CK4, LH3, WA7 and WA8 wells. On completion of the activity, the wells will continue to operate under the accepted Okha FPSO Facility Operations EP.

Location and water depth

In Commonwealth waters, ~ 120 km north-west of Dampier (Figure 2). The wells are ~ 81 m (CK4), ~ 128 m (LH3), ~ 82 m (WA7) and ~ 83 m (WA8) deep.

Timing and duration

- LWI may occur between Q2 2027 - 2031, in a single campaign or over multiple campaigns.
- Activities are expected to take between 14 - 35 days for CK4, between 14 - 21 days for LH3, between 10 - 15 days for WA7 and WA8.
- When activities occur, they will run 24 hours a day, 7 days a week.
- Timing and duration are subject to change due to factors including approvals, weather, project vessel availability and other unforeseen circumstances.

1 / 3

1

Okha Light Well Intervention Environment Plan | July 2026

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Activity Location

The EP explains how Woodside will manage environmental risks and impacts while carrying out our activities. These plans help us conduct operations safely and responsibly, with respect for the environment and cultural heritage. The location where the work will be done is known as the Operational Area (**Figure 2**).

Woodside must consult with relevant persons, including Traditional Custodian groups whose functions, interests or activities may be affected by the activities to be carried out under the EP or that are considered relevant, to listen to concerns and, where required, incorporate feedback into the EP.

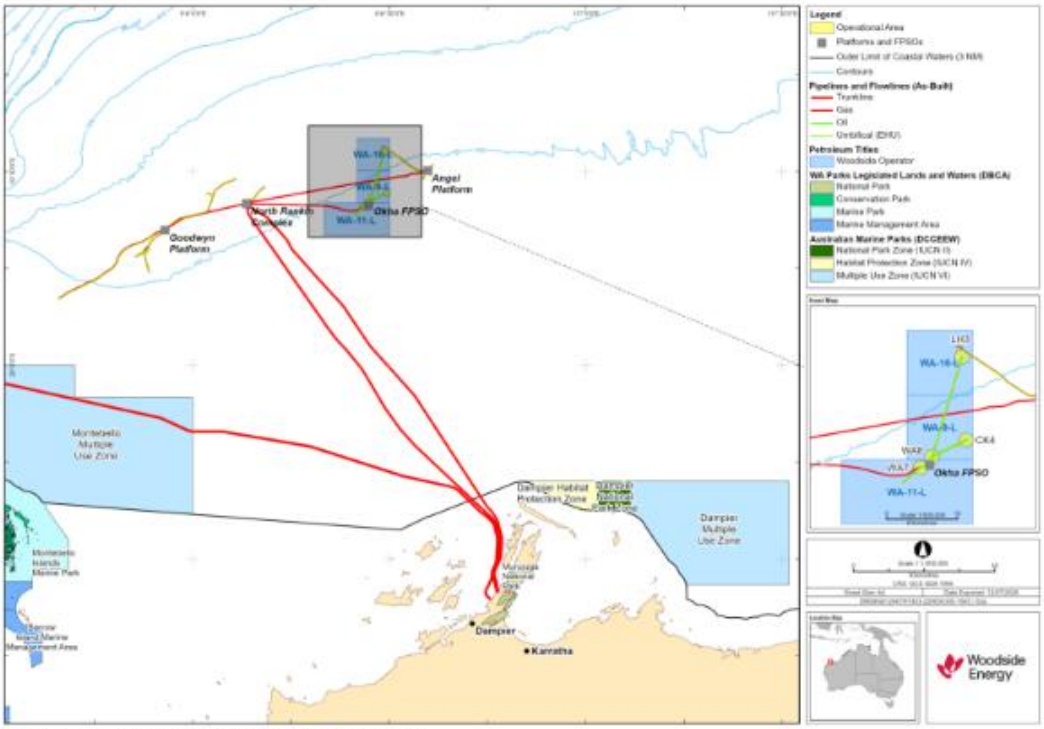


Figure 2: Location of the Okha Light Well Intervention Operational Area

Planned Activities and Unplanned Events

We assess both planned activities and unplanned events which may result in environmental risks and impacts.

Planned activities are activities that Woodside knows will happen as part of the work under the EP. This could include generating underwater noise, light emissions, associated atmospheric emissions or routine discharges (such as sewage, waste, and deck drainage). We take steps so that planned activities comply with legislative and regulatory requirements.

Unplanned events are very unlikely. They may be the result of an accident, incident or emergency, such as a spill of fuel or oil from a ship (vessel) collision, a spill on the deck of a vessel (like during refuelling), unplanned seabed and/or marine life disturbance, or accidental introduction of invasive species from outside the region.

Planned and unplanned activities, potential impacts, and management measures are included in the Consultation Information Sheet for this activity, available at www.woodside.com/what-we-do/consultation-activities.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Environment that May Be Affected (EMBA)

The EMBA map (**Figure 3**) is a model of the largest spatial area where the activity could have a potential environmental impact. It combines multiple modelling outputs for both planned and unplanned activities in the highly unlikely event of an oil and natural gas (hydrocarbon) release to the environment. The modelling scenarios that inform the EMBA are loss of well containment and vessel collision.

The EMBA does not show the predicted impact of a single event - it is the merged area of many possible scenarios that a highly unlikely hydrocarbon release could travel, depending on the weather and ocean conditions at the time. This means that if a hydrocarbon release was to occur, the whole EMBA would not be affected. The specific and minimal part of the EMBA that is affected will only be known at the time of a release.

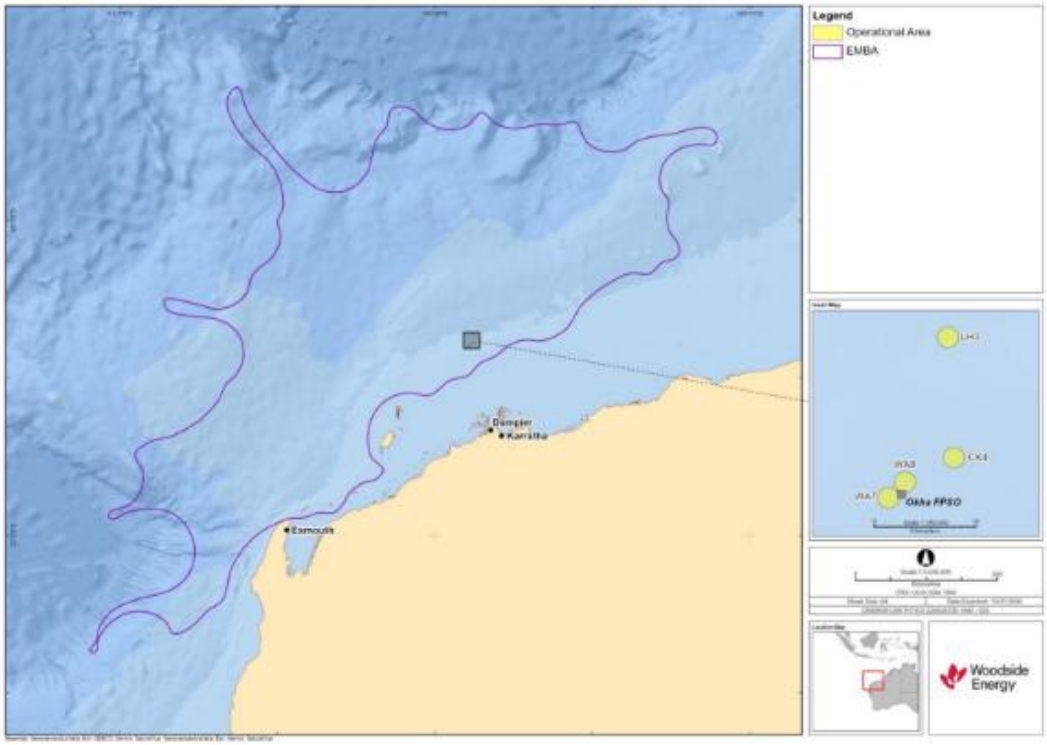


Figure 3: Location of the Okha Light Well Intervention EP EMBA

Your Feedback is Important

Woodside consults with relevant persons during the preparation of EPs to notify them about the activity and hear their feedback. By working together, we aim to protect biodiversity and maintain the health of ecosystems while carrying out our projects.

Your feedback helps shape the EP by:

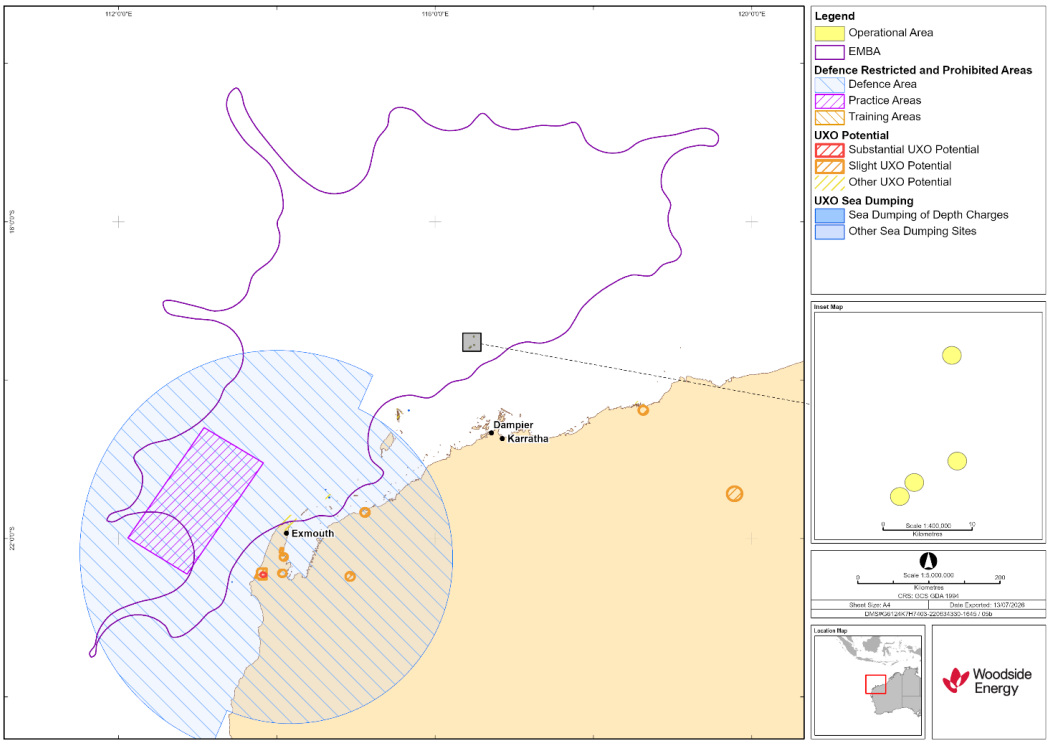
- Identifying additional possible measures to reduce environmental impacts.
- Helping us consider cultural heritage and environmental values.
- Providing information that may help improve Woodside's environmental practices.

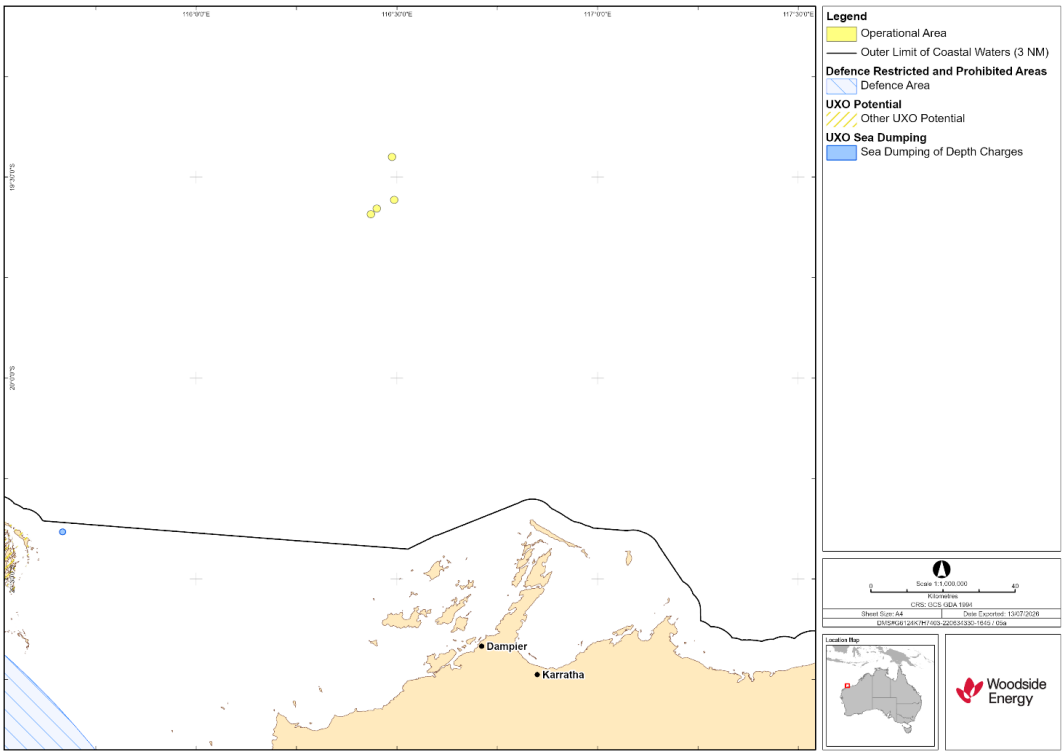
If there is particular information that you provide during consultation that you'd prefer not to be published, please let us know. We'll make your request known to NOPSEMA.

We'll manage any personal information collected during our consultation with you in accordance with Woodside's Environment Plan Privacy Collection

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.3.3 Defence zones map





This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.3.4 Letter sent to Gascoyne Recreational Marine Users, Pilbara/Kimberley Recreational Marine Users – 7 May 2026

Please direct all responses/queries to:
Woodside Energy Feedback
t: +61 8 (1)800 442 977
e: feedback@woodside.com

007 - 1

Woodside Energy

Woodside Energy Group Ltd
ACN 004 898 962
Mia Yellagonga
11 Mount Street
Perth WA 6000
Australia
T: +61 8 9348 4000
www.woodside.com

6 May 2026

Dear Stakeholder

CK4 and LH3 WELL INTERVENTION ENVIRONMENT PLAN

Woodside previously consulted you on its plans to submit the CK4 and LH3 Well Intervention Environment Plan (EP).

The Cossack-4H (CK4) and Lambert-3 (LH3) well intervention is within the Woodside Burrup Pty Ltd Petroleum Licence Area WA-9-L and WA-16-L, located within Commonwealth waters ~135 km north-west of Dampier. The CK4 and LH3 EP covers:

- Light well intervention activities on the CK4 and LH3 wells using a light well intervention vessel (LWIV). The two wells produce oil and gas through the Okha FPSO facility which commenced production from the fields in 2011.
- Support vessel and helicopter operations.

Further information on the proposed activities is provided in the Consultation Information Sheet which is available via the QR code below:

If you have feedback specific to the activities and the proposed EP, Woodside welcomes it at **feedback@woodside.com** or via phone call at 1800 442 977 by **18 May 2026.**

Your feedback and our response will be included in our EP which will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for acceptance in accordance with the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (Cth). Your feedback may also be used to support other regulatory processes associated with the planned activities (which may or may not be confidential).

Please let us know if you request that particular information that you provide in the consultation not be published. If so, we will make your request known to NOPSEMA.

Personal information collected in the course of consultation will be handled in accordance with Woodside's Environment Plan Privacy Collection Notice. To understand how personal information will be handled, please visit **www.woodside.com/what-we-do/consultation-activities**.

Regards

Woodside Energy Feedback

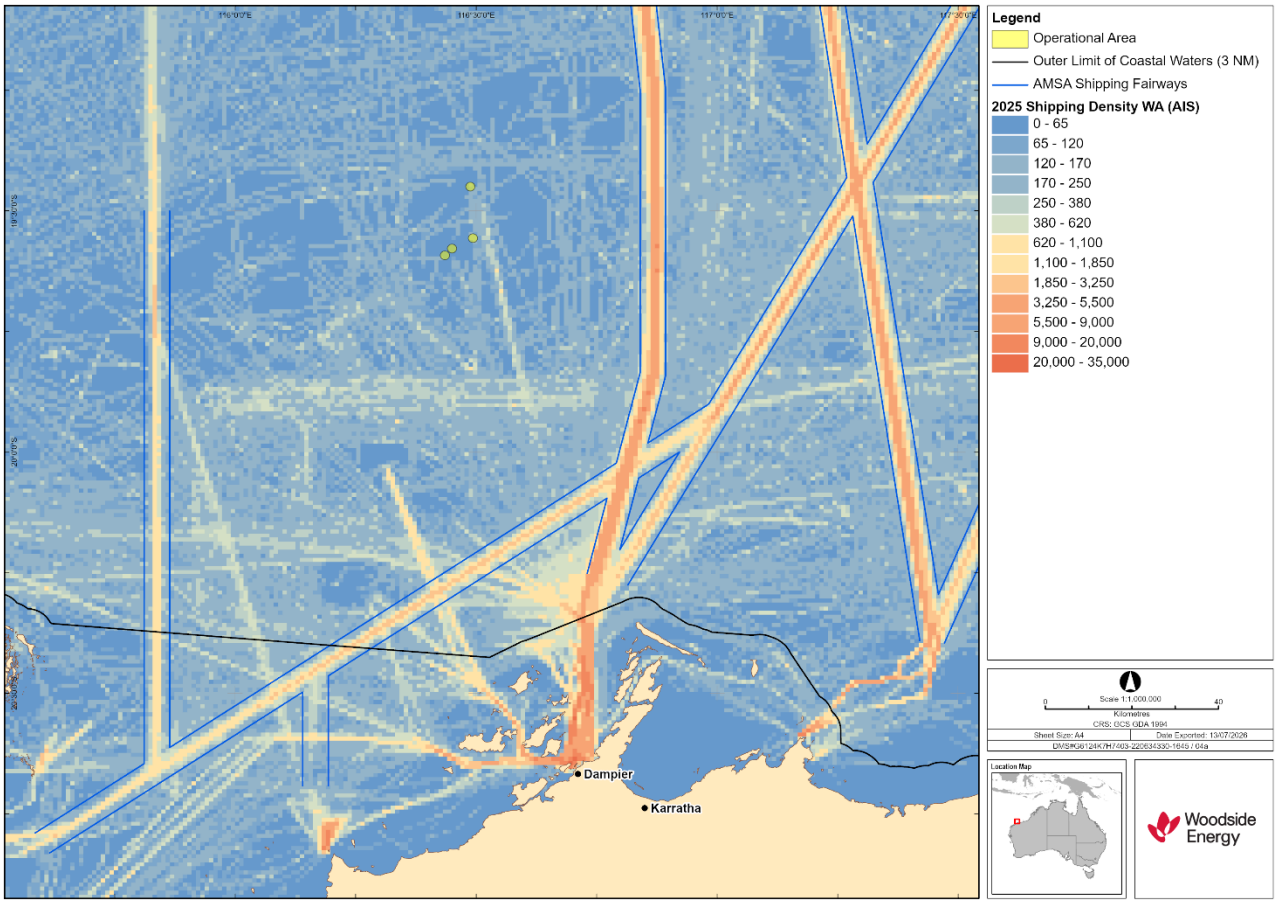
Woodside Energy

Woodside Energy
Mia Yellagonga
Karlak, 11 Mount Street
Perth WA 6000
Australia

T: 1800 442 977
E: feedback@woodside.com
www.woodside.com

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.3.5 Vessel density map



This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.3.6 Shipwrecks

6.3.7 State data

EMBA and Accumulated Shoreline
State Shipwreck Data - Okha LWI EP

Vessel Name	Comments	When Lost	Where Lost	Latitude	Longitude
Gem	Lugger	1893/03/25	North West Cape	21°37	113°59
Emlyn Castle		1960		21°47.0833	114°09.9
Haw Kiet		2003		18°27.49	117°15.5
Lady Ann	Ship (non-sail)	9/18/1982	24 miles north of NW Cape	21°24	114°12
McCormack	Barge	1989/10/00	N.E. tip of Eaglehawk Island West of Dampier, Dampier Archipelago	20°08.200	115°57.200
McDermott Derrick Barge No 20	Barge	10/20/1989	N.E. tip of Eaglehawk Island, Dampier Archipelago	20°08.200	115°57.200
Mildura	Steamer	1166	North-West Cape	21°47.04552	114°10.0641
Pelsart (Pelsaert)	Cutter	10/15/1908	12 miles Northwest of Imperieuse Reef, Rowley Shoals	17°34	118°35
Trial	Ship	1622/05/24	Trial Rocks	20°17.159	115°22.514
Veronica	Lugger	1928/07	Sunday Island, Exmouth Gulf	21°41	114°23

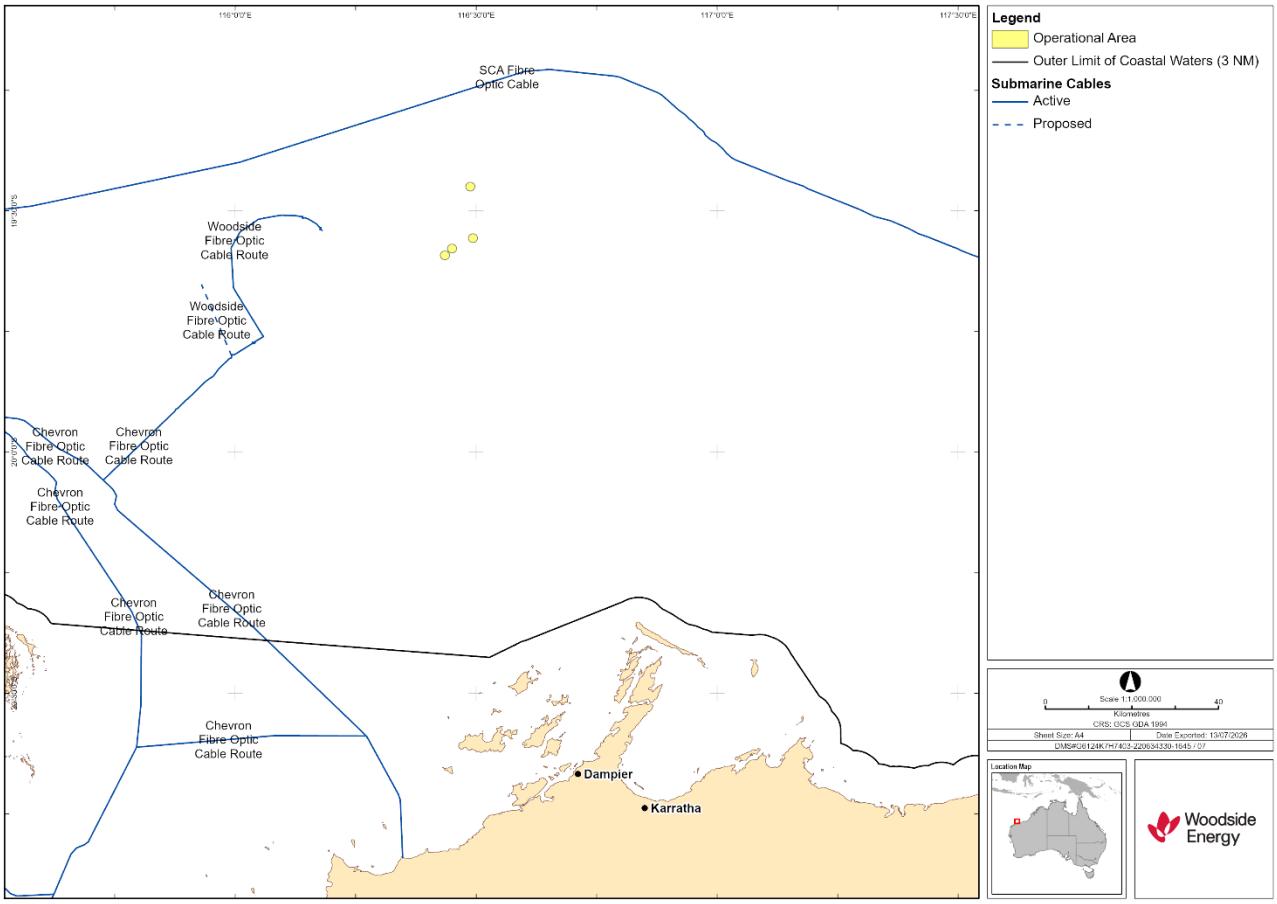
This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.3.8 Commonwealth data

EMBA and Accumulated Shoreline Commonwealth Shipwreck Data - Okha LWI EP					
Vessel Name	Vessel Type	When Lost	Where Lost	Latitude	Longitude
Agnes	Sailing vessel	1893	Exmouth Gulf	-21.75	114.0833333
Alfred	Sailing vessel	1908	Off north-west coast	-17	118.75
Beatrice	Sailing vessel	1899	Off North-West Cape	-21.61666667	113.9833333
Bell	Sailing vessel	1893	Exmouth	-21.75	114.0833333
Curlew	Sailing vessel	1911	At Onslow, Monte Bellos Group	-20	115.1666667
Elizabeth	Sailing vessel	1893	Exmouth Gulf	-21.75	114.0833333
Ellen	Sailing vessel	1893	Exmouth Gulf	-21.75	114.0833333
Emlyn Castle	Unknown	1960		-21.78472167	114.165
Florence	Sailing vessel	1893	Exmouth Gulf	-21.75	114.0833333
Gem	Sailing vessel	1893	North West Cape	-21.61666667	113.9833333
Haw Kiet	Unknown	2003		-18.45816667	117.2583333
Kapala	Unknown	1964	Exmouth Gulf	-21.75	114.0833333
Lady Ann	Sailing vessel	1982	24 miles north of NW Cape	-21.4	114.2
Lamareaux	Sailing vessel	1893	Exmouth Gulf	-21.75	114.0833333
Leave	Sailing vessel	1893	Exmouth Gulf	-21.75	114.0833333
Lily Of The Lake	Sailing vessel	1875	Exmouth Gulf	-21.75	114.0833333
Mabel	Sailing vessel	1893	Exmouth Gulf	-21.75	114.0833333
Marietta	Unknown	1905	Barrow Island	-20	115.1666667
McCormack		1989	N.E. tip of Eaglehawk Island West of Dampier,	-20.13666667	115.9533333
McDermott Derrick Barge No 20	Barge	1989	N.E. tip of Eaglehawk Island, Dampier Archipelago	-20.13666667	115.9533333
Mildura	Twin screw steamer	1907	North-West Cape	-21.784092	114.167735
Nellie	Sailing vessel	1893	Exmouth Gulf	-21.75	114.0833333
Olive	Sailing vessel	1893	Exmouth Gulf	-21.75	114.0833333
Pearl	Sailing vessel	1896	Exmouth Gulf, Meda Creek	-21.75	114.0833333
Pelsart (Pelsaert)	Sailing vessel	1908	12 miles off Imperieuse Reef, Rowley Shoals	-17	118.75
Rose	Sailing vessel	1908	Ashburton	-21.58333333	114.8333333
Ruby	Sailing vessel	1893	Exmouth Gulf	-21.75	114.0833333
Sea Queen	Sailing vessel	1893	Exmouth Gulf	-21.75	114.0833333
See Taube	Unknown	1954	North-east of Rowley Shoals	-17	118.75
Smuggler	Sailing vessel	1893	Exmouth Gulf	-21.75	114.0833333
Tanami	Sailing vessel		Trial Rocks	-20.28333	115.36666
Trial	Sailing vessel	1622	Trial Rocks	-20.28598333	115.3752333
Unidentified Lugger	Unknown	1893	Exmouth Gulf	-21.75	114.0833333
Veronica	Sailing vessel	1928	Sunday Island, Exmouth Gulf	-21.68333333	114.3833333
Vianen	Sailing vessel	1628	Barrow Island Area	-20	115.1666667
Wild Wave	Sailing vessel	1875	Exmouth Gulf	-21.75	114.0833333
Wild Wave (China)	Sailing vessel	1873	Monte Bello Island	-20	115.1666667

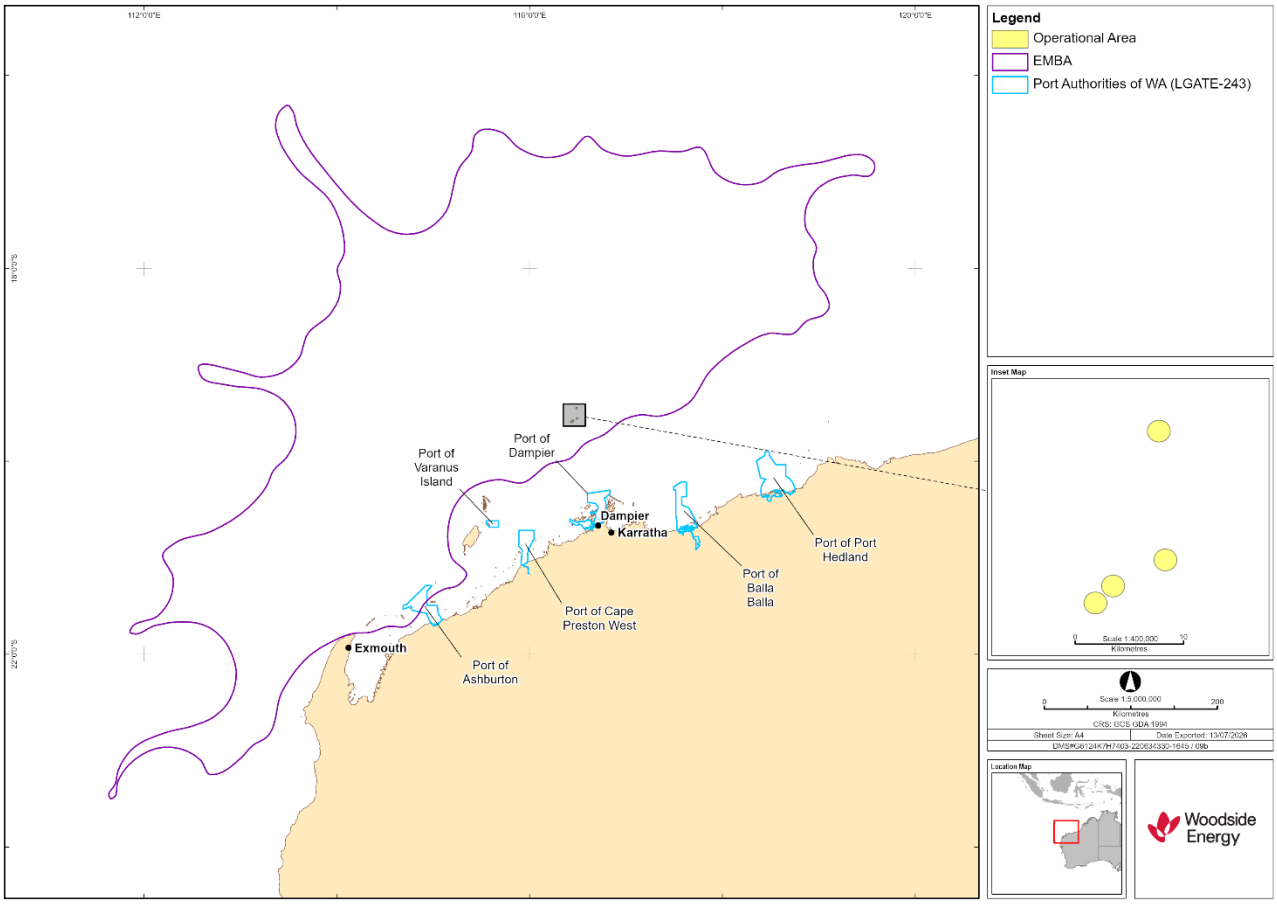
This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.3.9 Submarine communication cable map



This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.3.10 Ports map



This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.3.11 Email sent to Australian Border Force (ABF), Australian Energy Producers (AEP), Australian Marine Conservation Society (AMCS), Australian Maritime Safety Authority (AMSA)–Marine Pollution, BP, Beagle No. 1, Broome Chamber of Commerce and Industry (BCCI), Cape Conservation Group (CCG), Carbon CQ, Carnarvon Energy Ltd, City of Karratha, Conservation Council of WA (CCWA), Department of Industry, Science and Resources (DISR), Department of Transport and Major Infrastructure (DTMI), Exmouth Chamber of Commerce and Industry (Exmouth CCI), Exmouth Community Liaison Group (Exmouth CLG), Finder Energy, Greenpeace Australia Pacific (GPAP), INPEX, InCapture, JX Nippon, KATO Energy (WA), Karratha & Districts Chamber of Commerce and Industry (KDCCI), Karratha Community Liaison Group (Karratha CLG), Kuwait Foreign Petroleum Exploration Company (KUFPEC), Kyushu Electric Wheatstone, Longreach Capital Investments, Marine Tourism WA, Ningaloo Coast World Heritage Advisory Committee (NCWHAC), OMV Australia, OPIC Australia Pty Limited, PE Wheatstone, Pelsart Resources N.L., Protect Ningaloo, Recfishwest, SK Earthon, Santos, Shire of Broome, Shire of Exmouth, Skye Resources Pty Ltd, Tanami Energy, WA Game Fishing Association, Western Gas, Department of Mines, Petroleum and Exploration (DMPE) – 23 July 2026

Woodside previously consulted you in April 2026 for the CK4 and LH3 Well Intervention Environment Plan (EP). We are issuing an Activity Update as two additional wells, located in the Wanaea field, Wanaea 7 (WA7) and Wanaea 8 (WA8), have been added to the light well intervention (LWI) activities based on synergies with vessel availability for the proposed activity. Reflecting this update, the EP has been renamed the Okha Light Well Intervention (LWI) EP.

Feedback previously submitted during consultation on the CK4 and LH3 Well Intervention EP has been considered and will continue to be included in the EP.

The Okha LWI EP Consultation Information Sheet (CIS) is an update of the previous CK4 and LH3 Well Intervention EP. A copy of the CIS is attached and available on Woodside's website.

Changes introduced through this Activity Update are shown in **bold** below.

Table 1 – Activity and location summary

- **WA7 and WA8 wells will have temporary plugs installed for temporary well suspension.**
- **The temporarily suspended WA7 and WA8 will also be managed under the accepted Okha FPSO Facility Operations EP.**
- **WA7 is located in WA-11-L and WA8 is located in WA-9-L.**
- Updated distances to nearest marine park/nature reserve:
  - Montebello Marine Park – Multiple Use Zone (Cth) is **70 km** south-west of the Operational Area.
  - Dampier Marine Park – Habitat Protection Zone (Cth) is **88 km** south-east of the Operational Area.

Table 2 – Approximate locations of key infrastructure

Production well centre locations	Water Depth (m)	Latitude (WGS84)	Longitude (WGS84)	Title
Cossack-4H (CK4)	~ 81	19° 33 22.909 S	116° 29 35.754 E	WA-9-L
Lambert-3 (LH3)	~ 128	19° 26 58.469 S	116° 29 16.227 E	WA-16-L
Wanaea-7 (WA7)	~ 82	19° 35 31.586 S	116° 26 6.622 E	WA-11-L

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Wanaea-8 (WA8)	~ 83	19° 34 40.796 S	116° 26 59.438 E	WA-9-11

Table 3 – Summary of key impacts and risks and proposed management measures

One additional control has been added given the proximity of WA7 and WA8 to the Okha FPSO facility.

Impact/Risk	Description of Source of Impact/Risk	Description of Impact/Risk	Proposed Mitigation and/or Management Measure
Unplanned events (accidents / incidents / emergency situations)			
Unplanned hydrocarbon release: vessel collision	Vessel collision resulting in release of hydrocarbons to the environment.	• In the highly unlikely event of a vessel collision causing a release of marine diesel, impacts to water quality and marine ecosystems could occur. • Modelling of a surface release of marine diesel was used to understand potential impacts. • Marine diesel is a relatively volatile, non-persistent nature hydrocarbon with up to 26% evaporating within the first 24 hours. • Potential to result in a reduction in water quality. • Potential disruption to marine fauna, including protected species. • Potential interference with or displacement of other marine users including fisheries, tourism and recreation.	• Preventing marine vessel collisions • Vessels adhere to regulatory requirements for navigational safety and the prevention of vessel collisions. • Notify relevant persons of activity commencement as requested. • Notify the Australian Hydrographic Office prior to commencement of the activity so that marine users are notified of the activity. • Consult with relevant persons so they are informed of the proposed activities. • Establish a temporary 500 m exclusion zone around the LWIV which is communicated to marine users. • **Develop a Concurrent Operations (CONOPS) Plan to manage interactions with the Okha FPSO.** • Spill response arrangements • In the event of a spill emergency response activities implemented in accordance with the OPEP. • Arrangements supporting the activities in the OPEP will be tested so that the OPEP can be implemented as planned.

Feedback

If you have feedback specific to the proposed activities, we welcome your feedback via email at feedback@woodside.com, via phone call at 1800 442 977 or via the feedback form on our website by **24 August 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suits you.

Your feedback and our response will be included in our EP, which will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for acceptance in accordance with the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (Cth). Your feedback may also be used to support other regulatory processes associated with the planned activities (which may or may not be confidential).

You may request that particular information you provide during consultation not be published in the EP made available on the NOPSEMA website. Please let us know if you request that particular information not be published, and we will make your request known to NOPSEMA.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Personal information collected in the course of consultation will be handled in accordance with Woodside's Environment Plan Privacy Collection Notice. To understand how personal information will be handled, please visit our website.

6.3.12 Email sent to Department of Defence (DoD) – 23 August 2026

Woodside previously consulted you in April 2026 for the CK4 and LH3 Well Intervention Environment Plan (EP). We are issuing an Activity Update as two additional wells, located in the Wanaea field, Wanaea 7 (WA7) and Wanaea 8 (WA8), have been added to the light well intervention (LWI) activities based on synergies with vessel availability for the proposed activity. Reflecting this update, the EP has been renamed the Okha Light Well Intervention (LWI) EP.

Feedback previously submitted during consultation on the CK4 and LH3 Well Intervention EP has been considered and will continue to be included in the EP.

The Okha LWI EP Consultation Information Sheet (CIS) is an update of the previous CK4 and LH3 Well Intervention EP. A copy of the CIS is attached and available on Woodside's website. Defence zone maps are also attached.

Changes introduced through this Activity Update are shown in **bold** below.

Table 1 – Activity and location summary

- **WA7 and WA8 wells will have temporary plugs installed for temporary well suspension.**
- **The temporarily suspended WA7 and WA8 will also be managed under the accepted Okha FPSO Facility Operations EP.**
- **WA7 is located in WA-11-L and WA8 is located in WA-9-L.**
- Updated distances to nearest marine park/nature reserve:
  - Montebello Marine Park – Multiple Use Zone (Cth) is **70 km** south-west of the Operational Area.
  - Dampier Marine Park – Habitat Protection Zone (Cth) is **88 km** south-east of the Operational Area.

Table 2 – Approximate locations of key infrastructure

Production well centre locations	Water Depth (m)	Latitude (WGS84)	Longitude (WGS84)	Title
Cossack-4H (CK4)	~ 81	19° 33 22.909 S	116° 29 35.754 E	WA-9-L
Lambert-3 (LH3)	~ 128	19° 26 58.469 S	116° 29 16.227 E	WA-16-L
Wanaea-7 (WA7)	~ 82	19° 35 31.586 S	116° 26 6.622 E	WA-11-L
Wanaea-8 (WA8)	~ 83	19° 34 40.796 S	116° 26 59.438 E	WA-9-11

Table 3 – Summary of key impacts and risks and proposed management measures

One additional control has been added given the proximity of WA7 and WA8 to the Okha FPSO facility.

Impact/Risk	Description of Source of Impact/Risk	Description of Impact/Risk	Proposed Mitigation and/or Management Measure
Unplanned events (accidents / incidents / emergency situations)			

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Unplanned hydrocarbon release: vessel collision	Vessel collision resulting in release of hydrocarbons to the environment.	• In the highly unlikely event of a vessel collision causing a release of marine diesel, impacts to water quality and marine ecosystems could occur. • Modelling of a surface release of marine diesel was used to understand potential impacts. • Marine diesel is a relatively volatile, non-persistent nature hydrocarbon with up to 26% evaporating within the first 24 hours. • Potential to result in a reduction in water quality. • Potential disruption to marine fauna, including protected species. • Potential interference with or displacement of other marine users including fisheries, tourism and recreation.	• Preventing marine vessel collisions • Vessels adhere to regulatory requirements for navigational safety and the prevention of vessel collisions. • Notify relevant persons of activity commencement as requested. • Notify the Australian Hydrographic Office prior to commencement of the activity so that marine users are notified of the activity. • Consult with relevant persons so they are informed of the proposed activities. • Establish a temporary 500 m exclusion zone around the LWIV which is communicated to marine users. • **Develop a Concurrent Operations (CONOPS) Plan to manage interactions with the Okha FPSO.** • Spill response arrangements • In the event of a spill emergency response activities implemented in accordance with the OPEP. • Arrangements supporting the activities in the OPEP will be tested so that the OPEP can be implemented as planned.

Feedback

If you have feedback specific to the proposed activities, we welcome your feedback via email at feedback@woodside.com, via phone call at 1800 442 977 or via the feedback form on our website by **24 August 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suits you.

Your feedback and our response will be included in our EP, which will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for acceptance in accordance with the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (Cth). Your feedback may also be used to support other regulatory processes associated with the planned activities (which may or may not be confidential).

You may request that particular information you provide during consultation not be published in the EP made available on the NOPSEMA website. Please let us know if you request that particular information not be published, and we will make your request known to NOPSEMA.

Personal information collected in the course of consultation will be handled in accordance with Woodside's Environment Plan Privacy Collection Notice. To understand how personal information will be handled, please visit our website.

6.3.13 Email sent to Australian Communications and Media Authority (ACMA), Telstra, Vocus – 23 July 2026

Woodside previously consulted you in April 2026 for the CK4 and LH3 Well Intervention Environment Plan (EP). We are issuing an Activity Update as two additional wells, located in the Wanaea field, Wanaea 7 (WA7) and Wanaea 8 (WA8), have been added to the light well intervention (LWI) activities based on synergies with vessel availability for the proposed activity. Reflecting this update, the EP has been renamed the Okha Light Well Intervention (LWI) EP.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Feedback previously submitted during consultation on the CK4 and LH3 Well Intervention EP has been considered and will continue to be included in the EP.

The Okha LWI EP Consultation Information Sheet (CIS) is an update of the previous CK4 and LH3 Well Intervention EP. A copy of the CIS is attached and available on Woodside's website. Please find attached submarine communications cable map.

Changes introduced through this Activity Update are shown in **bold** below.

Table 1 – Activity and location summary

- **WA7 and WA8 wells will have temporary plugs installed for temporary well suspension.**
- **The temporarily suspended WA7 and WA8 will also be managed under the accepted Okha FPSO Facility Operations EP.**
- **WA7 is located in WA-11-L and WA8 is located in WA-9-L.**
- Updated distances to nearest marine park/nature reserve:
  - Montebello Marine Park – Multiple Use Zone (Cth) is **70 km** south-west of the Operational Area.
  - Dampier Marine Park – Habitat Protection Zone (Cth) is **88 km** south-east of the Operational Area.

Table 2 – Approximate locations of key infrastructure

Production well centre locations	Water Depth (m)	Latitude (WGS84)	Longitude (WGS84)	Title
Cossack-4H (CK4)	~ 81	19° 33 22.909 S	116° 29 35.754 E	WA-9-L
Lambert-3 (LH3)	~ 128	19° 26 58.469 S	116° 29 16.227 E	WA-16-L
Wanaea-7 (WA7)	~ 82	19° 35 31.586 S	116° 26 6.622 E	WA-11-L
Wanaea-8 (WA8)	~ 83	19° 34 40.796 S	116° 26 59.438 E	WA-9-11

Table 3 – Summary of key impacts and risks and proposed management measures

One additional control has been added given the proximity of WA7 and WA8 to the Okha FPSO facility.

Impact/Risk	Description of Source of Impact/Risk	Description of Impact/Risk	Proposed Mitigation and/or Management Measure
Unplanned events (accidents / incidents / emergency situations)			
Unplanned hydrocarbon release: vessel collision	Vessel collision resulting in release of hydrocarbons to the environment.	• In the highly unlikely event of a vessel collision causing a release of marine diesel, impacts to water quality and marine ecosystems could occur. • Modelling of a surface release of marine diesel was used to understand potential impacts. • Marine diesel is a relatively volatile, non-	• Preventing marine vessel collisions • Vessels adhere to regulatory requirements for navigational safety and the prevention of vessel collisions. • Notify relevant persons of activity commencement as requested. • Notify the Australian Hydrographic Office prior to commencement of the activity so that marine users are notified of the activity. • Consult with relevant persons so they are informed of the proposed activities.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

		persistent nature hydrocarbon with up to 26% evaporating within the first 24 hours. • Potential to result in a reduction in water quality. • Potential disruption to marine fauna, including protected species. • Potential interference with or displacement of other marine users including fisheries, tourism and recreation.	• Establish a temporary 500 m exclusion zone around the LWIV which is communicated to marine users. • **Develop a Concurrent Operations (CONOPS) Plan to manage interactions with the Okha FPSO.** • Spill response arrangements • In the event of a spill emergency response activities implemented in accordance with the OPEP. • Arrangements supporting the activities in the OPEP will be tested so that the OPEP can be implemented as planned.

Feedback

If you have feedback specific to the proposed activities, we welcome your feedback via email at feedback@woodside.com, via phone call at 1800 442 977 or via the feedback form on our website by **24 August 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suits you.

Your feedback and our response will be included in our EP, which will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for acceptance in accordance with the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (Cth). Your feedback may also be used to support other regulatory processes associated with the planned activities (which may or may not be confidential).

You may request that particular information you provide during consultation not be published in the EP made available on the NOPSEMA website. Please let us know if you request that particular information not be published, and we will make your request known to NOPSEMA.

Personal information collected in the course of consultation will be handled in accordance with Woodside's Environment Plan Privacy Collection Notice. To understand how personal information will be handled, please visit our website.

6.3.14 Email sent to Australian Hydrographic Office (AHO), Australian Maritime Safety Authority (AMSA)–Navigation Safety – 23 July 2026

Woodside previously consulted you in April 2026 for the CK4 and LH3 Well Intervention Environment Plan (EP). We are issuing an Activity Update as two additional wells, located in the Wanaea field, Wanaea 7 (WA7) and Wanaea 8 (WA8), have been added to the light well intervention (LWI) activities based on synergies with vessel availability for the proposed activity. Reflecting this update, the EP has been renamed the Okha Light Well Intervention (LWI) EP.

Feedback previously submitted during consultation on the CK4 and LH3 Well Intervention EP has been considered and will continue to be included in the EP.

The Okha LWI EP Consultation Information Sheet (CIS) is an update of the previous CK4 and LH3 Well Intervention EP. A copy of the CIS is attached and available on Woodside's website. Updated GIS shape files and vessel density map are also attached.

Changes introduced through this Activity Update are shown in **bold** below.

Table 1 – Activity and location summary

- **WA7 and WA8 wells will have temporary plugs installed for temporary well suspension.**

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- **The temporarily suspended WA7 and WA8 will also be managed under the accepted Okha FPSO Facility Operations EP.**
- **WA7 is located in WA-11-L and WA8 is located in WA-9-L.**
- Updated distances to nearest marine park/nature reserve:
  - Montebello Marine Park – Multiple Use Zone (Cth) is **70 km** south-west of the Operational Area.
  - Dampier Marine Park – Habitat Protection Zone (Cth) is **88 km** south-east of the Operational Area.

Table 2 – Approximate locations of key infrastructure

Production well centre locations	Water Depth (m)	Latitude (WGS84)	Longitude (WGS84)	Title
Cossack-4H (CK4)	~ 81	19° 33 22.909 S	116° 29 35.754 E	WA-9-L
Lambert-3 (LH3)	~ 128	19° 26 58.469 S	116° 29 16.227 E	WA-16-L
Wanaea-7 (WA7)	~ 82	19° 35 31.586 S	116° 26 6.622 E	WA-11-L
Wanaea-8 (WA8)	~ 83	19° 34 40.796 S	116° 26 59.438 E	WA-9-11

Table 3 – Summary of key impacts and risks and proposed management measures

One additional control has been added given the proximity of WA7 and WA8 to the Okha FPSO facility.

Impact/Risk	Description of Source of Impact/Risk	Description of Impact/Risk	Proposed Mitigation and/or Management Measure
Unplanned events (accidents / incidents / emergency situations)			
Unplanned hydrocarbon release: vessel collision	Vessel collision resulting in release of hydrocarbons to the environment.	• In the highly unlikely event of a vessel collision causing a release of marine diesel, impacts to water quality and marine ecosystems could occur. • Modelling of a surface release of marine diesel was used to understand potential impacts. • Marine diesel is a relatively volatile, non-persistent nature hydrocarbon with up to 26% evaporating within the first 24 hours. • Potential to result in a reduction in water quality. • Potential disruption to marine fauna, including protected species. • Potential interference with or displacement of	• Preventing marine vessel collisions • Vessels adhere to regulatory requirements for navigational safety and the prevention of vessel collisions. • Notify relevant persons of activity commencement as requested. • Notify the Australian Hydrographic Office prior to commencement of the activity so that marine users are notified of the activity. • Consult with relevant persons so they are informed of the proposed activities. • Establish a temporary 500 m exclusion zone around the LWIV which is communicated to marine users. • **Develop a Concurrent Operations (CONOPS) Plan to manage interactions with the Okha FPSO.** • Spill response arrangements • In the event of a spill emergency response activities implemented in accordance with the OPEP. • Arrangements supporting the activities in the OPEP will be tested so that the OPEP can be implemented as planned.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

		other marine users including fisheries, tourism and recreation.	

Feedback

If you have feedback specific to the proposed activities, we welcome your feedback via email at feedback@woodside.com, via phone call at 1800 442 977 or via the feedback form on our website by **24 August 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suits you.

Your feedback and our response will be included in our EP, which will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for acceptance in accordance with the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (Cth). Your feedback may also be used to support other regulatory processes associated with the planned activities (which may or may not be confidential).

You may request that particular information you provide during consultation not be published in the EP made available on the NOPSEMA website. Please let us know if you request that particular information not be published, and we will make your request known to NOPSEMA.

Personal information collected in the course of consultation will be handled in accordance with Woodside's Environment Plan Privacy Collection Notice. To understand how personal information will be handled, please visit our website.

You may request that particular information you provide during consultation not be published in the EP made available on the NOPSEMA website. Please let us know if you request that particular information not be published, and we will make your request known to NOPSEMA.

Personal information collected in the course of consultation will be handled in accordance with Woodside's Environment Plan Privacy Collection Notice. To understand how personal information will be handled, please visit our website.

6.3.15 Email sent to Australian Fisheries Management Authority (AFMA), Commonwealth Fisheries Association (CFA), Department of Agriculture, Fisheries and Forestry (DAFF)–Fisheries, Tuna Australia – 23 July 2026

Woodside previously consulted you in April 2026 for the CK4 and LH3 Well Intervention Environment Plan (EP). We are issuing an Activity Update as two additional wells, located in the Wanaea field, Wanaea 7 (WA7) and Wanaea 8 (WA8), have been added to the light well intervention (LWI) activities based on synergies with vessel availability for the proposed activity. Reflecting this update, the EP has been renamed the Okha Light Well Intervention (LWI) EP.

Feedback previously submitted during consultation on the CK4 and LH3 Well Intervention EP has been considered and will continue to be included in the EP.

The Okha LWI EP Consultation Information Sheet (CIS) is an update of the previous CK4 and LH3 Well Intervention EP. A copy of the CIS is attached and available on Woodside's website.

Changes introduced through this Activity Update are shown in **bold** below.

Table 1 – Activity and location summary

WA7 and WA8 wells will have temporary plugs installed for temporary well suspension.

The temporarily suspended WA7 and WA8 will also be managed under the accepted Okha FPSO Facility Operations EP.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

WA7 is located in WA-11-L and WA8 is located in WA-9-L.

Updated distances to nearest marine park/nature reserve:

- Montebello Marine Park – Multiple Use Zone (Cth) is **70 km** south-west of the Operational Area.
- Dampier Marine Park – Habitat Protection Zone (Cth) is **88 km** south-east of the Operational Area.

Table 2 – Approximate locations of key infrastructure

Production well centre locations	Water Depth (m)	Latitude (WGS84)	Longitude (WGS84)	Title
Cossack-4H (CK4)	~ 81	19° 33 22.909 S	116° 29 35.754 E	WA-9-L
Lambert-3 (LH3)	~ 128	19° 26 58.469 S	116° 29 16.227 E	WA-16-L
Wanaea-7 (WA7)	**~ 82**	**19° 35 31.586 S**	**116° 26 6.622 E**	**WA-11-L**
Wanaea-8 (WA8)	**~ 83**	**19° 34 40.796 S**	**116° 26 59.438 E**	**WA-9-11**

Table 3 – Summary of key impacts and risks and proposed management measures

One additional control has been added given the proximity of WA7 and WA8 to the Okha FPSO facility.

Impact/Risk	Description of Source of Impact/Risk	Description of Impact/Risk	Proposed Mitigation and/or Management Measure
Unplanned events (accidents / incidents / emergency situations)			
Unplanned hydrocarbon release: *vessel collision*	Vessel collision resulting in release of hydrocarbons to the environment.	1. In the highly unlikely event of a vessel collision causing a release of marine diesel, impacts to water quality and marine ecosystems could occur. 2. Modelling of a surface release of marine diesel was used to understand potential impacts. 3. Marine diesel is a relatively volatile, non-persistent nature hydrocarbon with up to 26% evaporating within the first 24 hours. 4. Potential to result in a reduction in water quality. 5. Potential disruption to marine fauna, including protected species. 6. Potential interference with or displacement of other marine users including fisheries, tourism and recreation.	7. Preventing marine vessel collisions 8. Vessels adhere to regulatory requirements for navigational safety and the prevention of vessel collisions. 9. Notify relevant persons of activity commencement as requested. 10. Notify the Australian Hydrographic Office prior to commencement of the activity so that marine users are notified of the activity. 11. Consult with relevant persons so they are informed of the proposed activities. 12. Establish a temporary 500 m exclusion zone around the LWIV which is communicated to marine users. **13. Develop a Concurrent Operations (CONOPS) Plan to manage interactions with the Okha FPSO.** 14. Spill response arrangements 15. In the event of a spill emergency response activities implemented in accordance with the OPEP. 16. Arrangements supporting the activities in the OPEP will be tested so that the OPEP can be implemented as planned.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Feedback

If you have feedback specific to the proposed activities, we welcome your feedback via email at feedback@woodside.com, via phone call at 1800 442 977 or via the feedback form on our website by **24 August 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suits you.

Your feedback and our response will be included in our EP, which will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for acceptance in accordance with the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (Cth). Your feedback may also be used to support other regulatory processes associated with the planned activities (which may or may not be confidential).

You may request that particular information you provide during consultation not be published in the EP made available on the NOPSEMA website. Please let us know if you request that particular information not be published, and we will make your request known to NOPSEMA.

Personal information collected in the course of consultation will be handled in accordance with Woodside's Environment Plan Privacy Collection Notice. To understand how personal information will be handled, please visit our website.

6.3.16 Email sent to Australian Southern Bluefin Tuna Fishery, Australian Southern Bluefin Tuna Industry Association (ASBTIA), North West Slope Trawl Fishery, Western Deepwater Trawl Fishery, Western Skipjack Fishery and Western Tuna and Billfish Fishery – 23 July 2026

Woodside previously consulted you in April 2026 for the CK4 and LH3 Well Intervention Environment Plan (EP). We are issuing an Activity Update as two additional wells, located in the Wanaea field, Wanaea 7 (WA7) and Wanaea 8 (WA8), have been added to the light well intervention (LWI) activities based on synergies with vessel availability for the proposed activity. Reflecting this update, the EP has been renamed the Okha Light Well Intervention (LWI) EP.

Feedback previously submitted during consultation on the CK4 and LH3 Well Intervention EP has been considered and will continue to be included in the EP.

The Okha LWI EP Consultation Information Sheet (CIS) is an update of the previous CK4 and LH3 Well Intervention EP. A copy of the CIS is attached and available on Woodside's website.

Changes introduced through this Activity Update are shown in **bold** below.

Table 1 – Activity and location summary

- **WA7 and WA8 wells will have temporary plugs installed for temporary well suspension.**
- **The temporarily suspended WA7 and WA8 will also be managed under the accepted Okha FPSO Facility Operations EP.**
- **WA7 is located in WA-11-L and WA8 is located in WA-9-L.**
- Updated distances to nearest marine park/nature reserve:
  - Montebello Marine Park – Multiple Use Zone (Cth) is **70 km** south-west of the Operational Area.
  - Dampier Marine Park – Habitat Protection Zone (Cth) is **88 km** south-east of the Operational Area.

Table 2 – Approximate locations of key infrastructure

Production well centre locations	Water Depth (m)	Latitude (WGS84)	Longitude (WGS84)	Title

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Cossack-4H (CK4)	~ 81	19° 33 22.909 S	116° 29 35.754 E	WA-9-L
Lambert-3 (LH3)	~ 128	19° 26 58.469 S	116° 29 16.227 E	WA-16-L
Wanaea-7 (WA7)	~ 82	19° 35 31.586 S	116° 26 6.622 E	WA-11-L
Wanaea-8 (WA8)	~ 83	19° 34 40.796 S	116° 26 59.438 E	WA-9-11

Table 3 – Summary of key impacts and risks and proposed management measures

One additional control has been added given the proximity of WA7 and WA8 to the Okha FPSO facility.

Impact/Risk	Description of Source of Impact/Risk	Description of Impact/Risk	Proposed Mitigation and/or Management Measure
Unplanned events (accidents / incidents / emergency situations)			
Unplanned hydrocarbon release: vessel collision	Vessel collision resulting in release of hydrocarbons to the environment.	• In the highly unlikely event of a vessel collision causing a release of marine diesel, impacts to water quality and marine ecosystems could occur. • Modelling of a surface release of marine diesel was used to understand potential impacts. • Marine diesel is a relatively volatile, non-persistent nature hydrocarbon with up to 26% evaporating within the first 24 hours. • Potential to result in a reduction in water quality. • Potential disruption to marine fauna, including protected species. • Potential interference with or displacement of other marine users including fisheries, tourism and recreation.	• Preventing marine vessel collisions • Vessels adhere to regulatory requirements for navigational safety and the prevention of vessel collisions. • Notify relevant persons of activity commencement as requested. • Notify the Australian Hydrographic Office prior to commencement of the activity so that marine users are notified of the activity. • Consult with relevant persons so they are informed of the proposed activities. • Establish a temporary 500 m exclusion zone around the LWIV which is communicated to marine users. • **Develop a Concurrent Operations (CONOPS) Plan to manage interactions with the Okha FPSO.** • Spill response arrangements • In the event of a spill emergency response activities implemented in accordance with the OPEP. • Arrangements supporting the activities in the OPEP will be tested so that the OPEP can be implemented as planned.

Feedback

If you have feedback specific to the proposed activities, we welcome your feedback via email at feedback@woodside.com, via phone call at 1800 442 977 or via the feedback form on our website by **24 August 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suits you.

Your feedback and our response will be included in our EP, which will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for acceptance in accordance with the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (Cth). Your feedback

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

may also be used to support other regulatory processes associated with the planned activities (which may or may not be confidential).

You may request that particular information you provide during consultation not be published in the EP made available on the NOPSEMA website. Please let us know if you request that particular information not be published, and we will make your request known to NOPSEMA.

Personal information collected in the course of consultation will be handled in accordance with Woodside's Environment Plan Privacy Collection Notice. To understand how personal information will be handled, please visit our website.

6.3.17 Email sent to Department of Agriculture, Fisheries and Forestry (DAFF) – Biosecurity, marine pests, vessels, aircraft and personnel – 23 July 2026

Woodside previously consulted you in April 2026 for the CK4 and LH3 Well Intervention Environment Plan (EP). We are issuing an Activity Update as two additional wells, located in the Wanaea field, Wanaea 7 (WA7) and Wanaea 8 (WA8), have been added to the light well intervention (LWI) activities based on synergies with vessel availability for the proposed activity. Reflecting this update, the EP has been renamed the Okha Light Well Intervention (LWI) EP.

Feedback previously submitted during consultation on the CK4 and LH3 Well Intervention EP has been considered and will continue to be included in the EP.

The Okha LWI EP Consultation Information Sheet (CIS) is an update of the previous CK4 and LH3 Well Intervention EP. A copy of the CIS is attached and available on Woodside's website.

Changes introduced through this Activity Update are shown in **bold** below.

Table 1 – Activity and location summary

- **WA7 and WA8 wells will have temporary plugs installed for temporary well suspension.**
- **The temporarily suspended WA7 and WA8 will also be managed under the accepted Okha FPSO Facility Operations EP.**
- **WA7 is located in WA-11-L and WA8 is located in WA-9-L.**
- Updated distances to nearest marine park/nature reserve:
  - Montebello Marine Park – Multiple Use Zone (Cth) is **70 km** south-west of the Operational Area.
  - Dampier Marine Park – Habitat Protection Zone (Cth) is **88 km** south-east of the Operational Area.

Table 2 – Approximate locations of key infrastructure

Production well centre locations	Water Depth (m)	Latitude (WGS84)	Longitude (WGS84)	Title
Cossack-4H (CK4)	~ 81	19° 33 22.909 S	116° 29 35.754 E	WA-9-L
Lambert-3 (LH3)	~ 128	19° 26 58.469 S	116° 29 16.227 E	WA-16-L
Wanaea-7 (WA7)	~ 82	19° 35 31.586 S	116° 26 6.622 E	WA-11-L
Wanaea-8 (WA8)	~ 83	19° 34 40.796 S	116° 26 59.438 E	WA-9-11

Table 3 – Summary of key impacts and risks and proposed management measures

One additional control has been added given the proximity of WA7 and WA8 to the Okha FPSO facility.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Impact/Risk	Description of Source of Impact/Risk	Description of Impact/Risk	Proposed Mitigation and/or Management Measure
Unplanned events (accidents / incidents / emergency situations)			
Unplanned hydrocarbon release: vessel collision	Vessel collision resulting in release of hydrocarbons to the environment.	• In the highly unlikely event of a vessel collision causing a release of marine diesel, impacts to water quality and marine ecosystems could occur. • Modelling of a surface release of marine diesel was used to understand potential impacts. • Marine diesel is a relatively volatile, non-persistent nature hydrocarbon with up to 26% evaporating within the first 24 hours. • Potential to result in a reduction in water quality. • Potential disruption to marine fauna, including protected species. • Potential interference with or displacement of other marine users including fisheries, tourism and recreation.	• Preventing marine vessel collisions • Vessels adhere to regulatory requirements for navigational safety and the prevention of vessel collisions. • Notify relevant persons of activity commencement as requested. • Notify the Australian Hydrographic Office prior to commencement of the activity so that marine users are notified of the activity. • Consult with relevant persons so they are informed of the proposed activities. • Establish a temporary 500 m exclusion zone around the LWIV which is communicated to marine users. • **Develop a Concurrent Operations (CONOPS) Plan to manage interactions with the Okha FPSO.** • Spill response arrangements • In the event of a spill emergency response activities implemented in accordance with the OPEP. • Arrangements supporting the activities in the OPEP will be tested so that the OPEP can be implemented as planned.

Feedback

If you have feedback specific to the proposed activities, we welcome your feedback via email at feedback@woodside.com, via phone call at 1800 442 977 or via the feedback form on our website by **24 August 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suits you.

Your feedback and our response will be included in our EP, which will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for acceptance in accordance with the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (Cth). Your feedback may also be used to support other regulatory processes associated with the planned activities (which may or may not be confidential).

You may request that particular information you provide during consultation not be published in the EP made available on the NOPSEMA website. Please let us know if you request that particular information not be published, and we will make your request known to NOPSEMA.

Personal information collected in the course of consultation will be handled in accordance with Woodside's Environment Plan Privacy Collection Notice. To understand how personal information will be handled, please visit our website.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.3.18 Email sent to Director of National Parks (DNP) – 23 July 2026

Woodside previously consulted you in April 2026 for the CK4 and LH3 Well Intervention Environment Plan (EP). We are issuing an Activity Update as two additional wells, located in the Wanaea field, Wanaea 7 (WA7) and Wanaea 8 (WA8), have been added to the light well intervention (LWI) activities based on synergies with vessel availability for the proposed activity. Reflecting this update, the EP has been renamed the Okha Light Well Intervention (LWI) EP.

Feedback previously submitted during consultation on the CK4 and LH3 Well Intervention EP has been considered and will continue to be included in the EP.

The Okha LWI EP Consultation Information Sheet (CIS) is an update of the previous CK4 and LH3 Well Intervention EP. A copy of the CIS is attached and available on Woodside's website. Please also find the attached GIS shape files.

Changes introduced through this Activity Update are shown in **bold** below.

Table 1 – Activity and location summary

- **WA7 and WA8 wells will have temporary plugs installed for temporary well suspension.**
- **The temporarily suspended WA7 and WA8 will also be managed under the accepted Okha FPSO Facility Operations EP.**
- **WA7 is located in WA-11-L and WA8 is located in WA-9-L.**
- Updated distances to nearest marine park/nature reserve:
  - Montebello Marine Park – Multiple Use Zone (Cth) is **70 km** south-west of the Operational Area.
  - Dampier Marine Park – Habitat Protection Zone (Cth) is **88 km** south-east of the Operational Area.

Table 2 – Approximate locations of key infrastructure

Production well centre locations	Water Depth (m)	Latitude (WGS84)	Longitude (WGS84)	Title
Cossack-4H (CK4)	~ 81	19° 33 22.909 S	116° 29 35.754 E	WA-9-L
Lambert-3 (LH3)	~ 128	19° 26 58.469 S	116° 29 16.227 E	WA-16-L
Wanaea-7 (WA7)	~ 82	19° 35 31.586 S	116° 26 6.622 E	WA-11-L
Wanaea-8 (WA8)	~ 83	19° 34 40.796 S	116° 26 59.438 E	WA-9-11

Table 3 – Summary of key impacts and risks and proposed management measures

One additional control has been added given the proximity of WA7 and WA8 to the Okha FPSO facility.

Impact/Risk	Description of Source of Impact/Risk	Description of Impact/Risk	Proposed Mitigation and/or Management Measure
Unplanned events (accidents / incidents / emergency situations)			
Unplanned hydrocarbon release: vessel collision	Vessel collision resulting in release of hydrocarbons to the environment.	• In the highly unlikely event of a vessel collision causing a release of marine diesel, impacts to water quality and marine ecosystems could occur.	• Preventing marine vessel collisions • Vessels adhere to regulatory requirements for navigational safety and the prevention of vessel collisions. • Notify relevant persons of activity commencement as requested.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

		• Modelling of a surface release of marine diesel was used to understand potential impacts. • Marine diesel is a relatively volatile, non-persistent nature hydrocarbon with up to 26% evaporating within the first 24 hours. • Potential to result in a reduction in water quality. • Potential disruption to marine fauna, including protected species. • Potential interference with or displacement of other marine users including fisheries, tourism and recreation.	• Notify the Australian Hydrographic Office prior to commencement of the activity so that marine users are notified of the activity. • Consult with relevant persons so they are informed of the proposed activities. • Establish a temporary 500 m exclusion zone around the LWIV which is communicated to marine users. • **Develop a Concurrent Operations (CONOPS) Plan to manage interactions with the Okha FPSO.** • Spill response arrangements • In the event of a spill emergency response activities implemented in accordance with the OPEP. • Arrangements supporting the activities in the OPEP will be tested so that the OPEP can be implemented as planned.

Feedback

If you have feedback specific to the proposed activities, we welcome your feedback via email at feedback@woodside.com, via phone call at 1800 442 977 or via the feedback form on our website by **24 August 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suits you.

Your feedback and our response will be included in our EP, which will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for acceptance in accordance with the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (Cth). Your feedback may also be used to support other regulatory processes associated with the planned activities (which may or may not be confidential).

You may request that particular information you provide during consultation not be published in the EP made available on the NOPSEMA website. Please let us know if you request that particular information not be published, and we will make your request known to NOPSEMA.

Personal information collected in the course of consultation will be handled in accordance with Woodside's Environment Plan Privacy Collection Notice. To understand how personal information will be handled, please visit our website.

6.3.19 Email sent to Department of Primary Industries and Regional Development (DPIRD) – 23 July 2026

Woodside previously consulted you in April 2026 for the CK4 and LH3 Well Intervention Environment Plan (EP). We are issuing an Activity Update as two additional wells, located in the Wanaea field, Wanaea 7 (WA7) and Wanaea 8 (WA8), have been added to the light well intervention (LWI) activities based on synergies with vessel availability for the proposed activity. Reflecting this update, the EP has been renamed the Okha Light Well Intervention (LWI) EP.

Feedback previously submitted during consultation on the CK4 and LH3 Well Intervention EP has been considered and will continue to be included in the EP.

The Okha LWI EP Consultation Information Sheet (CIS) is an update of the previous CK4 and LH3 Well Intervention EP. A copy of the CIS is attached and available on Woodside's website.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Changes introduced through this Activity Update are shown in **bold** below.

Table 1 – Activity and location summary

- **WA7 and WA8 wells will have temporary plugs installed for temporary well suspension.**
- **The temporarily suspended WA7 and WA8 will also be managed under the accepted Okha FPSO Facility Operations EP.**
- **WA7 is located in WA-11-L and WA8 is located in WA-9-L.**
- Updated distances to nearest marine park/nature reserve:
  - Montebello Marine Park – Multiple Use Zone (Cth) is **70 km** south-west of the Operational Area.
  - Dampier Marine Park – Habitat Protection Zone (Cth) is **88 km** south-east of the Operational Area.

Table 2 – Approximate locations of key infrastructure

Production well centre locations	Water Depth (m)	Latitude (WGS84)	Longitude (WGS84)	Title
Cossack-4H (CK4)	~ 81	19° 33 22.909 S	116° 29 35.754 E	WA-9-L
Lambert-3 (LH3)	~ 128	19° 26 58.469 S	116° 29 16.227 E	WA-16-L
Wanaea-7 (WA7)	~ 82	19° 35 31.586 S	116° 26 6.622 E	WA-11-L
Wanaea-8 (WA8)	~ 83	19° 34 40.796 S	116° 26 59.438 E	WA-9-11

Table 3 – Summary of key impacts and risks and proposed management measures

One additional control has been added given the proximity of WA7 and WA8 to the Okha FPSO facility.

Impact/Risk	Description of Source of Impact/Risk	Description of Impact/Risk	Proposed Mitigation and/or Management Measure
Unplanned events (accidents / incidents / emergency situations)			
Unplanned hydrocarbon release: vessel collision	Vessel collision resulting in release of hydrocarbons to the environment.	• In the highly unlikely event of a vessel collision causing a release of marine diesel, impacts to water quality and marine ecosystems could occur. • Modelling of a surface release of marine diesel was used to understand potential impacts. • Marine diesel is a relatively volatile, non-persistent nature hydrocarbon with up to 26% evaporating within the first 24 hours. • Potential to result in a reduction in water quality.	• Preventing marine vessel collisions • Vessels adhere to regulatory requirements for navigational safety and the prevention of vessel collisions. • Notify relevant persons of activity commencement as requested. • Notify the Australian Hydrographic Office prior to commencement of the activity so that marine users are notified of the activity. • Consult with relevant persons so they are informed of the proposed activities. • Establish a temporary 500 m exclusion zone around the LWIV which is communicated to marine users. • **Develop a Concurrent Operations (CONOPS) Plan to manage interactions with the Okha FPSO.** • Spill response arrangements

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

		• Potential disruption to marine fauna, including protected species. • Potential interference with or displacement of other marine users including fisheries, tourism and recreation.	• In the event of a spill emergency response activities implemented in accordance with the OPEP. • Arrangements supporting the activities in the OPEP will be tested so that the OPEP can be implemented as planned.

Feedback

If you have feedback specific to the proposed activities, we welcome your feedback via email at feedback@woodside.com, via phone call at 1800 442 977 or via the feedback form on our website by **24 August 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suits you.

Your feedback and our response will be included in our EP, which will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for acceptance in accordance with the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (Cth). Your feedback may also be used to support other regulatory processes associated with the planned activities (which may or may not be confidential).

You may request that particular information you provide during consultation not be published in the EP made available on the NOPSEMA website. Please let us know if you request that particular information not be published, and we will make your request known to NOPSEMA.

Personal information collected in the course of consultation will be handled in accordance with Woodside's Environment Plan Privacy Collection Notice. To understand how personal information will be handled, please visit our website.

6.3.20 Email sent to Gascoyne Recreational Marine Users, Pilbara/Kimberley Recreational Marine Users– 26 July 2026

Woodside previously consulted you in April 2026 for the CK4 and LH3 Well Intervention Environment Plan (EP). We are issuing an Activity Update as two additional wells, located in the Wanaea field, Wanaea 7 (WA7) and Wanaea 8 (WA8), have been added to the light well intervention (LWI) activities based on synergies with vessel availability for the proposed activity. Reflecting this update, the EP has been renamed the Okha Light Well Intervention (LWI) EP.

Feedback previously submitted during consultation on the CK4 and LH3 Well Intervention EP has been considered and will continue to be included in the EP.

The Okha LWI EP Consultation Information Sheet (CIS) is an update of the previous CK4 and LH3 Well Intervention EP. A copy of the CIS is attached and available on Woodside's website.

Changes introduced through this Activity Update are shown in **bold** below.

Table 1 – Activity and location summary

- **WA7 and WA8 wells will have temporary plugs installed for temporary well suspension.**
- **The temporarily suspended WA7 and WA8 will also be managed under the accepted Okha FPSO Facility Operations EP.**
- **WA7 is located in WA-11-L and WA8 is located in WA-9-L.**
- Updated distances to nearest marine park/nature reserve:
  - Montebello Marine Park – Multiple Use Zone (Cth) is **70 km** south-west of the Operational Area.
  - Dampier Marine Park – Habitat Protection Zone (Cth) is **88 km** south-east of the Operational Area.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 2 – Approximate locations of key infrastructure

Production well centre locations	Water Depth (m)	Latitude (WGS84)	Longitude (WGS84)	Title
Cossack-4H (CK4)	~ 81	19° 33 22.909 S	116° 29 35.754 E	WA-9-L
Lambert-3 (LH3)	~ 128	19° 26 58.469 S	116° 29 16.227 E	WA-16-L
Wanaea-7 (WA7)	~ 82	19° 35 31.586 S	116° 26 6.622 E	WA-11-L
Wanaea-8 (WA8)	~ 83	19° 34 40.796 S	116° 26 59.438 E	WA-9-11

Table 3 – Summary of key impacts and risks and proposed management measures

One additional control has been added given the proximity of WA7 and WA8 to the Okha FPSO facility.

Impact/Risk	Description of Source of Impact/Risk	Description of Impact/Risk	Proposed Mitigation and/or Management Measure
Unplanned events (accidents / incidents / emergency situations)			
Unplanned hydrocarbon release: vessel collision	Vessel collision resulting in release of hydrocarbons to the environment.	• In the highly unlikely event of a vessel collision causing a release of marine diesel, impacts to water quality and marine ecosystems could occur. • Modelling of a surface release of marine diesel was used to understand potential impacts. • Marine diesel is a relatively volatile, non-persistent nature hydrocarbon with up to 26% evaporating within the first 24 hours. • Potential to result in a reduction in water quality. • Potential disruption to marine fauna, including protected species. • Potential interference with or displacement of other marine users including fisheries, tourism and recreation.	• Preventing marine vessel collisions • Vessels adhere to regulatory requirements for navigational safety and the prevention of vessel collisions. • Notify relevant persons of activity commencement as requested. • Notify the Australian Hydrographic Office prior to commencement of the activity so that marine users are notified of the activity. • Consult with relevant persons so they are informed of the proposed activities. • Establish a temporary 500 m exclusion zone around the LWIV which is communicated to marine users. • **Develop a Concurrent Operations (CONOPS) Plan to manage interactions with the Okha FPSO.** • Spill response arrangements • In the event of a spill emergency response activities implemented in accordance with the OPEP. • Arrangements supporting the activities in the OPEP will be tested so that the OPEP can be implemented as planned.

Feedback

If you have feedback specific to the proposed activities, we welcome your feedback via email at feedback@woodside.com, via phone call at 1800 442 977 or via the feedback form on our website by **24**

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

August 2026. Alternatively, Woodside is willing to consider and accept your feedback via a means which suits you.

Your feedback and our response will be included in our EP, which will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for acceptance in accordance with the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (Cth). Your feedback may also be used to support other regulatory processes associated with the planned activities (which may or may not be confidential).

You may request that particular information you provide during consultation not be published in the EP made available on the NOPSEMA website. Please let us know if you request that particular information not be published, and we will make your request known to NOPSEMA.

Personal information collected in the course of consultation will be handled in accordance with Woodside's Environment Plan Privacy Collection Notice. To understand how personal information will be handled, please visit our website.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.3.21 Letter sent to Gascoyne Recreational Marine Users, Pilbara/Kimberley Recreational Marine Users– 16 April 2026

Please direct all responses/queries to:
Woodside Energy Feedback
t: +61 8 (1)800 442 977
e: feedback@woodside.com

Woodside Energy Group Ltd
ACN 004 898 962
Mia Yellagonga
11 Mount Street
Perth WA 6000
Australia
T: +61 8 9348 4000
www.woodside.com

A - 1

24 July 2026

Dear Recreational Marine User

Woodside previously consulted you in April 2026 for the CK4 and LH3 Well Intervention Environment Plan (EP). We are issuing an Activity Update as two additional wells, located in the Wanaea field, Wanaea 7 (WA7) and Wanaea 8 (WA8), have been added to the light well intervention (LWI) activities based on synergies with vessel availability for the proposed activity. Reflecting this update, the EP has been renamed the Okha Light Well Intervention (LWI) EP.

Feedback previously submitted during consultation on the CK4 and LH3 Well Intervention EP has been considered and will continue to be included in the EP.

The Okha LWI EP Consultation Information Sheet (CIS) is an update of the previous CK4 and LH3 Well Intervention EP. A copy of the CIS is attached and available at thttps://www.woodside.com/what-we-do/consultation-activities

Changes introduced through this Activity Update are shown in **bold** below.

Table 1 – Activity and location summary

- **WA7 and WA8 wells will have temporary plugs installed for temporary well suspension**
- **The temporarily suspended WA7 and WA8 will also be managed under the accepted Okha FPSO Facility Operations EP.**
- **WA7 is located in WA-11-L and WA8 is located in WA-9-L**
- Updated distances to nearest marine park/nature reserve:
  - Montebello Marine Park – Multiple Use Zone (Cth) is **70 km** south-west of the Operational Area.
  - Dampier Marine Park – Habitat Protection Zone (Cth) is **88 km** south-east of the Operational Area.

Table 2 – Approximate locations of key infrastructure

Production well centre locations	Water Depth (m)	Latitude (WGS84)	Longitude (WGS84)	Title
Cossack-4H (CK4)	~ 81	19° 33 22.909 S	116° 29 35.754 E	WA-9-L
Lambert-3 (LH3)	~ 128	19° 26 58.469 S	116° 29 16.227 E	WA-16-L
Wanaea-7 (WA7)	**~ 82**	**19° 35 31.586 S**	**116° 26 6.622 E**	**WA-11-L**
Wanaea-8 (WA8)	**~ 83**	**19° 34 40.796 S**	**116° 26 59.438 E**	**WA-9-11**

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 3 – Summary of key impacts and risks and proposed management measures
One additional control has been added given the proximity of WA7 and WA8 to the Okha FPSO facility.

Impact/Risk	Description of Source of Impact/Risk	Description of Impact/Risk	Proposed Mitigation and/or Management Measure
Unplanned events (accidents / incidents / emergency situations)			
Unplanned hydrocarbon release: ***vessel collision***	• Vessel collision resulting in release of hydrocarbons to the environment.	• In the highly unlikely event of a vessel collision causing a release of marine diesel, impacts to water quality and marine ecosystems could occur. • Modelling of a surface release of marine diesel was used to understand potential impacts. • Marine diesel is a relatively volatile, non-persistent nature hydrocarbon with up to 26% evaporating within the first 24 hours. • Potential to result in a reduction in water quality. • Potential disruption to marine fauna, including protected species. • Potential interference with or displacement of other marine users including fisheries, tourism and recreation.	Preventing marine vessel collisions • Vessels adhere to regulatory requirements for navigational safety and the prevention of vessel collisions. • Notify relevant stakeholders of activity commencement as requested. • Notify the Australian Hydrographic Office prior to commencement of the activity so that marine users are notified of the activity. • Consult with relevant persons so they are informed of the proposed activities. • Establish a temporary 500 m exclusion zone around the LWIV which is communicated to marine users. • **Develop a Concurrent Operations (CONOPS) Plan to manage interactions with the Okha FPSO.** Spill response arrangements • In the event of a spill emergency response activities implemented in accordance with the OPEP. • Arrangements supporting the activities in the OPEP will be tested so that the OPEP can be implemented as planned.

Feedback

If you have feedback specific to the proposed activities, we welcome your feedback via email at feedback @woodside.com, via phone call at 1800 442 977 or via the feedback form at https://www.woodside.com/what-we-do/consultation-activities by **24 August 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suits you.

Your feedback and our response will be included in our EP, which will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for acceptance in accordance with the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (Cth). Your feedback may also be used to support other regulatory processes associated with the planned activities (which may or may not be confidential).

You may request that particular information you provide during consultation not be published in the EP made available on the NOPSEMA website. Please let us know if you request that particular information not be published, and we will make your request known to NOPSEMA.

Personal information collected in the course of consultation will be handled in accordance with Woodside's Environment Plan Privacy Collection Notice. To understand how personal information will be handled, please visit https://www.woodside.com/privacy .

Regards

Woodside Energy Feedback

Woodside Energy
Mia Yellagonga
Karlak, 11 Mount Street
Perth WA 6000
Australia

T: 1800 442 977
E: feedback@woodside.com
www.woodside.com

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.3.22 Email sent to Australian Institute of Marine Science (AIMS), Commonwealth Scientific and Industrial Research Organisation (CSIRO), Curtin University, Edith Cowan University (ECU), Murdoch University, University of Western Australia (UWA), Western Australian Marine Science Institution (WAMSI) – 23 July 2026

Woodside previously consulted you in April 2026 for the CK4 and LH3 Well Intervention Environment Plan (EP). We are issuing an Activity Update as two additional wells, located in the Wanaea field, Wanaea 7 (WA7) and Wanaea 8 (WA8), have been added to the light well intervention (LWI) activities based on synergies with vessel availability for the proposed activity. Reflecting this update, the EP has been renamed the Okha Light Well Intervention (LWI) EP.

Feedback previously submitted during consultation on the CK4 and LH3 Well Intervention EP has been considered and will continue to be included in the EP.

The Okha LWI EP Consultation Information Sheet (CIS) is an update of the previous CK4 and LH3 Well Intervention EP. A copy of the CIS is attached and available on Woodside's website.
Woodside is seeking your advice regarding any research activities that your institution may be undertaking that may overlap with our proposed activities.

Changes introduced through this Activity Update are shown in **bold** below.

Table 1 – Activity and location summary

- **WA7 and WA8 wells will have temporary plugs installed for temporary well suspension.**
- **The temporarily suspended WA7 and WA8 will also be managed under the accepted Okha FPSO Facility Operations EP.**
- **WA7 is located in WA-11-L and WA8 is located in WA-9-L.**
- Updated distances to nearest marine park/nature reserve:
  - Montebello Marine Park – Multiple Use Zone (Cth) is **70 km** south-west of the Operational Area.
  - Dampier Marine Park – Habitat Protection Zone (Cth) is **88 km** south-east of the Operational Area.

Table 2 – Approximate locations of key infrastructure

Production well centre locations	Water Depth (m)	Latitude (WGS84)	Longitude (WGS84)	Title
Cossack-4H (CK4)	~ 81	19° 33 22.909 S	116° 29 35.754 E	WA-9-L
Lambert-3 (LH3)	~ 128	19° 26 58.469 S	116° 29 16.227 E	WA-16-L
Wanaea-7 (WA7)	~ 82	19° 35 31.586 S	116° 26 6.622 E	WA-11-L
Wanaea-8 (WA8)	~ 83	19° 34 40.796 S	116° 26 59.438 E	WA-9-11

Table 3 – Summary of key impacts and risks and proposed management measures

One additional control has been added given the proximity of WA7 and WA8 to the Okha FPSO facility.

Impact/Risk	Description of Source of Impact/Risk	Description of Impact/Risk	Proposed Mitigation and/or Management Measure
Unplanned events (accidents / incidents / emergency situations)			

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Unplanned hydrocarbon release: vessel collision	Vessel collision resulting in release of hydrocarbons to the environment.	• In the highly unlikely event of a vessel collision causing a release of marine diesel, impacts to water quality and marine ecosystems could occur. • Modelling of a surface release of marine diesel was used to understand potential impacts. • Marine diesel is a relatively volatile, non-persistent nature hydrocarbon with up to 26% evaporating within the first 24 hours. • Potential to result in a reduction in water quality. • Potential disruption to marine fauna, including protected species. • Potential interference with or displacement of other marine users including fisheries, tourism and recreation.	• Preventing marine vessel collisions • Vessels adhere to regulatory requirements for navigational safety and the prevention of vessel collisions. • Notify relevant persons of activity commencement as requested. • Notify the Australian Hydrographic Office prior to commencement of the activity so that marine users are notified of the activity. • Consult with relevant persons so they are informed of the proposed activities. • Establish a temporary 500 m exclusion zone around the LWIV which is communicated to marine users. • **Develop a Concurrent Operations (CONOPS) Plan to manage interactions with the Okha FPSO.** • Spill response arrangements • In the event of a spill emergency response activities implemented in accordance with the OPEP. • Arrangements supporting the activities in the OPEP will be tested so that the OPEP can be implemented as planned.

Feedback

If you have feedback specific to the proposed activities, we welcome your feedback via email at feedback@woodside.com, via phone call at 1800 442 977 or via the feedback form on our website by **24 August 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suits you.

Your feedback and our response will be included in our EP, which will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for acceptance in accordance with the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (Cth). Your feedback may also be used to support other regulatory processes associated with the planned activities (which may or may not be confidential).

You may request that particular information you provide during consultation not be published in the EP made available on the NOPSEMA website. Please let us know if you request that particular information not be published, and we will make your request known to NOPSEMA.

Personal information collected in the course of consultation will be handled in accordance with Woodside's Environment Plan Privacy Collection Notice. To understand how personal information will be handled, please visit our website.

6.3.23 Email sent to Department of Climate Change, Energy, the Environment and Water (DCCEEW), Western Australian Museum (WAM) – 23 July 2026

Woodside previously consulted you in April 2026 for the CK4 and LH3 Well Intervention Environment Plan (EP). We are issuing an Activity Update as two additional wells, located in the Wanaea field, Wanaea 7

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

(WA7) and Wanaea 8 (WA8), have been added to the light well intervention (LWI) activities based on synergies with vessel availability for the proposed activity. Reflecting this update, the EP has been renamed the Okha Light Well Intervention (LWI) EP.

Feedback previously submitted during consultation on the CK4 and LH3 Well Intervention EP has been considered and will continue to be included in the EP.

The Okha LWI EP Consultation Information Sheet (CIS) is an update of the previous CK4 and LH3 Well Intervention EP. A copy of the CIS is attached and available on Woodside's website. Please find the attached shipwrecks maps.

Changes introduced through this Activity Update are shown in **bold** below.

Table 1 – Activity and location summary

- **WA7 and WA8 wells will have temporary plugs installed for temporary well suspension.**
- **The temporarily suspended WA7 and WA8 will also be managed under the accepted Okha FPSO Facility Operations EP.**
- **WA7 is located in WA-11-L and WA8 is located in WA-9-L.**
- Updated distances to nearest marine park/nature reserve:
  - Montebello Marine Park – Multiple Use Zone (Cth) is **70 km** south-west of the Operational Area.
  - Dampier Marine Park – Habitat Protection Zone (Cth) is **88 km** south-east of the Operational Area.

Table 2 – Approximate locations of key infrastructure

Production well centre locations	Water Depth (m)	Latitude (WGS84)	Longitude (WGS84)	Title
Cossack-4H (CK4)	~ 81	19° 33 22.909 S	116° 29 35.754 E	WA-9-L
Lambert-3 (LH3)	~ 128	19° 26 58.469 S	116° 29 16.227 E	WA-16-L
Wanaea-7 (WA7)	~ 82	19° 35 31.586 S	116° 26 6.622 E	WA-11-L
Wanaea-8 (WA8)	~ 83	19° 34 40.796 S	116° 26 59.438 E	WA-9-11

Table 3 – Summary of key impacts and risks and proposed management measures

One additional control has been added given the proximity of WA7 and WA8 to the Okha FPSO facility.

Impact/Risk	Description of Source of Impact/Risk	Description of Impact/Risk	Proposed Mitigation and/or Management Measure
Unplanned events (accidents / incidents / emergency situations)			
Unplanned hydrocarbon release: vessel collision	Vessel collision resulting in release of hydrocarbons to the environment.	• In the highly unlikely event of a vessel collision causing a release of marine diesel, impacts to water quality and marine ecosystems could occur. • Modelling of a surface release of marine diesel was used to	• Preventing marine vessel collisions • Vessels adhere to regulatory requirements for navigational safety and the prevention of vessel collisions. • Notify relevant persons of activity commencement as requested. • Notify the Australian Hydrographic Office prior to commencement of the activity so that marine users are notified of the activity.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

		understand potential impacts. • Marine diesel is a relatively volatile, non-persistent nature hydrocarbon with up to 26% evaporating within the first 24 hours. • Potential to result in a reduction in water quality. • Potential disruption to marine fauna, including protected species. • Potential interference with or displacement of other marine users including fisheries, tourism and recreation.	• Consult with relevant persons so they are informed of the proposed activities. • Establish a temporary 500 m exclusion zone around the LWIV which is communicated to marine users. • **Develop a Concurrent Operations (CONOPS) Plan to manage interactions with the Okha FPSO.** • Spill response arrangements • In the event of a spill emergency response activities implemented in accordance with the OPEP. • Arrangements supporting the activities in the OPEP will be tested so that the OPEP can be implemented as planned.

Feedback

If you have feedback specific to the proposed activities, we welcome your feedback via email at feedback@woodside.com, via phone call at 1800 442 977 or via the feedback form on our website by **24 August 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suits you.

Your feedback and our response will be included in our EP, which will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for acceptance in accordance with the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (Cth). Your feedback may also be used to support other regulatory processes associated with the planned activities (which may or may not be confidential).

You may request that particular information you provide during consultation not be published in the EP made available on the NOPSEMA website. Please let us know if you request that particular information not be published, and we will make your request known to NOPSEMA.

Personal information collected in the course of consultation will be handled in accordance with Woodside's Environment Plan Privacy Collection Notice. To understand how personal information will be handled, please visit our website.

6.3.24 Email sent to Department of Planning, Lands and Heritage (DPLH) – 23 July 2026

Woodside previously consulted you in April 2026 for the CK4 and LH3 Well Intervention Environment Plan (EP). We are issuing an Activity Update as two additional wells, located in the Wanaea field, Wanaea 7 (WA7) and Wanaea 8 (WA8), have been added to the light well intervention (LWI) activities based on synergies with vessel availability for the proposed activity. Reflecting this update, the EP has been renamed the Okha Light Well Intervention (LWI) EP.

Feedback previously submitted during consultation on the CK4 and LH3 Well Intervention EP has been considered and will continue to be included in the EP.

The Okha LWI EP Consultation Information Sheet (CIS) is an update of the previous CK4 and LH3 Well Intervention EP. A copy of the CIS is attached and available on Woodside's website. Please find the attached shipwreck map.

Changes introduced through this Activity Update are shown in **bold** below.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 1 – Activity and location summary

- **WA7 and WA8 wells will have temporary plugs installed for temporary well suspension.**
- **The temporarily suspended WA7 and WA8 will also be managed under the accepted Okha FPSO Facility Operations EP.**
- **WA7 is located in WA-11-L and WA8 is located in WA-9-L.**
- Updated distances to nearest marine park/nature reserve:
  - Montebello Marine Park – Multiple Use Zone (Cth) is **70 km** south-west of the Operational Area.
  - Dampier Marine Park – Habitat Protection Zone (Cth) is **88 km** south-east of the Operational Area.

Table 2 – Approximate locations of key infrastructure

Production well centre locations	Water Depth (m)	Latitude (WGS84)	Longitude (WGS84)	Title
Cossack-4H (CK4)	~ 81	19° 33 22.909 S	116° 29 35.754 E	WA-9-L
Lambert-3 (LH3)	~ 128	19° 26 58.469 S	116° 29 16.227 E	WA-16-L
Wanaea-7 (WA7)	~ 82	19° 35 31.586 S	116° 26 6.622 E	WA-11-L
Wanaea-8 (WA8)	~ 83	19° 34 40.796 S	116° 26 59.438 E	WA-9-11

Table 3 – Summary of key impacts and risks and proposed management measures

One additional control has been added given the proximity of WA7 and WA8 to the Okha FPSO facility.

Impact/Risk	Description of Source of Impact/Risk	Description of Impact/Risk	Proposed Mitigation and/or Management Measure
Unplanned events (accidents / incidents / emergency situations)			
Unplanned hydrocarbon release: vessel collision	Vessel collision resulting in release of hydrocarbons to the environment.	• In the highly unlikely event of a vessel collision causing a release of marine diesel, impacts to water quality and marine ecosystems could occur. • Modelling of a surface release of marine diesel was used to understand potential impacts. • Marine diesel is a relatively volatile, non-persistent nature hydrocarbon with up to 26% evaporating within the first 24 hours. • Potential to result in a reduction in water quality.	• Preventing marine vessel collisions • Vessels adhere to regulatory requirements for navigational safety and the prevention of vessel collisions. • Notify relevant persons of activity commencement as requested. • Notify the Australian Hydrographic Office prior to commencement of the activity so that marine users are notified of the activity. • Consult with relevant persons so they are informed of the proposed activities. • Establish a temporary 500 m exclusion zone around the LWIV which is communicated to marine users. • **Develop a Concurrent Operations (CONOPS) Plan to manage interactions with the Okha FPSO.** • Spill response arrangements

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

		• Potential disruption to marine fauna, including protected species. • Potential interference with or displacement of other marine users including fisheries, tourism and recreation.	• In the event of a spill emergency response activities implemented in accordance with the OPEP. • Arrangements supporting the activities in the OPEP will be tested so that the OPEP can be implemented as planned.

Feedback

If you have feedback specific to the proposed activities, we welcome your feedback via email at feedback@woodside.com, via phone call at 1800 442 977 or via the feedback form on our website by **24 August 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suits you.

Your feedback and our response will be included in our EP, which will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for acceptance in accordance with the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (Cth). Your feedback may also be used to support other regulatory processes associated with the planned activities (which may or may not be confidential).

You may request that particular information you provide during consultation not be published in the EP made available on the NOPSEMA website. Please let us know if you request that particular information not be published, and we will make your request known to NOPSEMA.

Personal information collected in the course of consultation will be handled in accordance with Woodside's Environment Plan Privacy Collection Notice. To understand how personal information will be handled, please visit our website.

6.3.25 Email sent to Shire of Ashburton – 23 July 2026

Woodside previously consulted you in April 2026 for the CK4 and LH3 Well Intervention Environment Plan (EP). We are issuing an Activity Update as two additional wells, located in the Wanaea field, Wanaea 7 (WA7) and Wanaea 8 (WA8), have been added to the light well intervention (LWI) activities based on synergies with vessel availability for the proposed activity. Reflecting this update, the EP has been renamed the Okha Light Well Intervention (LWI) EP.

Feedback previously submitted during consultation on the CK4 and LH3 Well Intervention EP has been considered and will continue to be included in the EP.

The Okha LWI EP Consultation Information Sheet (CIS) is an update of the previous CK4 and LH3 Well Intervention EP. A copy of the CIS is attached and available on Woodside's website.

Changes introduced through this Activity Update are shown in **bold** below.

Table 1 – Activity and location summary

- **WA7 and WA8 wells will have temporary plugs installed for temporary well suspension.**
- **The temporarily suspended WA7 and WA8 will also be managed under the accepted Okha FPSO Facility Operations EP.**
- **WA7 is located in WA-11-L and WA8 is located in WA-9-L.**
- Updated distances to nearest marine park/nature reserve:
  - Montebello Marine Park – Multiple Use Zone (Cth) is **70 km** south-west of the Operational Area.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- Dampier Marine Park – Habitat Protection Zone (Cth) is **88 km** south-east of the Operational Area.

Table 2 – Approximate locations of key infrastructure

Production well centre locations	Water Depth (m)	Latitude (WGS84)	Longitude (WGS84)	Title
Cossack-4H (CK4)	~ 81	19° 33 22.909 S	116° 29 35.754 E	WA-9-L
Lambert-3 (LH3)	~ 128	19° 26 58.469 S	116° 29 16.227 E	WA-16-L
Wanaea-7 (WA7)	~ 82	19° 35 31.586 S	116° 26 6.622 E	WA-11-L
Wanaea-8 (WA8)	~ 83	19° 34 40.796 S	116° 26 59.438 E	WA-9-11

Table 3 – Summary of key impacts and risks and proposed management measures

One additional control has been added given the proximity of WA7 and WA8 to the Okha FPSO facility.

Impact/Risk	Description of Source of Impact/Risk	Description of Impact/Risk	Proposed Mitigation and/or Management Measure
Unplanned events (accidents / incidents / emergency situations)			
Unplanned hydrocarbon release: vessel collision	Vessel collision resulting in release of hydrocarbons to the environment.	• In the highly unlikely event of a vessel collision causing a release of marine diesel, impacts to water quality and marine ecosystems could occur. • Modelling of a surface release of marine diesel was used to understand potential impacts. • Marine diesel is a relatively volatile, non-persistent nature hydrocarbon with up to 26% evaporating within the first 24 hours. • Potential to result in a reduction in water quality. • Potential disruption to marine fauna, including protected species. • Potential interference with or displacement of other marine users including fisheries, tourism and recreation.	• Preventing marine vessel collisions • Vessels adhere to regulatory requirements for navigational safety and the prevention of vessel collisions. • Notify relevant persons of activity commencement as requested. • Notify the Australian Hydrographic Office prior to commencement of the activity so that marine users are notified of the activity. • Consult with relevant persons so they are informed of the proposed activities. • Establish a temporary 500 m exclusion zone around the LWIV which is communicated to marine users. • **Develop a Concurrent Operations (CONOPS) Plan to manage interactions with the Okha FPSO.** • Spill response arrangements • In the event of a spill emergency response activities implemented in accordance with the OPEP. • Arrangements supporting the activities in the OPEP will be tested so that the OPEP can be implemented as planned.

Feedback

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

If you have feedback specific to the proposed activities, we welcome your feedback via email at feedback@woodside.com, via phone call at 1800 442 977 or via the feedback form on our website by **24 August 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suits you.

Your feedback and our response will be included in our EP, which will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for acceptance in accordance with the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (Cth). Your feedback may also be used to support other regulatory processes associated with the planned activities (which may or may not be confidential).

You may request that particular information you provide during consultation not be published in the EP made available on the NOPSEMA website. Please let us know if you request that particular information not be published, and we will make your request known to NOPSEMA.

Personal information collected in the course of consultation will be handled in accordance with Woodside's Environment Plan Privacy Collection Notice. To understand how personal information will be handled, please visit our website.

6.3.26 Email sent to Chevron Australia – 23 July 2026

Woodside previously consulted you in April 2026 for the CK4 and LH3 Well Intervention Environment Plan (EP). We are issuing an Activity Update as two additional wells, located in the Wanaea field, Wanaea 7 (WA7) and Wanaea 8 (WA8), have been added to the light well intervention (LWI) activities based on synergies with vessel availability for the proposed activity. Reflecting this update, the EP has been renamed the Okha Light Well Intervention (LWI) EP.

Feedback previously submitted during consultation on the CK4 and LH3 Well Intervention EP has been considered and will continue to be included in the EP.

The Okha LWI EP Consultation Information Sheet (CIS) is an update of the previous CK4 and LH3 Well Intervention EP. A copy of the CIS is attached and available on Woodside's website. Please also find attached GIS shape files. We would be grateful if you could please forward this consultation update to your Joint Venture participants Osaka Gas Gorgon, MidOcean Gorgon and JERA Gorgon for feedback.

Changes introduced through this Activity Update are shown in **bold** below.

Table 1 – Activity and location summary

- **WA7 and WA8 wells will have temporary plugs installed for temporary well suspension.**
- **The temporarily suspended WA7 and WA8 will also be managed under the accepted Okha FPSO Facility Operations EP.**
- **WA7 is located in WA-11-L and WA8 is located in WA-9-L.**
- Updated distances to nearest marine park/nature reserve:
  - Montebello Marine Park – Multiple Use Zone (Cth) is **70 km** south-west of the Operational Area.
  - Dampier Marine Park – Habitat Protection Zone (Cth) is **88 km** south-east of the Operational Area.

Table 2 – Approximate locations of key infrastructure

Production well centre locations	Water Depth (m)	Latitude (WGS84)	Longitude (WGS84)	Title
Cossack-4H (CK4)	~ 81	19° 33 22.909 S	116° 29 35.754 E	WA-9-L
Lambert-3 (LH3)	~ 128	19° 26 58.469 S	116° 29 16.227 E	WA-16-L
Wanaea-7 (WA7)	~ 82	19° 35 31.586 S	116° 26 6.622 E	WA-11-L

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Wanaea-8 (WA8)	~ 83	19° 34 40.796 S	116° 26 59.438 E	WA-9-11

Table 3 – Summary of key impacts and risks and proposed management measures

One additional control has been added given the proximity of WA7 and WA8 to the Okha FPSO facility.

Impact/Risk	Description of Source of Impact/Risk	Description of Impact/Risk	Proposed Mitigation and/or Management Measure
Unplanned events (accidents / incidents / emergency situations)			
Unplanned hydrocarbon release: vessel collision	Vessel collision resulting in release of hydrocarbons to the environment.	• In the highly unlikely event of a vessel collision causing a release of marine diesel, impacts to water quality and marine ecosystems could occur. • Modelling of a surface release of marine diesel was used to understand potential impacts. • Marine diesel is a relatively volatile, non-persistent nature hydrocarbon with up to 26% evaporating within the first 24 hours. • Potential to result in a reduction in water quality. • Potential disruption to marine fauna, including protected species. • Potential interference with or displacement of other marine users including fisheries, tourism and recreation.	• Preventing marine vessel collisions • Vessels adhere to regulatory requirements for navigational safety and the prevention of vessel collisions. • Notify relevant persons of activity commencement as requested. • Notify the Australian Hydrographic Office prior to commencement of the activity so that marine users are notified of the activity. • Consult with relevant persons so they are informed of the proposed activities. • Establish a temporary 500 m exclusion zone around the LWIV which is communicated to marine users. • **Develop a Concurrent Operations (CONOPS) Plan to manage interactions with the Okha FPSO.** • Spill response arrangements • In the event of a spill emergency response activities implemented in accordance with the OPEP. • Arrangements supporting the activities in the OPEP will be tested so that the OPEP can be implemented as planned.

Feedback

If you have feedback specific to the proposed activities, we welcome your feedback via email at feedback@woodside.com, via phone call at 1800 442 977 or via the feedback form on our website by **24 August 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suits you.

Your feedback and our response will be included in our EP, which will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for acceptance in accordance with the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (Cth). Your feedback may also be used to support other regulatory processes associated with the planned activities (which may or may not be confidential).

You may request that particular information you provide during consultation not be published in the EP made available on the NOPSEMA website. Please let us know if you request that particular information not be published, and we will make your request known to NOPSEMA.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Personal information collected in the course of consultation will be handled in accordance with Woodside's Environment Plan Privacy Collection Notice. To understand how personal information will be handled, please visit our website.

6.3.27 Email sent to Western Australian Fishing Industry Council – 16 April 2026

Please see SI Report A, reference 10.6

6.3.28 Email sent by WAFIC on behalf of Woodside to Mackerel Managed Fishery (Area 2), Pilbara Trap Fishery, Pilbara Line Fishery, Pilbara Trawl Fishery

Dear Licence Holders:

Woodside, through WAFIC, previously consulted you in April 2026 for the CK4 and LH3 Well Intervention Environment Plan (EP). We are issuing an Activity Update as two additional wells, located in the Wanaea field, Wanaea 7 (WA7) and Wanaea 8 (WA8), have been added to the light well intervention (LWI) activities based on synergies with vessel availability for the proposed activity. Reflecting this update, the EP has been renamed the Okha Light Well Intervention (LWI) EP.

If you would like to comment on the proposed activity, please contact WAFIC by 24 August 2026 using the details below.

The Okha LWI EP Consultation Information Sheet (CIS) is an update of the previous CK4 and LH3 Well Intervention EP. A copy of the CIS is attached and available on Woodside's website.

Changes introduced through this Activity Update are shown in **bold** below.

Table 1 – Activity and location summary

- **WA7 and WA8 wells will have temporary plugs installed for temporary well suspension.**
- **The temporarily suspended WA7 and WA8 will also be managed under the accepted Okha FPSO Facility Operations EP.**
- **WA7 is located in WA-11-L and WA8 is located in WA-9-L.**
- Updated distances to nearest marine park/nature reserve:
  - Montebello Marine Park – Multiple Use Zone (Cth) is **70 km** south-west of the Operational Area.
  - Dampier Marine Park – Habitat Protection Zone (Cth) is **88 km** south-east of the Operational Area.

Table 2 – Approximate locations of key infrastructure

Production well centre locations	Water Depth (m)	Latitude (WGS84)	Longitude (WGS84)	Title
Cossack-4H (CK4)	~ 81	19° 33 22.909 S	116° 29 35.754 E	WA-9-L
Lambert-3 (LH3)	~ 128	19° 26 58.469 S	116° 29 16.227 E	WA-16-L
Wanaea-7 (WA7)	**~ 82**	**19° 35 31.586 S**	**116° 26 6.622 E**	**WA-11-L**
Wanaea-8 (WA8)	**~ 83**	**19° 34 40.796 S**	**116° 26 59.438 E**	**WA-9-11**

Table 3 – Summary of key impacts and risks and proposed management measures

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

One additional control has been added given the proximity of WA7 and WA8 to the Okha FPSO facility.

Impact/Risk	Description of Source of Impact/Risk	Description of Impact/Risk	Proposed Mitigation and/or Management Measure
Unplanned events (accidents / incidents / emergency situations)			
Unplanned hydrocarbon release: *vessel collision*	Vessel collision resulting in release of hydrocarbons to the environment.	• In the highly unlikely event of a vessel collision causing a release of marine diesel, impacts to water quality and marine ecosystems could occur. • Modelling of a surface release of marine diesel was used to understand potential impacts. • Marine diesel is a relatively volatile, non-persistent nature hydrocarbon with up to 26% evaporating within the first 24 hours. • Potential to result in a reduction in water quality. • Potential disruption to marine fauna, including protected species. • Potential interference with or displacement of other marine users including fisheries, tourism and recreation.	• Preventing marine vessel collisions • Vessels adhere to regulatory requirements for navigational safety and the prevention of vessel collisions. • Notify relevant persons of activity commencement as requested. • Notify the Australian Hydrographic Office prior to commencement of the activity so that marine users are notified of the activity. • Consult with relevant persons so they are informed of the proposed activities. • Establish a temporary 500 m exclusion zone around the LWIV which is communicated to marine users. • **Develop a Concurrent Operations (CONOPS) Plan to manage interactions with the Okha FPSO.** • Spill response arrangements • In the event of a spill emergency response activities implemented in accordance with the OPEP. • Arrangements supporting the activities in the OPEP will be tested so that the OPEP can be implemented as planned.

Feedback

Please provide feedback specific to the proposed activities described to [Individual 1] by 24 August 2026.

Your feedback and Woodside's response will be included in Woodside's EP, which will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for acceptance in accordance with the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (Cth). Your feedback may also be used to support other regulatory processes associated with the planned activities (which may or may not be confidential).

You may request that particular information you provide during consultation not be published in the EP made available on the NOPSEMA website. Please let WAFIC know if you request that particular information not be published, and if so, Woodside will make your request known to NOPSEMA.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Personal information collected in the course of consultation will be handled in accordance with Woodside's Environment Plan Privacy Collection Notice. To understand how personal information will be handled, please visit Woodside's website.

6.3.29 Email sent to Department of Biodiversity, Conservation and Attractions (DBCA) – 23 July 2026

Woodside previously consulted you in April 2026 for the CK4 and LH3 Well Intervention Environment Plan (EP). We are issuing an Activity Update as two additional wells, located in the Wanaea field, Wanaea 7 (WA7) and Wanaea 8 (WA8), have been added to the light well intervention (LWI) activities based on synergies with vessel availability for the proposed activity. Reflecting this update, the EP has been renamed the Okha Light Well Intervention (LWI) EP.

Feedback previously submitted during consultation on the CK4 and LH3 Well Intervention EP has been considered and will continue to be included in the EP.

The Okha LWI EP Consultation Information Sheet (CIS) is an update of the previous CK4 and LH3 Well Intervention EP. A copy of the CIS is attached and available on Woodside's website.

Changes introduced through this Activity Update are shown in **bold** below.

Table 1 – Activity and location summary

- **WA7 and WA8 wells will have temporary plugs installed for temporary well suspension.**
- **The temporarily suspended WA7 and WA8 will also be managed under the accepted Okha FPSO Facility Operations EP.**
- **WA7 is located in WA-11-L and WA8 is located in WA-9-L.**
- Updated distances to nearest marine park/nature reserve:
  - Montebello Marine Park – Multiple Use Zone (Cth) is **70 km** south-west of the Operational Area.
  - Dampier Marine Park – Habitat Protection Zone (Cth) is **88 km** south-east of the Operational Area.

Table 2 – Approximate locations of key infrastructure

Production well centre locations	Water Depth (m)	Latitude (WGS84)	Longitude (WGS84)	Title
Cossack-4H (CK4)	~ 81	19° 33 22.909 S	116° 29 35.754 E	WA-9-L
Lambert-3 (LH3)	~ 128	19° 26 58.469 S	116° 29 16.227 E	WA-16-L
Wanaea-7 (WA7)	~ 82	19° 35 31.586 S	116° 26 6.622 E	WA-11-L
Wanaea-8 (WA8)	~ 83	19° 34 40.796 S	116° 26 59.438 E	WA-9-11

Table 3 – Summary of key impacts and risks and proposed management measures

One additional control has been added given the proximity of WA7 and WA8 to the Okha FPSO facility.

Impact/Risk	Description of Source of Impact/Risk	Description of Impact/Risk	Proposed Mitigation and/or Management Measure
Unplanned events (accidents / incidents / emergency situations)			

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Unplanned hydrocarbon release: vessel collision	Vessel collision resulting in release of hydrocarbons to the environment.	• In the highly unlikely event of a vessel collision causing a release of marine diesel, impacts to water quality and marine ecosystems could occur. • Modelling of a surface release of marine diesel was used to understand potential impacts. • Marine diesel is a relatively volatile, non-persistent nature hydrocarbon with up to 26% evaporating within the first 24 hours. • Potential to result in a reduction in water quality. • Potential disruption to marine fauna, including protected species. • Potential interference with or displacement of other marine users including fisheries, tourism and recreation.	• Preventing marine vessel collisions • Vessels adhere to regulatory requirements for navigational safety and the prevention of vessel collisions. • Notify relevant persons of activity commencement as requested. • Notify the Australian Hydrographic Office prior to commencement of the activity so that marine users are notified of the activity. • Consult with relevant persons so they are informed of the proposed activities. • Establish a temporary 500 m exclusion zone around the LWIV which is communicated to marine users. • **Develop a Concurrent Operations (CONOPS) Plan to manage interactions with the Okha FPSO.** • Spill response arrangements • In the event of a spill emergency response activities implemented in accordance with the OPEP. • Arrangements supporting the activities in the OPEP will be tested so that the OPEP can be implemented as planned.

Feedback

If you have feedback specific to the proposed activities, we welcome your feedback via email at feedback@woodside.com, via phone call at 1800 442 977 or via the feedback form on our website by **24 August 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suits you.

Your feedback and our response will be included in our EP, which will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for acceptance in accordance with the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (Cth). Your feedback may also be used to support other regulatory processes associated with the planned activities (which may or may not be confidential).

You may request that particular information you provide during consultation not be published in the EP made available on the NOPSEMA website. Please let us know if you request that particular information not be published, and we will make your request known to NOPSEMA.

Personal information collected in the course of consultation will be handled in accordance with Woodside's Environment Plan Privacy Collection Notice. To understand how personal information will be handled, please visit our website.

6.3.30 Email sent to Aquaculture Council of Western Australia (ACWA) – 23 July 2026

Woodside previously consulted you in April 2026 for the CK4 and LH3 Well Intervention Environment Plan (EP). We are issuing an Activity Update as two additional wells, located in the Wanaea field, Wanaea 7 (WA7) and Wanaea 8 (WA8), have been added to the light well intervention (LWI) activities based on

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

synergies with vessel availability for the proposed activity. Reflecting this update, the EP has been renamed the Okha Light Well Intervention (LWI) EP.

Feedback previously submitted during consultation on the CK4 and LH3 Well Intervention EP has been considered and will continue to be included in the EP.

The Okha LWI EP Consultation Information Sheet (CIS) is an update of the previous CK4 and LH3 Well Intervention EP. A copy of the CIS is attached and available on Woodside's website.

Changes introduced through this Activity Update are shown in **bold** below.

Table 1 – Activity and location summary

- **WA7 and WA8 wells will have temporary plugs installed for temporary well suspension.**
- **The temporarily suspended WA7 and WA8 will also be managed under the accepted Okha FPSO Facility Operations EP.**
- **WA7 is located in WA-11-L and WA8 is located in WA-9-L.**
- Updated distances to nearest marine park/nature reserve:
  - Montebello Marine Park – Multiple Use Zone (Cth) is **70 km** south-west of the Operational Area.
  - Dampier Marine Park – Habitat Protection Zone (Cth) is **88 km** south-east of the Operational Area.

Table 2 – Approximate locations of key infrastructure

Production well centre locations	Water Depth (m)	Latitude (WGS84)	Longitude (WGS84)	Title
Cossack-4H (CK4)	~ 81	19° 33 22.909 S	116° 29 35.754 E	WA-9-L
Lambert-3 (LH3)	~ 128	19° 26 58.469 S	116° 29 16.227 E	WA-16-L
Wanaea-7 (WA7)	~ 82	19° 35 31.586 S	116° 26 6.622 E	WA-11-L
Wanaea-8 (WA8)	~ 83	19° 34 40.796 S	116° 26 59.438 E	WA-9-11

Table 3 – Summary of key impacts and risks and proposed management measures

One additional control has been added given the proximity of WA7 and WA8 to the Okha FPSO facility.

Impact/Risk	Description of Source of Impact/Risk	Description of Impact/Risk	Proposed Mitigation and/or Management Measure
Unplanned events (accidents / incidents / emergency situations)			
Unplanned hydrocarbon release: vessel collision	Vessel collision resulting in release of hydrocarbons to the environment.	• In the highly unlikely event of a vessel collision causing a release of marine diesel, impacts to water quality and marine ecosystems could occur. • Modelling of a surface release of marine diesel was used to understand potential impacts.	• Preventing marine vessel collisions • Vessels adhere to regulatory requirements for navigational safety and the prevention of vessel collisions. • Notify relevant persons of activity commencement as requested. • Notify the Australian Hydrographic Office prior to commencement of the activity so that marine users are notified of the activity. • Consult with relevant persons so they are informed of the proposed activities.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

		• Marine diesel is a relatively volatile, non-persistent nature hydrocarbon with up to 26% evaporating within the first 24 hours. • Potential to result in a reduction in water quality. • Potential disruption to marine fauna, including protected species. • Potential interference with or displacement of other marine users including fisheries, tourism and recreation.	• Establish a temporary 500 m exclusion zone around the LWIV which is communicated to marine users. • **Develop a Concurrent Operations (CONOPS) Plan to manage interactions with the Okha FPSO.** • Spill response arrangements • In the event of a spill emergency response activities implemented in accordance with the OPEP. • Arrangements supporting the activities in the OPEP will be tested so that the OPEP can be implemented as planned.

Feedback

If you have feedback specific to the proposed activities, we welcome your feedback via email at feedback@woodside.com, via phone call at 1800 442 977 or via the feedback form on our website by **24 August 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suits you.

Your feedback and our response will be included in our EP, which will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for acceptance in accordance with the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (Cth). Your feedback may also be used to support other regulatory processes associated with the planned activities (which may or may not be confidential).

You may request that particular information you provide during consultation not be published in the EP made available on the NOPSEMA website. Please let us know if you request that particular information not be published, and we will make your request known to NOPSEMA.

Personal information collected in the course of consultation will be handled in accordance with Woodside's Environment Plan Privacy Collection Notice. To understand how personal information will be handled, please visit our website.

ction Notice. To understand how personal information will be handled, please visit our website.

6.3.31 Email sent to Pilbara Ports – 23 July 2026

Woodside previously consulted you in April 2026 for the CK4 and LH3 Well Intervention Environment Plan (EP). We are issuing an Activity Update as two additional wells, located in the Wanaea field, Wanaea 7 (WA7) and Wanaea 8 (WA8), have been added to the light well intervention (LWI) activities based on synergies with vessel availability for the proposed activity. Reflecting this update, the EP has been renamed the Okha Light Well Intervention (LWI) EP.

Feedback previously submitted during consultation on the CK4 and LH3 Well Intervention EP has been considered and will continue to be included in the EP.

The Okha LWI EP Consultation Information Sheet (CIS) is an update of the previous CK4 and LH3 Well Intervention EP. A copy of the CIS is attached and available on Woodside's website. Please find the attached ports map.

Changes introduced through this Activity Update are shown in **bold** below.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 1 – Activity and location summary

- **WA7 and WA8 wells will have temporary plugs installed for temporary well suspension.**
- **The temporarily suspended WA7 and WA8 will also be managed under the accepted Okha FPSO Facility Operations EP.**
- **WA7 is located in WA-11-L and WA8 is located in WA-9-L.**
- Updated distances to nearest marine park/nature reserve:
  - Montebello Marine Park – Multiple Use Zone (Cth) is **70 km** south-west of the Operational Area.
  - Dampier Marine Park – Habitat Protection Zone (Cth) is **88 km** south-east of the Operational Area.

Table 2 – Approximate locations of key infrastructure

Production well centre locations	Water Depth (m)	Latitude (WGS84)	Longitude (WGS84)	Title
Cossack-4H (CK4)	~ 81	19° 33 22.909 S	116° 29 35.754 E	WA-9-L
Lambert-3 (LH3)	~ 128	19° 26 58.469 S	116° 29 16.227 E	WA-16-L
Wanaea-7 (WA7)	~ 82	19° 35 31.586 S	116° 26 6.622 E	WA-11-L
Wanaea-8 (WA8)	~ 83	19° 34 40.796 S	116° 26 59.438 E	WA-9-11

Table 3 – Summary of key impacts and risks and proposed management measures

One additional control has been added given the proximity of WA7 and WA8 to the Okha FPSO facility.

Impact/Risk	Description of Source of Impact/Risk	Description of Impact/Risk	Proposed Mitigation and/or Management Measure
Unplanned events (accidents / incidents / emergency situations)			
Unplanned hydrocarbon release: vessel collision	Vessel collision resulting in release of hydrocarbons to the environment.	• In the highly unlikely event of a vessel collision causing a release of marine diesel, impacts to water quality and marine ecosystems could occur. • Modelling of a surface release of marine diesel was used to understand potential impacts. • Marine diesel is a relatively volatile, non-persistent nature hydrocarbon with up to 26% evaporating within the first 24 hours. • Potential to result in a reduction in water quality.	• Preventing marine vessel collisions • Vessels adhere to regulatory requirements for navigational safety and the prevention of vessel collisions. • Notify relevant persons of activity commencement as requested. • Notify the Australian Hydrographic Office prior to commencement of the activity so that marine users are notified of the activity. • Consult with relevant persons so they are informed of the proposed activities. • Establish a temporary 500 m exclusion zone around the LWIV which is communicated to marine users. • **Develop a Concurrent Operations (CONOPS) Plan to manage interactions with the Okha FPSO.** • Spill response arrangements

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

		• Potential disruption to marine fauna, including protected species. • Potential interference with or displacement of other marine users including fisheries, tourism and recreation.	• In the event of a spill emergency response activities implemented in accordance with the OPEP. • Arrangements supporting the activities in the OPEP will be tested so that the OPEP can be implemented as planned.

Feedback

If you have feedback specific to the proposed activities, we welcome your feedback via email at feedback@woodside.com, via phone call at 1800 442 977 or via the feedback form on our website by **24 August 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suits you.

Your feedback and our response will be included in our EP, which will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for acceptance in accordance with the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (Cth). Your feedback may also be used to support other regulatory processes associated with the planned activities (which may or may not be confidential).

You may request that particular information you provide during consultation not be published in the EP made available on the NOPSEMA website. Please let us know if you request that particular information not be published, and we will make your request known to NOPSEMA.

Personal information collected in the course of consultation will be handled in accordance with Woodside's Environment Plan Privacy Collection Notice. To understand how personal information will be handled, please visit our website.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.4 Newspaper advertisements

6.4.1 The Australian – 16 April 2026

THE AUSTRALIAN THURSDAY, APRIL 16, 2026

Test for treaty as PNG troops face lockdown

BEN PACKHAM
FOREIGN AFFAIRS AND DEFENCE CORRESPONDENT

Australia's soon-to-be ally Papua New Guinea has ordered its military personnel to be confined to barracks for a month amid fears of unrest over nepotism and fraud allegations that forced the country's defence minister to step aside.

The crisis comes as the Albanese government prepares to ratify the countries' Pukpuk treaty and recruit Papua New Guineans to the Australian Defence Force.

PNG Defence Force chief Philip Polevaru directed all bases to be closed and personnel be denied access to weapons and ammunition after soldiers set up roadblocks in Port Moresby in protest at courts-martial against up to five alleged whistleblowers.

Some soldiers in PNG's second city of Lae defied the order, leaving the city's Lyam Barracks to demand the sidelined minister, Billy Joseph, be arrested.

Prime Minister James Marape assumed responsibility for the defence portfolio last week after Dr Joseph stood aside over allegations of recruitment "irregularities". It followed the emergence of videos on social media of would-be recruits allegedly using fake documents to meet the force's 25-year age cap. The applicants were allegedly known to Dr Joseph, who denies any interference in the recruitment process.

Senior ADF officers will support an independent inquiry into the matter by PNG's chief secretary and state solicitor.

Mr Marape called for calm, warning those involved in unlawful or disorderly conduct risked disciplinary action and dismissal.

"Discipline is the foundation of our defence force, and any actions that undermine order and stability will not be tolerated," the Prime Minister said.

He said he had asked Rear Admiral Polevaru to pause an internal investigation into the actions of the alleged whistleblowers pending the results of the cabinet-ordered inquiry.

Australia last year pledged 3500 new automatic rifles for the PNGDF and improved armouries to prevent the weapons being stolen and used in tribal conflicts.

The ADF opened recruitment of eligible Papua New Guineans on January 1, though it is unclear whether any applicants have been accepted. It will draw its recruits from the ranks of school leavers and university graduates rather than the country's military.

PNG Institute of National Affairs executive director Paul Barker said the PNGDF's governance and standards had been allowed to deteriorate over the years and work was needed to rebuild morale and standards.

"In the old days you'd find the defence soldiers smart, washed and so on," he said.

"Now they're a lot more lackadaisical, not in every instance but you do find standards, including levels of fitness, well below what people recall from older days.

"Obviously through the partnership (with Australia) you want to see those standards improved."

Retired Major General Mick Ryan said the challenges made the Pukpuk treaty all the more important. "At times like this, when your friends are having trouble, that's when you step up in the relationship," he said.

"PNG is a consequential country for Australia, and we should steadfastly them."

Australia will pour hundreds of millions of dollars into the PNGDF under the Pukpuk treaty, which requires each country to "act to meet the common danger" if there is an armed attack on either. It flags expanded defence co-operation through "enhanced capability, interoperability and integration".

The treaty was signed by Anthony Albanese and Mr Marape last October after initial headaches in getting the support of the PNG cabinet for the agreement.

It was a diplomatic coup for Labor, reinforcing Australia's strategic buffer by sidelining China's ambitions for closer security ties with Port Moresby.

Mr Albanese said at the time that the nations' militaries would work more closely together than ever before. "The treaty ... speaks about interoperability," he said. "So, that means defence assets, but our greatest asset is our people."

The has been facing acute budget constraints in recent years. The Australian revealed last October that the force faced a shortfall in its food services over an unpaid $8.2m catering bill.

Hancock-a-hoop and downright rich ... they all win and lose





SHAUN SMITH / NEWSWIRE, ERNIE MCINTYRE, ABC

Bianca Rinehart and John Hancock at court; Lang Hancock with Rose Porteous in 1957; below, Peter Wright



PAUL GARVEY

One of Australia's costliest pieces of civil litigation has ended – at least for now – with both main protagonists claiming victory. Gina Rinehart has successfully seen off attempts by her father's former business partner and two of her children to claim ownership of some of her most valuable assets, but will need to fork out hundreds of millions of dollars of past and future royalties as a result of the mammoth judgment handed down in the WA Supreme Court on Wednesday.

All the parties involved in the trial suffered some degree of loss, particularly Mrs Rinehart's children, John Hancock and Bianca Rinehart, but arguably the biggest loser from the decision was the reputation of the man who was integral to identifying the iron ore riches at the heart of it all: Lang Hancock.

In her decision spelling out how to carve up the fast disputed spoils of Lang Hancock's iron ore empire, judge Jennifer Smith made some damning findings about the conduct of the iron ore pioneer during the final years of his life.

While Lang Hancock was on one hand trying to carve up assets with his former business partner Peter Wright in an effort to avoid the exact sort of litigation that has played out in the court for the past 16 years, Justice Smith's judgment found the patriarch had breached his fiduciary duties as a director amid a "dynastic struggle" with his daughter.

"It is clear that the action of Lang Hancock in diverting HPPL's for Hancock Prospecting's property and opportunities ... was done not to protect HPPL's assets but to avoid scrutiny by Gina Rinehart," the decision said.

Those conclusions emerged from Justice Smith's examination of thousands of pieces of correspondence, contracts and transcripts as she attempted to reconstruct just who was entitled to what out of the mammoth Pilbara iron ore assets which famously caught the eye of Lang Hancock decades ago.

The upshot of Justice Smith's decision was good and bad news for everyone involved.

Mrs Rinehart and Hancock Prospecting will now have to pay Wright Prospecting and DFD Rhodes – the family business established respectively by Lang Hancock's former business partner, Wright, and fellow prospector Don Rhodes – millions in royalties that they had argued had no basis. Hancock Prospecting estimates the royalties will be worth around $1bn a year to DFD Rhodes and around $14bn to Wright Prospecting.

Those sums may sound large, but they pale in comparison to the multi-billion-dollar value of the East Angelas iron ore project in which both Wright Prospecting and John Hancock and Bianca Rinehart had been seeking shares. The court found in Hancock Prospecting's favour, leaving a key piece of Mrs Rinehart's asset base intact.

In statements issued after the decision, both Hancock Prospecting and Wright Prospecting claimed victory.

Hancock Prospecting executive director Jay Newby said the primary issue on the proceedings was the ownership of the iron ore assets themselves, and dismissed the royalties matter as a "far less significant issue".

"HPPL welcomes the WA Supreme Court decision which decisively confirms HPPL's rightful ownership of these tenements finally rejecting the baseless ownership claims of John, Bianca and Wright Prospecting Pty Ltd (WPPL) in their entirety," Mr Newby said.

> 'The parties could consider simply bearing their own cost of the proceedings'
>
> JENNIFER SMITH
> SUPREME COURT JUDGE

He also said that the decision demonstrated that the assertions of fraud made against Mrs Rinehart and Hancock Prospecting in relation to the ownership of the projects during the trial were "plainly wrong".

A spokesman for Wright Prospecting meanwhile said the company also welcomed the court's decision.

"These proceedings were commenced in 2010 and, after many delays, we are pleased to finally receive a result in our favour. The decision is lengthy and complex. We will review it in detail before determining if any further steps need to be taken," the spokesman said.

Reflecting the split-points-to-turn of the decision, Justice Smith suggested both Hancock and Wright consider wearing their respective shares of the court costs.

"When one reviews all the findings I've made, it could perhaps be found that WPPL won half of its case and lost half of its case, and HPPL has won and lost half of its case," Justice Smith said. "The parties could consider simply bearing their own cost of the proceedings."

While Hancock Prospecting and Wright Prospecting already collect enormous amounts of iron ore royalties each year, the royalties that will now flow to DFD Rhodes following Wednesday's decision will have a huge impact on that company's finances. Speaking outside court, DFD Rhodes chief executive Matt Keady described the royalties order as a "substantial" win over a "formidable opponent".

"We are very, very pleased that the court has recognised the contribution of Don Rhodes to the iron ore industry," he said.

The case is among the most costly civil actions ever seen before an Australian court. No fewer than 30 lawyers, six SCs and one KC were jammed into Court 82 of Western Australia's David Malcolm Justice Centre for the start of the 2021 trial. That court is the largest in the state's Supreme Court, but rows of the public gallery had to be ripped out to accommodate extra seating and desks for the huge number of lawyers.

The number of lawyers present had thinned out slightly for Wednesday's verdict, with at least 15 present in the court and another seven dialling in remotely.

The decision is almost certain to be appealed, given the size of the fortune at the centre of the case and the deep pockets of the case's protagonists.

The proceedings have outlasted the original judge, Rene Le Miere, who reached the compulsory retirement age before it could make it to trial. Justice Smith herself had to secure special approval to serve two years beyond her mandatory retirement in order to work on her verdict.

None of the main individuals involved in the case was in court of Wednesday's verdict.

Both Mrs Rinehart and Wright Prospecting matriarch Angela Bennett were absent from court throughout the proceedings. Both John Hancock and Bianca Rinehart attended some sessions of the 2021 trial, but neither attended on Wednesday.

Blood feud to olive branch

Continued from Page 1

Rose Porteous, and in the past two decades on the other side of the table in his own protracted dispute with the matriarch.

The estrangement of John and his mother has played out in the public eye for years, and goes well beyond the legal challenges John has launched against her. John famously adopted the surname of his grandfather Lang Hancock, and his mother did not attend her son's wedding in the Pilbara's Hancock Gorge more than a decade ago.

John and Bianca were not initially parties to the claim brought by Wright Prospecting against Mrs Rinehart's Hancock Prospecting, and which was decided on Wednesday, but were dragged in given the crossover between the case and his own dispute with his mother.

John and Bianca's case remains the subject of arbitration. But their mother and her legal team still now resume that process with increased confidence given the findings handed down by judge Jennifer Smith.

The judge found that the claim brought by John and Bianca "failed at the first hurdle".

Jay Newby, the executive director of Hancock Prospecting, said the decision "decisively confirms" the company's ownership of key Pilbara tenements and "finally rejected" the baseless ownership claims of John and Bianca, as well as a rival claim from Wright Prospecting, "in their entirety".

If that statement is anything to go by, John's call for a reconciliation is likely to be as futile as his grandfather's own attempts to stave off future litigation over his legacy.

Back in 1982, when John was just six years old, Lang Hancock wrote to his long-term business partner Peter Wright urging the pair to properly sort out the carve-up of their assets. "We will have to do our best to solve the problem now rather than pass them on to the next generation," Lang prophetically wrote.

In Wednesday's call for reconciliation, John recalled the years of peace that he and his mother had shared as they sought to defend Lang's legacy and the crucial 1968 agreement he had put in place to set out the future of his empire.

"For many difficult years in the mid 1990s and early 2000s I stood by my mother's side as she defended the validity of the June 68 agreement in court, and our family company, from a multitude of litigation concerning Rose Porteous. I supported my mother during the ingrest into my grandfather's death. Interspersed during those difficult years were happier times of travelling with her," he said.

"At some point after the Porteous litigation was settled in 2003, Gina changed her mind and argued the June 68 agreement was not binding and that she was not trustee of the (Hancock Family Memorial Foundation) trust. When I asked her about the changes in company ownership, my mother terminated my employment at Hancock Prospecting, and I had to find other employment and income. As a young man, with little access to documentation and no wealth to provide a small fraction of the extensive legal team I have constantly been up against, it was ... an incredibly difficult fight for fairness."

He acknowledged the complexity of Wednesday's Supreme Court decision, but expressed some positivity about some of the court's findings about the family trust at the centre of the dispute with his mother.

CK4 and LH3 Well Intervention Environment Plan

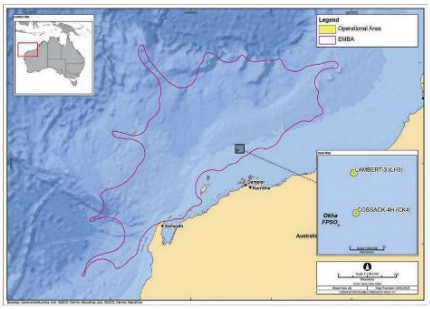
Woodside has led the development of the LNG industry in Australia and today aims to thrive through the global energy transition. Woodside consults with relevant persons to gather feedback to inform its Commonwealth Environment Plans.

CK4 & LH3 Well Intervention Environment Plan

Woodside plans to do light well intervention activities on the CK4 (Cossack-4H) and LH3 (Lambert-3) wells to remediate the wells using a light well intervention vessel and other support vessels. The two wells produce oil and gas through the Okha Floating Production Storage and Offloading (FPSO) facility which commenced production from the fields in 2017.

Environment that May Be Affected (EMBA)

The EMBA is the largest geographic area where an unplanned event could potentially have an environmental consequence. In the highly unlikely event a hydrocarbon release does occur, the whole EMBA would not be affected.



We would like to hear from you

If you are an individual, organisation or community group and believe your functions, interests or activities may be impacted by the activities under this Environment Plan, we would like to hear from you by 18 May 2026.

To find out more go to:

www.woodside.com/what-we-do/consultation-activities
You can also subscribe via our website to receive future information on upcoming activities.

feedback@woodside.com
Toll free: 1800 442 977
woodside.com

Woodside Energy

Bondi antisemitism inquiry locks in hearings

JAMIE DOWLING
LACHLAN LEEMING

Public hearing dates have been set for the Bondi royal commission, which will hear evidence on experiences of antisemitism five months on from the terror massacre at Sydney's Bondi Beach.

The Antisemitism and Social Cohesion Royal Commission will hold its first block of public hearings from May 4 to 15, starting days after the release of its interim report on national security agencies and potential intelligence failings contributing to the mass shooting.

Later this year, the Australian Mayors Summit Against Antisemitism will hold its next meeting in and around Bondi just weeks before the first anniversary of the massacre.

According to a memo released on Wednesday, the first royal commission hearings will have four focuses:

- "Defining antisemitism"
- "The nature of antisemitism, in its historical and contemporary manifestations."
- "Lived experiences of antisemitism, and its impacts on Jewish Australians in various domains"; and
- "Metrics for assessing the prevalence of antisemitism in institutions and society, including through incident reporting and survey data".

Royal commissioner Virginia Bell – a former High Court judge – said case study testimony would be integral to her federal inquiry. "It is vital for the work of the royal commission that we hear directly from Australians who have experienced antisemitism first-hand," she said.

Hearings will be live-streamed. A breakdown of session times during the hearing block is not yet available.

Executive Council of Australian Jewry president Daniel Aghion said the hearings would provide a chance to acknowledge rising anti-Jewish hatred. "We hope the public hearings are an opportunity for Australians to hear directly from Jewish community members about their lived experiences of antisemitism, including firebombings, attacks on synagogues, shooting, harassment and threats against community institutions, as well as everyday acts of exclusion," he said.

"We know this process will be difficult for many ... Giving evidence is an act of courage, and we hope each account contributes to making Australia a safer place."

Wayerley mayor Will Nemesh told The Australian he would use the mayors' summit in November to push councils across the country to stand up for antisemitism and hold together fracturing social cohesion, after he used last year's inaugural summit to release a model strategy councils could use.

04.15.2026 20:43 NewsCorp Australia – Tearsheet

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.4.2 The West Australian – 16 April 2026

The West Australian
Thursday, April 16, 2026

Australians go bananas

Bananas have come out on top as Australia's favourite fruit.

The humble fruit was the most logged food in the MyFitnessPal app in the past year, with more than nine million entries — the highest of all fruits and foods generally. Avocados were next with 6.4 million entries.

More than half of surveyed Australians (58 per cent) chose bananas over avocados (32 per cent), while another 10 per cent were undecided.

Bananas were most commonly eaten fresh (83 per cent), with more than a third choosing them for breakfast or a daytime snack.

Warning over Dr AI

Half the answers to medical questions given by artificial intelligence are "somewhat" or "highly" problematic after prompts to pick up on vulnerabilities, scientists say.

Research in the BMJ Open tested five leading generative AI chatbots and were given open and closed questions about cancer, vaccines, stem cells, nutrition and athletic performance.

Those behind the study said the prompts were designed to mimic usual information-seeking questions and "misinformation tropes" online.

'Our amazing brother'

Family reveal pain at losing 11yo in scooter crash

CALEB RUNCIMAN

An 11-year-old boy struck by a car and killed while riding his scooter in Mandurah has been remembered as a "beloved son" by his devastated family.

The family of Michael Judge expressed their devastation in an online obituary after he was fatally injured when he was struck by a blue Mazda sedan outside Lakeside Villas on Mandurah Terrace on April 6.

Michael is understood to have been visiting his friend who was staying at the villas.

The tragedy happened when he rode his scooter down the steep driveway before crossing the busy Mandurah road.

The tribute, published in The West Australian, described Michael as a "beloved son" to his parents and an "amazing brother" to three siblings.

"We were so lucky to share 11 wonderful years with you," the obituary read.

"You will be deeply missed and always loved."

Michael's mother also penned a tribute as part of an online fundraiser on Tuesday, describing Michael as "my son and best friend 4 life".

The 11-year-old was taken by St John WA to Peel Health Campus, but later died from his critical injuries.



Off-duty nurse Nicole Jones had said she tried to save Michael's life after driving past the confronting scene.

"I had just finished a nursing shift and went to pick up my son when I drove by and saw a lot of people around not sure what to do," she said.

"He (the driver) was in a lot of shock and very upset. It didn't seem like, from what I'd heard, that he could have avoided it."

Ms Jones said she hoped the tragic ordeal would serve as a tragic reminder about road safety after having to deal with multiple scooter previously.

"Just thoughts and prayers for mum and dad. I'm sorry I couldn't have done more," she said.

WA Police initially said the boy was riding an e-scooter before they clarified that he was on a push scooter.

> We were so lucky to share 11 wonderful years with you. You will always be loved.
>
> **Michael's family**

Major crash investigators have not laid charges against the 46-year-old male driver of the car, who stopped at the scene to assist.

Michael was one of five people killed on WA roads on the Easter long weekend.

Three people were killed on April 2.

An 18-year old woman died in a crash on mudflats near Derby.

In Bedfordale, 14-year-old Jaxon Brinkworth died when his dirt bike and a Ford F150 utility collided on Albany Highway.

Soon after, a 30-year-old man was killed in Jarrahdale after he lost control of his motorbike.

A 35-year-old man died in hospital on Easter Monday after being injured when the car he was a passenger in lost control and crashed into a tree in Como.

CK4 and LH3 Well Intervention Environment Plan

Woodside has led the development of the LNG industry in Australia and today aims to thrive through the global energy transition. Woodside consults with relevant persons to gather feedback to inform its Commonwealth Environment Plans.

CK4 & LH3 Well Intervention Environment Plan

Woodside plans to do light well intervention activities on the CK4 (Cossack-4H) and LH3 (Lambert-3) wells to remediate the wells using a light well intervention vessel and other support vessels. The two wells produce oil and gas through the Okha Floating Production Storage and Offloading (FPSO) facility which commenced production from the fields in 2011.

Environment that May Be Affected (EMBA)

The EMBA is the largest geographic area where an unplanned event could potentially have an environmental consequence. In the highly unlikely event a hydrocarbon release does occur, the whole EMBA would not be affected.

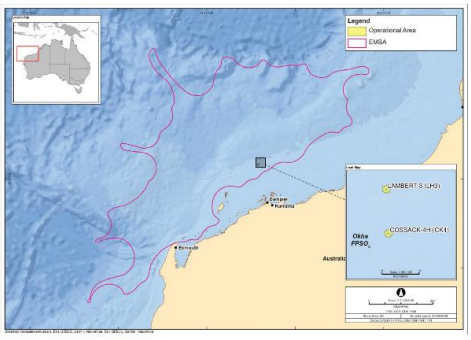
We would like to hear from you

If you are an individual, organisation or community group and believe your functions, interests or activities may be impacted by the activities under this Environment Plan, we would like to hear from you by **18 May 2026**.

To find out more go to:

www.woodside.com/what-we-do/consultation-activities

You can also subscribe via our website to receive future information on upcoming activities.



feedback@woodside.com
Toll free: 1800 442 977
woodside.com

Woodside Energy

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.4.3 Pilbara News – 15 April 2026

Pilbara NEWS
Wednesday, April 15, 2026
pilbaranews.com.au
NEWS 7

Narelle warnings under fire



Julie Freeman Picture: Nationals WA



Rob Horstman Pic: Matthew Paddick



Craig Waters from DFES.



Damage to Karratha Back Beach boat ramp from STC Narelle. Picture: City of Karratha

CAIN ANDREWS

Residents of Karratha and surrounding Pilbara communities have launched a petition asking State Parliament to investigate how the Department of Fire and Emergency Services' new cyclone warning system was implemented during cyclone Narelle.

The petition, entered into Parliament by Nationals WA leader in the Legislative Council Julie Freeman on April 7, asks the authority to investigate why a "red alert" was not issued and an evacuation centre not established in Karratha as Narelle bore down on the town.

As of April 10, the petition had 622 signatures.

Ms Freeman said Karratha residents experienced damaging winds and hazardous conditions while remaining under a "watch and act" warning, creating confusion about when to stop travelling, close businesses and take shelter.

"Communities rely on clear, timely and accurate warnings to make critical safety decisions. When those warnings don't reflect what people are actually experiencing on the ground, it puts lives at risk," she said.

"It is essential that warning systems are consistent and based on real-time local conditions, not just the projected path of a system."

Shadow minister for emergency services Rob Horstman also raised concerns and said recent changes to the DFES warning system led to "widespread confusion".

"Under the current system, there's no indication of when to take shelter until the Emergency warning is issued, forcing residents to monitor multiple agencies' warnings," he said.

"On-the-ground reports from residents along the North and Mid-West coast suggest some people were left vulnerable by prolonged Watch and Act warnings, when local conditions warranted an emergency warning."

He said it was a "matter of life and death" when warnings were inconsistent.

"Western Australians deserve a warning system that is clear, consistent, and focused on community safety," Mr Horstman said.

However, DFES deputy commissioner Craig Waters said the conditions in Karratha did not meet the criteria for an Emergency warning and under the previous system would also not have resulted in a red alert.

"Cyclone warning levels are based on the expected impact of wind, not just isolated gusts, and are determined using all available information including forecasts and observed conditions," he said.

"In this instance, while destructive wind gusts were recorded, they were not sustained above the threshold required to trigger an emergency warning.

"Incident controllers must balance a wide range of factors, including evolving forecasts, observed conditions and community impact when determining warning levels in real time.

"DFES was monitoring community requirements and was not made aware of anyone in Dampier or Onslow requiring an evacuation centre.

"Like all emergencies, this event will be reviewed to identify any learnings and opportunities to strengthen future responses."

Regardless of the warning level issued, Mr Waters said individuals and businesses should prioritise their own safety and follow their plans if conditions felt unsafe.

"This reinforces the importance of all community members having a cyclone plan so decisions can be made early and confidently, including at the Watch and Act stage," he said.

Karratha mayor Daniel Scott also raised concerns about the DFES warning system after cyclone Narelle passed on March 27. "We escaped the fury of Narelle really, it just skirted past us," he said at the time.

"But I think one of the things I do want to raise is the community's concern around the new warning system.

"It seems to me that there's no systematic approach to making a decision for each warning level."

Cyclone Mitchell, in February, had a red alert but was not as close to town, while Narelle was on a Watch and Act alert with sustained winds of 110km/h.

"We probably should have been on red alert because at that stage you know and no one knows if a cyclone is going to turn further south or not," Mr Scott said.

Emergency Services Minister Paul Papalia was contacted for comment.

CK4 and LH3 Well Intervention Environment Plan

Woodside has led the development of the LNG industry in Australia and today aims to thrive through the global energy transition. Woodside consults with relevant persons to gather feedback to inform its Commonwealth Environment Plans.

CK4 & LH3 Well Intervention Environment Plan

Woodside plans to do light well intervention activities on the CK4 (Cossack-4H) and LH3 (Lambert-3) wells to remediate the wells using a light well intervention vessel and other support vessels. The two wells produce oil and gas through the Okha Floating Production Storage and Offloading (FPSO) facility which commenced production from the fields in 2011.

Environment that May Be Affected (EMBA)

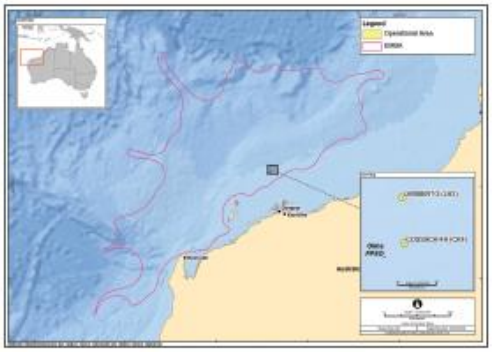
The EMBA is the largest geographic area where an unplanned event could potentially have an environmental consequence. In the highly unlikely event a hydrocarbon release does occur, the whole EMBA would not be affected.

We would like to hear from you

If you are an individual, organisation or community group and believe your functions, interests or activities may be impacted by the activities under this Environment Plan, we would like to hear from you by **18 May 2026**.

To find out more go to:

www.woodside.com/what-we-do/consultation-activities
You can also subscribe via our website to receive future information on upcoming activities.



feedback@woodside.com
Toll free: 1800 442 977
woodside.com

Woodside Energy

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.4.4 Midwest Times – 15 April 2026

Times
Wednesday, April 15, 2026
midwesttimes.com.au



The damaged Jeep.

Brand Hwy chase drama

IMOGEN WILSON

A 38-year-old man is facing a string of charges after a police pursuit on the Brand Highway that was abandoned because of the danger involved.

Police said on Monday, April 6, officers saw a car driving dangerously on near Greenough River Road in Cape Burney.

The driver has been charged with contravening a 24-hour notice prohibiting driving, failing to comply when asked to stop, reckless driving to escape police pursuit, failing to comply with a direction to stop in a circumstance of aggravation, and possessing methamphetamine. Police said , a black Jeep Grand Cherokee, was being driven in a "concerning manner" when spotted about 10.45am. They allege the driver continued driving when directed to pull over.

Police started a pursuit, which was later discontinued. Police said they later found the vehicle and driver after the vehicle hit a tree. The man has been remanded in custody and will appear in Geraldton Magistrates Court on May 4.

Man carried out of gorge



A gorge in the Kalbarri National Park.

IMOGEN WILSON

A canoeing trip in the Kalbarri gorges turned into a logistical nightmare on Friday when a man badly injured his knee — leaving him having to be carried out on a stretcher by 15 emergency responders.

On Friday about 9.30am, the State Emergency Service was called to Four Ways Trail in Kalbarri.

The man, part of a canoeing group in the gorge, had slipped on gravel and damaged one of his knees.

The injury was severe and caused muscle damage, leaving him unable to walk.

Kalbarri SES manager Steve Cable said once called to the scene he quickly got a team together, including three police officers.

Mr Cable said when people were injured in the gorges, usually the only way out was to carry them.

"So, as we always do, we scrambled a combined crew, went down to the location, put him in a stretcher and did the rather arduous carry-out," he said.

"We carried him to the top, put him in the back of the vehicle, drove him to the ambulance, put him in the ambulance and that was another rescue done."

Mr Cable said the injured man was carried up the steep cliff by a rescue crew of about 15 people.

Once SES received the emergency call from the bottom of the Four Ways gorge, Mr Cable said he instantly knew he would need more people to help than what he could supply.

The rescue crew consisted of SES, Parks and Wildlife, police and other volunteers.

"That's how we usually operate out there, we get a whole crew together because it's just so hard," Mr Cable said.



Steve Cable

Injuries in the gorges are not as common as they used to be, according to Mr Cable, but the main three call-out reasons were medical episodes, heat stress and injuries.

"If you can make sure you've got communications and water out there, that's essential," he said.

CK4 and LH3 Well Intervention Environment Plan

Woodside has led the development of the LNG industry in Australia and today aims to thrive through the global energy transition. Woodside consults with relevant persons to gather feedback to inform its Commonwealth Environment Plans.

CK4 & LH3 Well Intervention Environment Plan

Woodside plans to do light well intervention activities on the CK4 (Cossack-4H) and LH3 (Lambert-3) wells to remediate the wells using a light well intervention vessel and other support vessels. The two wells produce oil and gas through the Okha Floating Production Storage and Offloading (FPSO) facility which commenced production from the fields in 2011.

Environment that May Be Affected (EMBA)

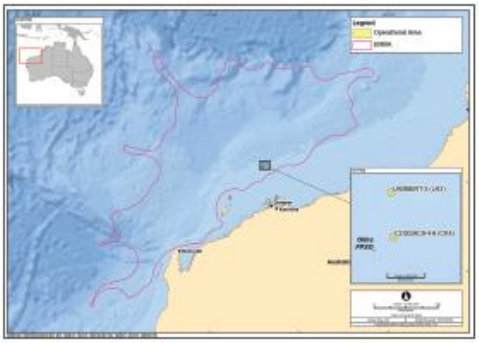
The EMBA is the largest geographic area where an unplanned event could potentially have an environmental consequence. In the highly unlikely event a hydrocarbon release does occur, the whole EMBA would not be affected.

We would like to hear from you

If you are an individual, organisation or community group and believe your functions, interests or activities may be impacted by the activities under this Environment Plan, we would like to hear from you by **18 May 2026.**

To find out more go to:

www.woodside.com/what-we-do/consultation-activities
You can also subscribe via our website to receive future information on upcoming activities.



feedback@woodside.com
Toll free: 1800 442 977
woodside.com

Woodside Energy

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.4.5 Broome Advertiser – 16 April 2026

8 NEWS broomead.com.au Thursday, April 16, 2026

Strike threat hangs over WA offshore LNG plant



Inpex's Ichthys LNG offshore facilities. Picture: Inpex

SIMONE GROGAN

Japan's Inpex and hundreds of frustrated workers are in the midst of a bitter bargaining dispute that risks descending into strike action and stoppages at the LNG giant's Ichthys operations off the WA coast.

The Offshore Alliance — a union formed between the Australian Workers' Union and the Maritime Union of Australia — said it had filed a protected action ballot order and threatened industrial action as early as May 3 if members get behind the vote, which is set to be held in the next few weeks.

The showdown follows more than six months of unsuccessful negotiations between the parties, but is now set against the backdrop of heightened concern about energy security due to the conflict in the Middle East.

Ichthys opened in 2018 and has capacity to produce up to 9.3 million tonnes of LNG a year, though the vast majority is exported to customers in Japan. Gas from the Ichthys field is fed to onshore facilities for processing near Darwin via an 890km pipeline.

Offshore Alliance representatives said workers "felt like they had no other option" than to take the first step towards strike action.

Inpex senior vice-president corporate Bill Townsend said the company's preference was to reach agreement "without disruption".

"The Middle East conflict has highlighted Australia's valued position as one of the world's most reliable energy suppliers to key trading partners in the Indo-Pacific region," Mr Townsend said.

"Last year, Ichthys LNG accounted for 8 per cent of both Japan and Taiwan's respective LNG import volumes, delivered via long-term sales and purchase agreements."

The Australian Resources & Energy Employer Association blasted the union's requests as "unrealistic".

"These are not responsible or incremental claims. They are an attempt to significantly lift pay and allowance structures for a workforce that is already among the highest paid in Australia," deputy chief executive Tara Diamond said.

"Inpex employees are typically earning between $300,000 and $400,000 per year. The Offshore Alliance's claims would push that well beyond $500,000 on average."

The union argues Inpex has deep-enough pockets to grant workers higher pay.

"After six months of negotiations, Inpex has failed to agree to even the most basic claims put forward by its workforce," spokesman and AWU Assistant National Secretary Chris Donovan said.

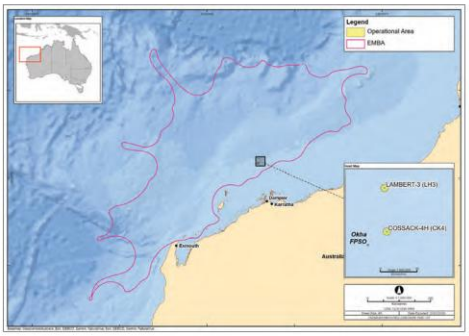
"Workers who operate some of the most complex and high-risk facilities in the country are being asked to accept an agreement that does nothing to address their concerns about pay, conditions and job security." Ichthys leads the $60b LNG operation with a 67.82 per cent interest alongside major partner TotalEnergies which has a 26 per cent stake. CPC Corporation Taiwan, Osaka Gas, Kansai Electric Power, JERA and Toho Gas also have minor stakes.

CK4 and LH3 Well Intervention Environment Plan

Woodside has led the development of the LNG industry in Australia and today aims to thrive through the global energy transition. Woodside consults with relevant persons to gather feedback to inform its Commonwealth Environment Plans.

CK4 & LH3 Well Intervention Environment Plan

Woodside plans to do light well intervention activities on the CK4 (Cossack-4H) and LH3 (Lambert-3) wells to remediate the wells using a light well intervention vessel and other support vessels. The two wells produce oil and gas through the Okha Floating Production Storage and Offloading (FPSO) facility which commenced production from the fields in 2011.



Environment that May Be Affected (EMBA)

The EMBA is the largest geographic area where an unplanned event could potentially have an environmental consequence. In the highly unlikely event a hydrocarbon release does occur, the whole EMBA would not be affected.

We would like to hear from you

If you are an individual, organisation or community group and believe your functions, interests or activities may be impacted by the activities under this Environment Plan, we would like to hear from you by **18 May 2026**.

To find out more go to:

www.woodside.com/what-we-do/consultation-activities

You can also subscribe via our website to receive future information on upcoming activities.

feedback@woodside.com
Toll free: 1800 442 977
woodside.com

Woodside Energy

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.4.6 Kimberley Echo – 16 April 2026

Kimberley Echo
Thursday, April 16, 2026
kimberleyecho.com.au

Jail rates of Aboriginal kids in the firing line



ALS chief executive Nerita Waight said Aboriginal children were languishing behind bars. Pic: The Wheeler Centre

CAIN ANDREWS



Anthony Albanese

The Kimberley Community Legal Service has joined a chorus of more than 200 Aboriginal, community and children's organisations calling for the Prime Minister to act on increasing incarceration rates of Aboriginal children.

The Kimberley organisation was one of 206 organisations and leaders from across the country that signed the open letter initiated by the National Aboriginal and Torres Strait Islander Legal Service urging Anthony Albanese to call an emergency summit on youth justice.

While the Prime Minister is yet to respond to the call, a Federal Government spokesperson said "only States and Territories" can set justice policies.

NATSILS acting chair Nerita Waight said the statement was untrue and accused Mr Albanese of "trying to pass the buck" and engaging in "political point-scoring".

"The Federal Government has constitutional authority to override State and Territory justice systems to enforce international human rights obligations.

This advice from senior counsel was shared with the Prime Minister last year."

Ms Waight said Aboriginal children were 'languishing behind bars" due to the Prime Minister's inaction. "Not only does Prime Minister Albanese have the power to act, but he also has the moral obligation," Ms Waight said.

"Hundreds of organisations are today urging the Prime Minister to call an emergency summit on youth justice to address this growing crisis. Is the Prime Minister really saying he will do nothing?"

It comes after Mr Albanese confirmed in his recent annual closing the gap update that Australia is not on track in reducing incarceration of Aboriginal and Torres Strait Islander youth. According to the Australian Bureau of Statistics, 37 per cent of the prison population is Aboriginal and Torres Strait Islander people which Ms Waight called a "shameful lack of progress" under the national agreement to close the gap.

She said to achieve the goals of the initiative "urgent and meaningful action" was needed to change the justice system.

"This shameful crisis is affecting children and communities from all corners of our country, and it requires national leadership, Ms Waight said.

"In the past two years alone, we have seen 11-year-olds locked up in watch houses, we have seen the re-introduction of dangerous and cruel spit hoods.

"We have seen a State premier boasting about introducing laws that could impose life sentences on children as young as 14.

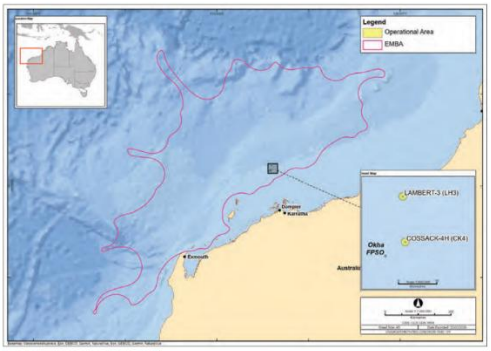
"Our letter is a warning flare. Act now, or own the consequences of a new generation being locked up for political gain."

CK4 and LH3 Well Intervention Environment Plan

Woodside has led the development of the LNG industry in Australia and today aims to thrive through the global energy transition. Woodside consults with relevant persons to gather feedback to inform its Commonwealth Environment Plans.

CK4 & LH3 Well Intervention Environment Plan

Woodside plans to do light well intervention activities on the CK4 (Cossack-4H) and LH3 (Lambert-3) wells to remediate the wells using a light well intervention vessel and other support vessels. The two wells produce oil and gas through the Okha Floating Production Storage and Offloading (FPSO) facility which commenced production from the fields in 2011.



Environment that May Be Affected (EMBA)

The EMBA is the largest geographic area where an unplanned event could potentially have an environmental consequence. In the highly unlikely event a hydrocarbon release does occur, the whole EMBA would not be affected.

We would like to hear from you

If you are an individual, organisation or community group and believe your functions, interests or activities may be impacted by the activities under this Environment Plan, we would like to hear from you by **18 May 2026**.

To find out more go to:

www.woodside.com/what-we-do/consultation-activities
You can also subscribe via our website to receive future information on upcoming activities.

feedback@woodside.com
Toll free: 1800 442 977
woodside.com

Woodside Energy

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.4.7 Koori Mail – 22 April 2026

hall of fame

One of Australia's most influential design thinkers



Boonwurrung Elder, Professor N'arwee't Carolyn Briggs AM, with her Design Institute of Australia's Hall of Fame award. *Picture: supplied.*

VIC

RESPECTED Boonwurrung Elder, Professor N'arwee't Carolyn Briggs AM, has been inducted into the Design Institute of Australia's Hall of Fame, recognised as one of Australia's most influential design thinkers.

Professor Briggs was one of five inductees honoured at an event held at the National Gallery of Victoria, alongside Paul Charlwood, Paul Huxtable, Geraldine Maher and Cal Swann.

Established in 1996, the awards have accoladed more than 140 Australian designers to date.

Professor Briggs was recognised for her decades-long work bringing First Peoples knowledge into design practice across Australia, including in architecture, urban planning, landscape design and public infrastructure.

Based at the Wominjeka Djeembana Research Lab within Monash Art, Design and Architecture (MADA), Professor Briggs has pioneered Indigenous-led research for many years.

Her work includes advocating for the cultural return of a century-old thulu (tree) from Switzerland to Australia, and exploring how Indigenous knowledge systems can reshape urban water design.

Professor Briggs is the Elder in Residence behind Kindred People, Monash University's new Indigenous-led festival celebrating First Nations arts, knowledges and community, which will run from September 1–5.

She is also the Elder in Residence for the Master of Indigenous Business Leadership course at Monash Business School, Australia's first Indigenous-led business master's program.

Professor Briggs said she was honoured by the induction.

"This honour belongs to the community. Everything I have been able to contribute has come from working alongside Elders, creatives and knowledge holders who have generously shared their wisdom," Professor Briggs said.

"I have been inspired by strong Aboriginal leaders, including Louisa Briggs, Michael Mansell, Hyllus Maris and Charles Perkins, and I hope this award helps open doors for the next generation and encourages young Indigenous people to be confident in their voices.

"I am grateful to my family for the strength and courage they have provided me, including my late mother Carrie, sister Eva, and brothers Fred and John.

"I would also like to acknowledge Elizabeth Tunstall, who was at the time the first Black dean of a faculty of design in the world, and who gave me the courage to pursue my PhD."

Professor Tristan Kennedy, Deputy Vice-Chancellor (Indigenous) and Senior Vice-President, congratulated Professor Briggs on her achievement.

"We are incredibly proud to work alongside a strong Indigenous Elder with the calibre of Professor N'arwee't Aunty Carolyn," Professor Kennedy said.

"I remain ever grateful for her contributions to our Monash community and for her generous cultural and intellectual guidance for the next generation of Indigenous leaders and knowledge holders."

Beyond her research, Professor Briggs has dedicated her life to education and mentorship. She founded the Boon Wurrung Foundation to support Indigenous youth and to preserve the language, knowledge and cultural heritage of the Boonwurrung people.Professor Briggs was also appointed a Member of the Order of Australia, named NAIDOC Female Elder of the Year, and inducted into Victoria's Honour Roll of Women.

CK4 and LH3 Well Intervention Environment Plan

Woodside has led the development of the LNG industry in Australia and today aims to thrive through the global energy transition. Woodside consults with relevant persons to gather feedback to inform its Commonwealth Environment Plans.

CK4 & LH3 Well Intervention Environment Plan

Woodside plans to do light well intervention activities on the CK4 (Cossack-4H) and LH3 (Lambert-3) wells to remediate the wells using a light well intervention vessel and other support vessels. The two wells produce oil and gas through the Okha Floating Production Storage and Offloading (FPSO) facility which commenced production from the fields in 2011.

Environment that May Be Affected (EMBA)

The EMBA is the largest geographic area where an unplanned event could potentially have an environmental consequence. In the highly unlikely event a hydrocarbon release does occur, the whole EMBA would not be affected.

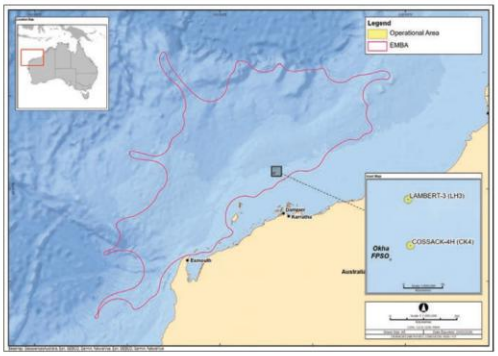
We would like to hear from you

If you are an individual, organisation or community group and believe your functions, interests or activities may be impacted by the activities under this Environment Plan, we would like to hear from you by **18 May 2026**.

To find out more go to:

www.woodside.com/what-we-do/consultation-activities

You can also subscribe via our website to receive future information on upcoming activities.



feedback@woodside.com
Toll free: 1800 442 977
woodside.com

Woodside Energy

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.4.8 National Indigenous Times – 28 April 2026

Singer's career takes a turn

JOSEPH GUENZLER

Gomeroi country music star Kyla-Bell Roberts has released her latest single Took A Turn featuring Nooky, with the track debuting on triple j Unearthed in late March.

The 17-year-old from Moree's rise continues after winning the 2025 triple j Unearthed High Indigenous Initiative with her single Myself, which led to mentoring with Nooky.

Roberts wrote Took A Turn several years ago, but decided to take the track in a new direction by pairing her country sound with rap.

She said the collaboration with Nooky came together after her Unearthed win opened the door to working with the Yuin and Thunghutti rapper.

"We knew we were going to release Took A Turn, but we thought that we'd do something different with it just because we've done the country stuff," Roberts told National Indigenous Times.

"Why don't we add a rapper to it? Then I ended up winning the Indigenous Initiative section of triple j Unearthed, and Nooky's name came up."

The session gave Roberts the chance to watch an established artist build a verse in real time.

She said the studio process quickly became one of the standout parts of the release.

"It was an amazing experience in the studio," she said. "Just getting to watch him actively write the rap, like he wrote the rap in front of us all.

"It was just crazy and just getting to see how he works in the studio."

The song is grounded in Roberts' own life.

"The song is really about coming from hard times and coming out of it," she said.

"My life took a turn for the better. "So, I just use music as a way to tell that story."

Roberts is balancing her growing music career with school, using weekdays for classes and assessments, and keeping weekends for practice and performance.

She said her teachers had supported her music journey.

"I really took music into mind when I thought about what I wanted to do for my subjects this year," Roberts said.

Roberts said this year was focused on releasing more songs, securing gigs, and building her audience.

The message she wants listeners to take from Took a Turn is one of perspective and resilience.

"I really just hope people kind of use their bad times and look at it more in a positive sense of where they're at now."

'Took a Turn' featuring Nooky is available now on all major streaming platforms.



Nooky and Kyla-Bell Roberts have collaborated on new song Took A Turn. Picture: Rahim Bakar

CK4 and LH3 Well Intervention Environment Plan

Woodside has led the development of the LNG industry in Australia and today aims to thrive through the global energy transition. Woodside consults with relevant persons to gather feedback to inform its Commonwealth Environment Plans.

CK4 & LH3 Well Intervention Environment Plan

Woodside plans to do light well intervention activities on the CK4 (Cossack-4H) and LH3 (Lambert-3) wells to remediate the wells using a light well intervention vessel and other support vessels. The two wells produce oil and gas through the Okha Floating Production Storage and Offloading (FPSO) facility which commenced production from the fields in 2011.

Environment that May Be Affected (EMBA)

The EMBA is the largest geographic area where an unplanned event could potentially have an environmental consequence. In the highly unlikely event a hydrocarbon release does occur, the whole EMBA would not be affected.

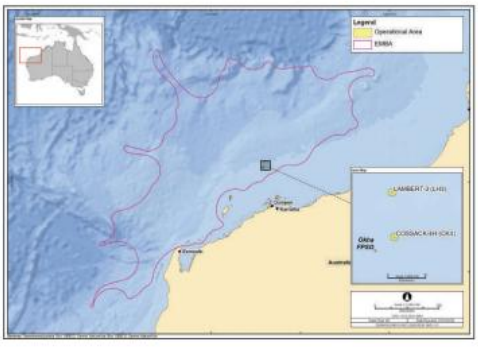
We would like to hear from you

If you are an individual, organisation or community group and believe your functions, interests or activities may be impacted by the activities under this Environment Plan, we would like to hear from you by **18 May 2026**.

To find out more go to:

www.woodside.com/what-we-do/consultation-activities

You can also subscribe via our website to receive future information on upcoming activities.



feedback@woodside.com
Toll free: 1800 442 977
woodside.com

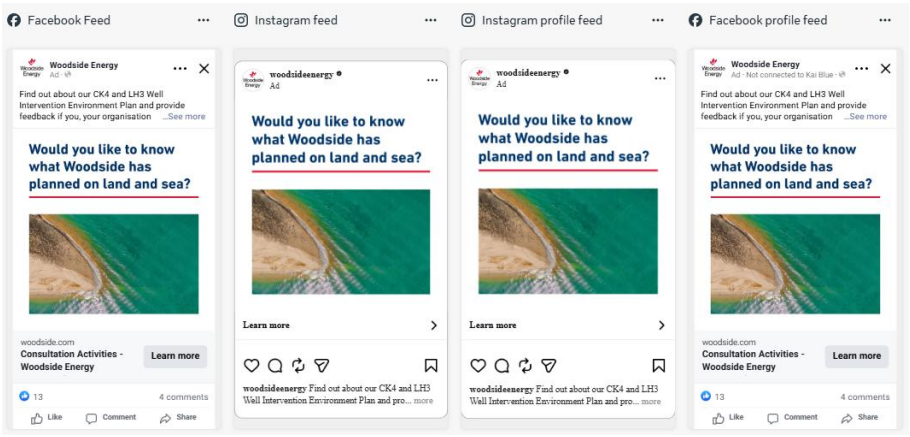
Woodside Energy

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

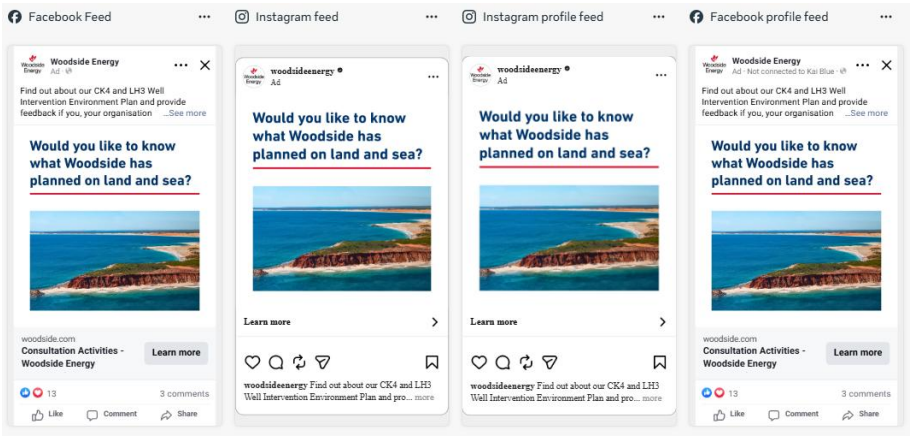
6.5 Social media

6.5.1 Social media EP targeted campaign

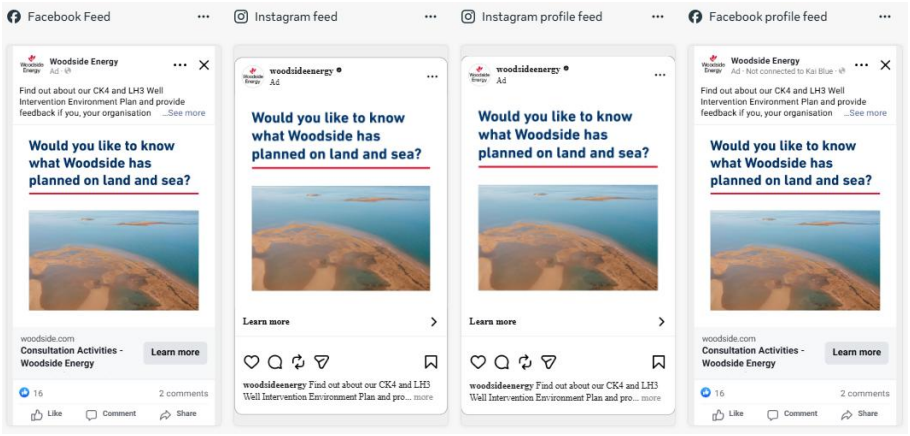
Tile design 1



Tile design 2



Tile design 3



6.6 Community information sessions

The community information sessions that Woodside has conducted are captured below:

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.6.1 Pilbara Region

6.6.1.1 KDCCI Markets at Red Earth Arts Festival (REAF) – 15 May 2026

Location	Karratha
Activity	KDCCI Markets at REAF
Date	15 May 2026
Description of the consultation	Woodside hosted a stand at the Karratha District Chamber of Commerce (KDCCI Red Earth Arts Festival (REAF) markets, a community event bringing together local businesses selling local products, a variety of food vendors and community groups and performances. Over 500 community members attended the event. The stand was staffed by members of Woodside's Corporate Affairs and Environment teams Woodside displayed a QR code on a banner at the stand linking to the 'Consultation activities' page of the Woodside website. Woodside displayed and made available printed consultation information sheets EPs including the CK4 and LH3 Well Intervention EP.
Advertising and invitations	Woodside advertised the event to enable individuals to self-identify, become aware of the community consultation, and to allow individuals to provide feedback on proposed activities, through the following: • An advertisement published in the Pilbara News on 13 May 2026 • A social media post via Woodside North West Facebook account advising that Woodside would be in attendance at the event on 15 May 2026 • A social media post via KDCCI Facebook account advising that Woodside would be in attendance at the event on 15 May 2026 • An advertisement displayed on community noticeboards at Roebourne BP Service Station, Lo's Karratha, and IGA Good Grocer Karratha • An EP consultation display with QR code (linked to the 'Consultation activities' page on Woodside's website) displayed at Woodside's stand. • EP consultation banner with QR code (linked to 'Consultation activities' page on Woodside website), displayed at Woodside's stand along with current EP consultation information sheets (see table below)
Estimated number of individuals consulted	Over 500 community members attended the event. Woodside spoke to many community members, recording 10 conversations.
Summary of Feedback, Objection or Claim	
• Queries around employment opportunities • General interest in the Scarborough Energy Protect progress and Pluto Train 2 and Train 1 modifications Protects. • General interest from Woodside employees around the Browse to NWS Protect. • Patrons shared their views on future of gas in the energy transition and how this compares to alternative power options; solar and nuclear. • Interest in Woodside's supply of DOMGAS to WA. • Environment Plan community consultation and approval process discussed and why we want to talk to community. No concerns raised. • Discussions with children about what Woodside does and where gas comes from. • Pleasant interactions with Woodside, Woodside contractor companies and near neighbour employees.	
Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response	
Whilst feedback was received, there were no objections or claims. The participation in the market was part of Woodside's broader consultation approach to enable self-identification and provide relevant persons with the opportunity to assess any impacts on their functions, interests or activities, and	

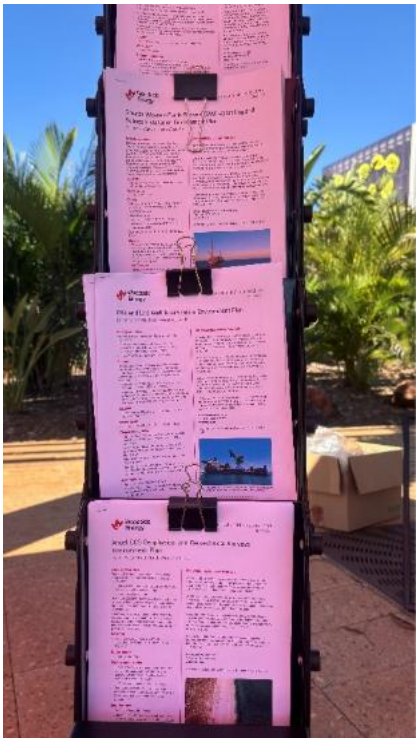
This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

provide feedback on proposed activities, which is consistent with the intended outcome of consultation (see Section 3.2).

Evidence of promotion and event

Advertisement **Pilbara News – 13 May 2026**	**Social media** **Woodside North West Facebook post** **15 May 2026**
	
Advertisement **IGA Good Grocer notice board – 12 May 2026**	**Advertisement** **Karratha City Plaza notice board – 12 May 2026**
	

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Advertisement **Lo's Cafe, Karratha community notice board – 12 May 2026**	**Event presence** **Banner at event – 15 May 2026**
	
Event presence **Consultation Information Sheets at event**	**Event presence** **Consultation Information Sheets at event**
	

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

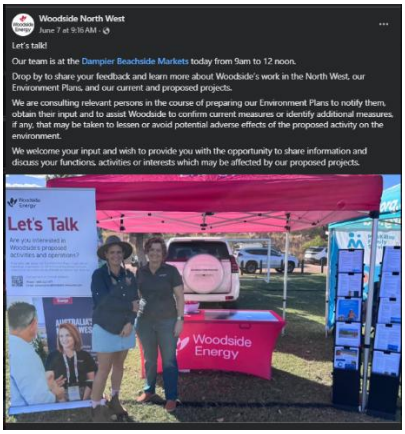
6.6.1.2 Dampier Beachside Markets – 7 June 2026

Location	Dampier
Activity	Dampier Beachside Markets
Date	7 June 2026
Description of the consultation	Woodside hosted a stand at the Dampier Beachside Markets, a community event bringing together local businesses selling local products, a variety of food vendors and community groups. The stand was staffed by members of Woodside's Corporate Affairs team. Woodside displayed a QR code at the stand linking to the 'Consultation activities' page of the Woodside website. Woodside displayed and made available printed Consultation Information Sheets on the CK4 and LH3 EP.
Advertising and invitations	Woodside advertised the event to enable individuals to self-identify, become aware of the community consultation, and to allow individuals to provide feedback on proposed activities, through the following: • An advertisement published in the Pilbara News on 3 June 2026. • A social media post via Woodside North West Facebook account advising that Woodside would be in attendance at the event on 7 June 2026 • A social media post via Dampier Beachside Markets - DCA Facebook account advising that Woodside would be in attendance at the event on 4 June 2026 • An advertisement displayed on community noticeboards at Lo's Karratha on 26 May 2026 • An advertisement displayed on community noticeboards at Lo's Karratha, and IGA Good Grocer Karratha on 26 May 2026 • An EP consultation display with QR code (linked to the 'Consultation activities' page on Woodside's website) displayed at Woodside's stand. • EP consultation banner with QR code (linked to 'Consultation activities' page on Woodside website), displayed at Woodside's stand along with current EP consultation information sheets (see table below)
Estimated number of individuals consulted	Over 1000 community members attended the event. Woodside spoke to many community members, recording 20 conversations.
Summary of Feedback, Objection or Claim	
• Queries around employment opportunities. • Discussion around flaring, why Woodside flares, informing community about upcoming flaring activity. no concerns raised - neutral sentiment. • General interest in the Scarborough Energy Protect progress and Pluto Train 2 and Train 1 modifications Protects. • General interest from Woodside employees around the Browse to NWS Protect. • General interest in Bass Straight activities. • Patrons shared their views on future of gas in the energy transition. • Environment Plan community consultation and approval process discussed and why we want to talk to community. No concerns raised. • Discussions with children about what Woodside does and where gas comes from. • Pleasant interactions with Woodside, Woodside contractor companies and near neighbour employees.	
Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response	
Whilst feedback was received, there were no objections or claims. The community information sessions were part of Woodside's broader consultation approach to enable self-identification and provide relevant persons with the opportunity to assess any impacts on their functions, interests or	

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

activities, and provide feedback on proposed activities, which is consistent with the intended outcome of consultation (see Section 5.2 of this EP).

Evidence of promotion and event

Advertisement **Pilbara News – 3 June 2026**	**Advertisement** **Karratha City Plaza Notice Board**
	
Advertisement **IGA Good Grocer notice board – 26 May 2026**	**Social Media** **Woodside North West Facebook post 7 June 2026**
	

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Advertisement Lo's Café – 26 May 2026	Event presence Banner at event – 7 June 2026
	

Event presence Consultation Information Sheets at event


6.6.1.3 FeNaCING Festival – 1 to 2 August 2026

Location	Karratha
Activity	FeNaCING Festival
Date	1 to 2 August 2026
Description of the consultation	Woodside hosted a stall at the FeNaCING Festival, Karratha, to engage community members on Woodside activities. The stand was staffed by Woodside representatives including from Environment and Corporate Affairs teams. Information was available on Woodside's activities in the north-west region and information sheets on flaring and marine seismic surveys were on display. Printed Consultation Information Sheets were also available on the Okha Light Well Intervention EP (former CK4 and LH3 Well Intervention).
Advertising and invitations	Woodside advertised the event to enable individuals to self-identify, become aware of the community consultation, and to allow individuals to provide feedback on proposed activities, through the following: (see evidence table below) • An advertisement published in the Pilbara News on 29 July 2026 edition • A social media post via Woodside North West Facebook account advising that Woodside would be in attendance at the event on 1 August 2026

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

	• A social media post via FeNaCING Festival Facebook account advising that Woodside would be in attendance at the event on 30 July 2026 • An advertisement displayed on community noticeboards at Lo's Karratha on 28 July 2026 • An advertisement displayed on community noticeboards at IGA Good Grocer Karratha on 29 July 2026 • An EP consultation display with QR code (linked to the 'Consultation activities' page on Woodside's website) displayed at Woodside's stand.
Estimated number of individuals consulted	Over 10,000 community members attended the event. Woodside spoke to many community members, over 1,100 engaged in a Woodside quiz, recording approximately 100 meaningful conversations.
Summary of Feedback, Objection or Claim	
• Interest in local jobs, training opportunities and local procurement opportunities. • Interest in Woodside's social contribution activities in City of Karratha. • Conversations about Woodsides flaring activities. • Conversations about Woodside's approach to cultural heritage management. • Query about Woodside's tax contribution. • Conversation about Woodside's approach to the energy transition and energy security. • Interest in industry's political influence. • General conversations about Woodside's activities in Western Australia, including the North West Shelf and Scarborough Energy Protect, Pluto Train 2 and Pluto Train 1 modifications. • Questions relating to the current status of the Browse to North West Shelf concept and considerations for Scott Reef. • How and why Woodside develops EPs and the EP approval process. • General interest in Woodside's health, safety and environmental management measures and mitigations, particularly in relation to seismic activities and potential impacts to fauna. • Discussions with children about what Woodside does and where gas comes from.	
Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response	
Whilst feedback was received, there were no objections or claims. The community information sessions were part of Woodside's broader consultation approach to enable self-identification and provide relevant persons with the opportunity to assess any impacts on their functions, interests or activities, and provide feedback on proposed activities, which is consistent with the intended outcome of consultation (see Section 5.2).	

Evidence of promotion and event

Advertisement **Pilbara News – 29 July 2026**	**Social media** **FeNaCING Festival Facebook page** **1 August 2026**

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.



Exmouth couple face a life-changing recovery

Warning after Mpox cases rise

Provide your feedback on our Environment Plans

We're joining the fun at FeNaCING Festival

Consultation Information Sheets at event



Consultation Information Sheets at event



Banner with QR code at event



Woodside marquee

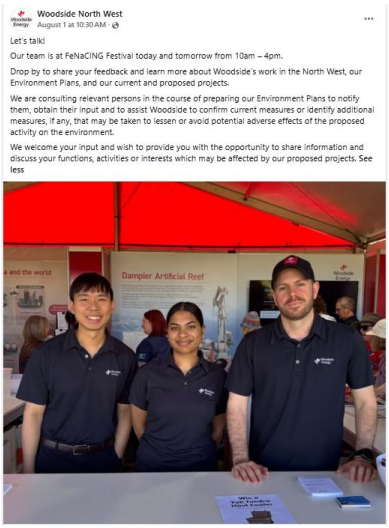


Woodside North West Facebook
1 August 2026



Promotional poster at Lo's Café Karratha
28 July 2026

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.



Promotional poster at BP service station Karratha 29 July 2026



Promotional poster at IGA Good Grocer Karratha





This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.6.1.4 Passions of the Pilbara – 8 August 2026

Location	Onslow
Activity	Passions of the Pilbara
Date	8 August 2026
Description of the consultation	Woodside hosted a stand at the Passion of the Pilbara Festival to engage community members on Woodside activities. The stand was staffed by Woodside Operations and Corporate Affairs representatives. Information was available on Woodside's activities in the Onslow region and information sheets on marine seismic surveys were also on display. Printed Consultation Information Sheets were also available for the Okha Light Well Intervention EP (former CK4 and LH3 Well Intervention EP).
Advertising and invitations	Woodside promoted the market stall on its North West Facebook page.
Estimated number of individuals consulted	Over 500 community members attended the event. Woodside spoke to many community members, recording approximately 30 conversations.
Summary of Feedback, Objection or Claim	
• General queries about Woodside's footprint in Onslow, including Macedon Gas Plant (operator) and Wheatstone LNG (non-operator) • Interest in Woodside's social contribution activities in Onslow and broader region and potential support for family support services. • General conversations about Woodside's activities in Western Australia, including the North West Shelf. • Questions relating to the current status of the Browse Protect. • General interest in job and training opportunities. • General interest in the role of gas in supporting energy security. • General interest in Woodside's approach to health, safety and environmental management.	
Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response	
Whilst feedback was received, there were no objections or claims. Presence at the Festival was part of Woodside's broader consultation approach to enable self-identification and provide relevant persons with the opportunity to assess any impacts on their functions, interests or activities, and provide feedback on proposed activities, which is consistent with the intended outcome of consultation (see Section 5.2).	

Evidence of promotion and event

Social media - Woodside North West Facebook – 8.8.26

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.



Consultation Information Sheets at event



This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.7 Community newsletter

6.7.1 Let's Talk – Edition 7 – May 2026

Woodside Energy

Let's Talk

Our Plans, Your Say

Edition 7 | May 2026



Deep Orient vessel.

The rundown

Woodside crews aboard the Deep Orient vessel have wrapped up one of their most complex decommissioning campaigns to date, safely delivering the Deep Orient program in Western Australia's North West.

Decommissioning involves removing infrastructure that's no longer required. It's considered from the start of a project and is an ongoing consideration.

The Deep Orient activities spanned the Griffin and Stybarrow fields, as well as Echo Yodel, a subsea tieback to Goodwyn A. These assets stopped producing in 2009, 2015 and 2012 respectively.

Following the safe plugging and abandonment of the wells, crews on the TechnipFMC-operated vessel safely recovered a total of 4,000 tonnes of subsea infrastructure, including 73 kilometres of pipelines. That's around the distance from Woodside's Perth headquarters to Mandurah. They also recovered 37 subsea structures such as Xmas trees, buoys, wellheads and umbilical termination assemblies.

Our decommissioning program is among the largest in Australia. Reducing risk, applying lessons learned and continually improving how we work keeps us focused on safety, the environment and carrying out the work efficiently.

Our focus is also on reducing, reusing, recycling and treating materials before disposal is considered.

In 2025, crews completed a multi-year decommissioning program at the Enfield field, approximately 38 km north of the North West Cape, Western Australia. The program included plugging and abandoning 18 Enfield wells, recovering and deconstructing the Nganhurra riser turret mooring, and removing flexible flowlines, umbilicals and other subsea structures. The deconstruction of the Nganhurra riser turret mooring saw 99.6 per cent of materials reused, repurposed or recycled.

This marks Woodside's first complete lifecycle project, from exploration through development and operations to final decommissioning.

Upcoming engagement opportunities

Woodside is consulting with local community members at events, making it easy to speak to us about our operations, decommissioning activities and proposed projects.

If you're interested in what Woodside has planned on land and sea, come and chat to our friendly teams at the locations below, follow the Woodside North West Facebook page or email us at: feedback@woodside.com

You can meet us at:

- **KDCCI Markets at REAF**
  Friday, 15 May 2026,
  3 pm – 8 pm. The Quarter,
  20 Sharpe Avenue, Karratha,
  WA, 6714
- **Dampier Beachside Markets**
  Sunday, 7 June 2026,
  9 am – 12 noon. Hampton Oval,
  Dampier, WA, 6713
- **FeNaClNG Festival**
  1-2 August 2026, 9 am – 4 pm.
  Bulgarra Oval, Karratha, WA,
  6714

Follow us on Facebook by clicking here



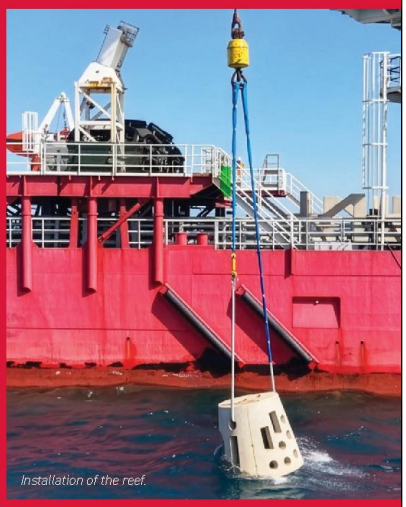
Come and speak to our friendly team.

To stay updated, subscribe for future editions at
woodside.com/what-we-do/consultation-activities

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Dampier fishers land a solid catch with new artificial reef

The bold vision of Woodside and Recfishwest to enhance marine life and recreational fishing in the Pilbara has become reality with the successful installation of an artificial reef off the coast of Dampier in north west Australia.



Installation of the reef.

The reef comprises 48 purpose-built concrete modules. They were carefully transported and installed in early December 2025.

The reef sits in some 35 metres of water, about 30 kilometres from the Dampier boat ramp. Over time, the site is expected to become a high-quality fishing location for species such as Spanish mackerel, cobia, emperor, cod and even sailfish.

Delivered with the support of the WA Government, the City of Karratha, Traditional Owners and local fishing clubs, the Dampier Artificial Reef represents a significant collaboration to provide an accessible and productive marine environment the community can enjoy now and in the future.

The installation of the reef was funded by Woodside and its Scarborough Joint Venture partners JERA Australia and LNG Japan. Woodside also acknowledges its Enfield Joint Venture partner, Mitsui E&P Australia, for contributing to the acquisition of the concrete modules.

As the reef establishes, we understand Recfishwest plans to share updates with local fishers, families and visitors who are set to enjoy a richer marine environment and better fishing in the years ahead.

Talking point

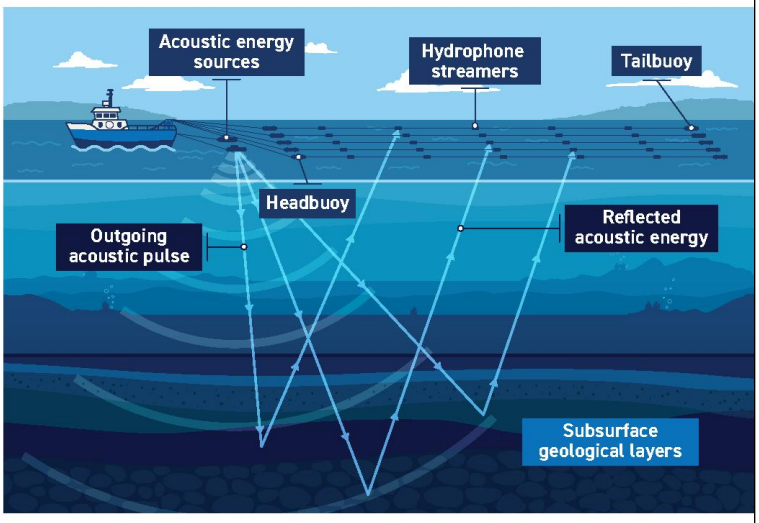
Pluto 4D M3 Marine Seismic Survey

Woodside's Pluto 4D M3 Marine Seismic Survey Environment Plan covers seismic survey activities in the Carnarvon Basin, north-west Australia, planned for late December 2026 to early February 2027, or the same period in the subsequent year.

Marine seismic surveys are a key technique used for geophysical exploration to understand what lies beneath the seabed, or subsurface. Woodside's seismic surveys are conducted under strict Australian and international regulations and management controls.

Marine seismic surveys are conducted by purpose-built survey vessels that tow specialised equipment placed in an array of long marine streamers. These vessels proceed at low speeds, typically around 4–5 knots (7.4–9.3 kilometres per hour), following predetermined sail lines to systematically map the survey area.

As the vessel moves, a sound source located at its rear releases compressed air as soundwaves into the water column at regular, short intervals. The soundwaves are reflected from subsurface rock layers to the water's surface, a bit like an echo. Sensitive microphones known as hydrophones, which are positioned within the streamers trailing behind the vessel, detect these soundwaves.



Alternatively, hydrophones and motion-sensitive sensors known as geophones can be embedded in small devices called ocean bottom seismic nodes, which are temporarily placed on the sea floor. The recorded sound is processed to generate images of subsurface structures, rock layers and other features for interpretation.

To learn more about marine seismic surveys, including methods that protect the marine environment, watch this video.



This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Consultation opportunities

Environment Plan	Activity Type	Location	Consultation Dates
Minerva Decommissioning and Field Management (Commonwealth)	Decommissioning	~ 11 km south-southwest of Port Campbell, Victoria	May 2026
Minerva Decommissioning and Field Management (State)	Decommissioning	~ 11 km south-southwest of Port Campbell, Victoria	May 2026
Goodwyn Alpha Facility Operations	Operations	~ 138 km north-west of the town of Dampier, Western Australia	April-May 2026
Browse to North West Shelf (NWS) Project Geophysical and Geotechnical (GPGT) Surveys (Commonwealth)	Survey	~ 370 to 430 km north-northwest of Broome, Western Australia	April-May 2026
Browse to NWS Project GPGT Surveys (State)	Survey	~ 430 km north-northwest of Broome, Western Australia	April-May 2026
Browse to NWS Project Trunkline GPGT Surveys (Commonwealth)	Survey	~ 110 km north-west of Dampier, Western Australia	April-May 2026
CK4 and LH3 Well Intervention	Drilling	~ 135 km north-west of Dampier, Western Australia	April-May 2026

Under assessment (since previous edition)

Environment Plan	Activity Type	Month Submitted
Greater Western Flank Phase 4 Drilling and Subsea Installation	Development	April 2026
Pluto 4D M3 Marine Seismic Survey	Survey	March 2026
Angel Carbon Capture and Storage GPGT Surveys (Commonwealth)	Survey	January 2026
NWS Trunklines Operations (State)	Operations	November 2025
Pluto Trunkline Operations (State)	Operations	November 2025

Recently accepted (since previous edition)

Environment Plan	Activity Type	Date Accepted
Julimar-Brunello Plug and Abandonment	Decommissioning	April 2026
Pyrenees Facility Operations	Operations	February 2026
North Rankin Complex Facility Operations	Operations	January 2026
Goodwyn Alpha GPGT Surveys	Survey	January 2026
NWS Phase 1 Plug and Abandonment and TPA03 Well Intervention	Decommissioning	December 2025
OKHA Floating Production Storage and Offloading Facility Operations	Operations & Production	July 2025

Have your say

Woodside consults relevant persons while preparing our Environment Plans to notify them, obtain their input and to assist Woodside to confirm current measures or identify additional measures, if any, that may be taken to lessen or avoid potential adverse impacts of the proposed activity on the environment.

We welcome your input so please contact us if you'd like to discuss your functions, interests or activities which may be affected by our proposed activities.

You can access our consultation information, provide feedback and subscribe for updates by **clicking here**



Right: Woodside employees keen to chat with community at the Ningaloo Sky Festival in Exmouth, WA.

You can view Commonwealth Environment Plans for approved activities and operations by visiting:
info.nopsema.gov.au/home/approved_projects_and_activities

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.



Carnaby's black cockatoos. Picture: Dean Arthurell.

Let's talk about... The Watheroo Biodiversity Project

Woodside's Watheroo Biodiversity Project is a collaborative effort to restore landscapes and support biodiversity in WA's northern Wheatbelt.

The project focuses on having positive biodiversity outcomes for habitats, threatened species and ecological function, through working with government agencies, non-government organisations, and local Indigenous and community groups.

As of December 2025, Woodside has planted approximately 5.5 million seedlings across 8,500 hectares in the Watheroo area. The land under reforestation in Watheroo is adjacent to a large area of conservation estate, the Watheroo National Park and connected reserves, as well as a significant area of remnant vegetation currently designated as unallocated Crown land. Together the combined area is over 130,000 hectares.

In addition to generating Australian Carbon Credit Units (for more information, click here), the plantings will provide additional habitat for fauna and create connectivity between these areas of remnant vegetation and conservation estate.*

One highlight of the Watheroo Biodiversity Project is the support for threatened Carnaby's black cockatoos. These large birds are under threat primarily from habitat loss due to historic land clearing. Together with not-for-profit conservation charity group Carnaby's Crusaders, numerous artificial hollows were installed in 2024 and 2025 to address a shortage of natural nesting sites because hollows large enough for the species to nest within typically only form in trees well over 100 years of age.

Additional programs within the project include a large-scale Light Detection and Ranging (LiDAR) survey to provide insight into the current status of the vulnerable malleefowl population in the region, motion detection camera fauna monitoring, annual bird surveys to track change within reforested areas, vegetation surveys to understand current condition of and stressors on remnant vegetation, and management of invasive species.

Woodside recognises that restoring biodiversity is a long-term commitment, and outcomes will continue to be monitored and reported transparently.

**All planting has been completed under the Carbon Credits (Carbon Farming Initiative) (Restoration by Environmental or Mallee Plantings - FullCAM) Methodology Determination 2024, which is authorised by the Carbon Credits (Carbon Farming Initiative) Act 2011.*

You can read more about Woodside's Biodiversity management and initiatives **here**.

Browse to North West Shelf (NWS) Project Geophysical and Geotechnical (GPGT) Surveys

Woodside has previously undertaken GPGT surveys in the Browse Basin as part of earlier project concepts. A series of new GPGT surveys are proposed to support potential future activities associated with the Browse to NWS Project.

Survey data is intended to inform the design and installation of the proposed trunkline, pipelines and umbilicals, subsea structures, and the mooring systems for the two proposed floating production storage and offtake (FPSO) facilities and mobile offshore drilling units (MODUs). Data may also contribute to assessments of existing infrastructure, support environmental and heritage studies, and assist in planning potential future project activities.

These surveys will be conducted across both Commonwealth and State waters and are organised into three Environment Plans. Woodside is consulting on these Environment Plans in April-May 2026. For more information, you can view the Consultation Information Sheets.

Browse to NWS Project GPGT Surveys (Commonwealth)

Browse to NWS Project GPGT Surveys (State)

Browse to NWS Project Trunkline GPGT Surveys

Join the conversation at **woodside.com/what-we-do/consultation-activities**

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

APPENDIX G OIL SPILL PREPAREDNESS AND RESPONSE STRATEGY SELECTION AND EVALUATION

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Woodside Energy

Oil Spill Preparedness and Response Mitigation Assessment for the Okha Light Well Intervention

Corporate HSE

Hydrocarbon Spill Preparedness

October 2026

Revision 0

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

CONTENTS

EXECUTIVE SUMMARY **7**

1 INTRODUCTION **10**

1.1 Overview 10

1.2 Purpose 10

1.3 Scope 10

1.4 Oil spill response document overview 10

2 RESPONSE PLANNING PROCESS **16**

2.1 Response planning process outline 18

2.1.1 Response Planning Assumptions 19

2.2 Environment plan risk assessment (credible spill scenarios) 20

2.2.1 Hydrocarbon characteristics 24

2.3 Hydrocarbon spill modelling 24

2.3.1 Stochastic modelling 25

2.3.2 Deterministic modelling 25

2.3.3 Response planning thresholds for surface and shoreline hydrocarbon exposure 26

2.3.4 Spill modelling results 30

3 IDENTIFY RESPONSE PROTECTION AREAS (RPAS) **32**

3.1 Identified sensitive receptor locations 32

3.2 Identify Response Protection Areas (RPAs) 33

4 NET ENVIRONMENTAL BENEFIT ANALYSIS (NEBA) **34**

4.1 Pre-operational / Strategic NEBA 35

4.2 Stage 1: Evaluate data 35

4.2.1 Define the scenario(s) 35

4.3 Stage 2: Predict Outcomes 35

4.4 Stage 3: Balance trade-offs 35

4.5 Stage 4: Select Best Response Options 35

4.5.1 Determining potential response options 35

5 HYDROCARBON SPILL ALARP PROCESS **41**

5.1 Monitor and evaluate 42

5.1.1 Response need based on predicted consequence parameters 42

5.1.2 Environmental performance based on need 43

5.2 Source control and well intervention 45

5.2.1 Response need based on predicted consequence parameters 45

5.2.2 Environmental performance based on need 46

5.3 Source Control via vessel Shipboard Oil Pollution Emergency Plan (SOPEP) 47

5.3.1 Environmental performance based on need 47

5.4 Oiled wildlife response (including hazing) 48

5.4.1 Response need based on predicted consequence parameters 48

5.4.2 Environmental performance based on need 51

5.5 Waste Management 52

5.5.1 Response need based on predicted consequence parameters 52

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

5.5.2 Environmental performance based on need 53
5.6 Operational and Scientific monitoring 54
5.6.1 Summary – operational and scientific monitoring 55
5.6.2 Environmental performance based on need 56
5.7 Incident Management System (IMS) 58
5.7.1 Incident action planning 58
5.7.2 Operational NEBA process 58
5.7.3 Consultation engagement process 58
5.7.4 Environmental performance based on need 59
5.8 Measurement criteria for all response techniques 61
6 ALARP EVALUATION 65
6.1 Monitor and evaluate – ALARP Assessment 65
6.1.1 Monitor and evaluate – Control Measure Options Analysis 65
6.1.2 Selected Control Measures 66
6.2 Source Control – ALARP Assessment 67
6.2.1 ROV Intervention 67
6.2.2 Activation/Mobilisation – Control Measure Options Analysis 69
6.2.3 Deployment Options Analysis 69
6.2.4 Selected Control Measures 70
6.3 Source Control via Vessel SOPEP – ALARP Assessment 71
6.3.1 Source Control via Vessel SOPEP – Control Measure Options Analysis 71
6.3.2 Selected control measures 71
6.4 Oiled Wildlife Response – ALARP Assessment 72
6.4.1 Existing Capability – Wildlife Response 72
6.4.2 Oiled Wildlife Response - Control Measure Options Analysis 72
6.4.3 Selected control measures 73
6.5 Waste Management – ALARP Assessment 74
6.5.1 Existing Capability – Waste Management 74
6.5.2 Waste Management - Control Measure Options Analysis 74
6.5.3 Selected control measures 75
6.6 Operational and Scientific Monitoring – ALARP Assessment 76
6.6.1 Existing Capability – Operational and Scientific Monitoring 76
6.6.2 Operational and Scientific Monitoring – Control Measure Options Analysis 76
6.6.3 Selected Control Measures 78
6.6.4 ALARP and Acceptability Summary 79
7 ENVIRONMENTAL RISK ASSESSMENT OF SELECTED RESPONSE TECHNIQUES 80
7.1 Identification of impacts and risks from implementing response techniques 80
7.2 Analysis of impacts and risks from implementing response techniques 80
7.3 Evaluation of impacts and risks from implementing response techniques 81
7.4 Treatment of impacts and risks from implementing response techniques 81
8 ALARP CONCLUSION 83
9 ACCEPTABILITY CONCLUSION 84

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

10 REFERENCES 85

11 GLOSSARY AND ABBREVIATIONS 87

ANNEX A: NET ENVIRONMENTAL BENEFIT ANALYSIS DETAILED OUTCOMES 91

ANNEX B: MONITOR AND EVALUATE ACTIVATION AND TERMINATION CRITERIA 93

ANNEX C: PETROLEUM ACTIVITY OSM ACTIVITY SPECIFIC REQUIREMENT AND VERIFICATION OF OSM-BIP ADEQUACY 95

C.1 Determine if the activity OSM Planning Area fits within the Combined OSM Planning Area 95

C.2 Determine activity-specific monitoring priorities 96

C.3 Mobilisation and timing of OMP and SMP implementation 100

C.4 Determine the OSM resourcing requirements and assess capability for the activity 102

ANNEX D: TACTICAL RESPONSE PLANS 106

FIGURES

Figure 1-1: Woodside hydrocarbon spill document structure 12
Figure 2-1: Response planning and selection process 17
Figure 2-2: Response planning assumption – timing, resourcing and effectiveness 19
Figure 2-3: Location of CS-01 and CS-03 23
Figure 2-4: Proportion of total area coverage (AMSA, 2014) 28
Figure 2-5: Oil thickness versus potential response options (from Allen & Dale 1996) 29
Figure 3-1: Identify Response Protection Areas (RPAs) flowchart 32
Figure 4-1: Net Environmental Benefit Analysis (NEBA) flowchart 34
Figure 5-1: Example screenshot of the CEM dashboard 62
Figure 5-2: Example screenshot for the SCAT role 62

TABLES

Table 0-1: Summary of the key details for assessment 7
Table 1-1: Hydrocarbon Spill preparedness and response – document references 13
Table 2-1: Petroleum Activities Program credible spill scenarios 21
Table 2-2: Summary of thresholds applied to the stochastic hydrocarbon spill modelling to determine the EMBA and inform operational and scientific monitoring 25
Table 2-3: Surface hydrocarbon thresholds for response planning 26
Table 2-4: Surface hydrocarbon viscosity thresholds 30
Table 2-5: Stochastic modelling results – probability and timing of surface and shoreline exposure values 31
Table 4-1: Response technique evaluation – Loss of Well Containment (LOWC) (CS-01) 37
Table 4-2: Response technique evaluation – vessel collision (CS-03) 39
Table 5-1: Environmental Performance – Monitor and evaluate 43
Table 5-2: Response Planning Assumptions – Source Control 45
Table 5-3: Environmental Performance – Source Control 46
Table 5-4: Key at-risk species potentially in open ocean 49
Table 5-5: WAOWRP Guide for rating wildlife impact of an oil spill (DBCA, 2022) 49
Table 5-6: Environmental Performance – Oiled Wildlife Response (OWR) 51
Table 5-7: Response Planning Assumptions – Waste Management 52
Table 5-8: Environmental Performance – Waste Management 53
Table 5-9 Joint industry OSM plans relevant to the Petroleum Activity 55
Table 5-10: Operational and scientific monitoring 56

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

Table 5-11: Environmental Performance – Incident Management System 59
Table 6-1: Safety case revision conditions and assumptions 68
Table 7-1: Analysis of risks and impacts 80

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

EXECUTIVE SUMMARY

Woodside Energy Limited (Woodside) has developed its oil spill preparedness and response position for the Okha Light Well Intervention, comprising Cossack-4H (CK-4), Lambert-3 (LH-4), Wanaea-7 (WA-7) and Wanaea-8 (WA-8) well intervention activities, hereafter known as the Petroleum Activity.

This document demonstrates that the risks and impacts from an unplanned hydrocarbon release, and the associated response operations, are controlled to As Low as Reasonably Practicable (ALARP) and an acceptable level. It achieves this by evaluating response options to address the potential environmental impacts resulting from an unplanned loss of hydrocarbon containment associated with the Petroleum Activity described in the Environment Plan (EP). This document then outlines Woodside's decisions and techniques for responding to a hydrocarbon release event and the process for determining its level of hydrocarbon spill preparedness.

A summary of the key facts and references to additional detail within this document are presented below.

Table 0-1: Summary of the key details for assessment

Key details of assessment	Summary	Reference to additional detail
Worst Case Credible Scenarios	**Credible Scenario-01 (CS-01): Intervention Wellbore Release** Subsea release of hydrocarbons due to loss of well containment during well intervention activities at the CK-4 well (19° 33' 22.91" S 116° 29' 35.75" E). 550 m^3 over 12 hours of Cossack Light Crude. 15.2% residual component of 83.6 m^3	Section 2.2
	Credible Spill Scenario-02 (CS-02): Well Suspension Wellbore Release Subsea hydrocarbon release caused by loss of well containment during well intervention at LH-3 well (19° 26′ 58.469″ S, 116° 29′ 16.227″ E). 117 m^3 over 12 hours of Cossack Light Crude. 15.2% residual component of 17.8 m^3.	
	Credible Scenario-03 (CS-03): Hydrocarbon release caused by vessel collision A 6-hour surface release of marine diesel oil after fuel tank rupture from vessel collision at the CK-4 well (19° 33' 22.91" S 116° 29' 35.75" E). 250 m^3 over 6 hours of marine diesel oil (MDO). 5% residual component of 12.5 m^3.	
	Credible Spill Scenario-04 (CS-04): Hydrocarbon release caused by Loss of Suspended Load Surface hydrocarbon release caused by rupture of the 8-inch production flowline due to a dropped object near the Lambert Hermes manifold (LHM). 414 m^3 over 72 hours of Cossack Light Crude. 15.2% residual component of 62.9 m^3.	
	Credible Spill Scenario-05 (CS-05): Hydrocarbon release during fuel bunkering Surface hydrocarbon release caused by failure of a fuel transfer hose or fittings curing marine diesel bunkering operations for the LWIV. 24 m^3 over 15 minutes of MDO. 5% residual component of 1.2 m^3.	
	Credible Spill Scenario-06 (CS-06): CK4 SCSSV Control Line Loss of Containment Subsea hydrocarbon release caused by loss of containment from the CK4 SCSSV control line leak path during XT changeout, resulting in release of well fluids and crude oil inventory. 42 m^3 over 32 hours Cossack Light Crude. 15.2% residual component of 6.4 m^3.	

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

<table>
<tr><td>Hydrocarbon Properties</td><td colspan="3">Cossack Light Crude
Cossack Light Crude (API 48.1) contains a moderate proportion (15.2% by mass) of hydrocarbon compounds that will not evaporate at atmospheric temperatures. These compounds will persist in the marine environment. The unweathered mixture has a dynamic viscosity of 1.40 cP. The pour point of the whole oil (-24°C) ensures it will remain in a liquid state over the annual temperature range observed on the North West Shelf.
The mixture is composed of hydrocarbons that have a wide range of boiling points and volatilities at atmospheric temperatures, and which will begin to evaporate at different rates on exposure to the atmosphere.
Evaporation rates will increase with temperature, but in general about 52.2% of the oil mass should evaporate within the first 12 hours (boiling point <180°C); a further 20.5% should evaporate within the first 24 hours (180°C < boiling point <265°C); and a further 12.0% should evaporate over several days (265°C < boiling point <380°C).</td><td>Section 6.7.1 of the EP
Appendix A of the First Strike Plan</td></tr>
<tr><td></td><td colspan="3">Marine Diesel Oil (MDO)
MDO is a mixture of volatile and persistent hydrocarbons with low proportions of highly volatile and residual components. The unweathered mixture has a dynamic viscosity of 4 cP.
The mixture is composed of hydrocarbons that have a wide range of boiling points and volatilities at atmospheric temperatures, and which will begin to evaporate at different rates on exposure to the atmosphere.
Evaporation rates will increase with temperature, but in general about 6% of the oil mass should evaporate within the first 12 hours (BP < 180 °C); a further 35% should evaporate within the first 24 hours (180°C < BP < 265 °C); and a further 54% should evaporate over several days (265 °C < BP < 380 °C).</td><td></td></tr>
<tr><td>Modelling Results</td><td colspan="3">Stochastic modelling
A quantitative, stochastic assessment has been undertaken for credible spill scenarios to help assess the environmental risk of a hydrocarbon spill.
A total of 200 replicate simulations were completed for each scenario to test for trends and variations in the trajectory and weathering of the spilled oil, with an even number of replicates completed using samples of metocean data that commenced within each calendar quarter (50 simulations per quarter).</td><td>Section 2.3</td></tr>
<tr><td></td><td></td><td>CS-01: Subsurface hydrocarbon release of 550 m^3 of Cossack light crude over 12 hours due to loss of well containment at CK-4 well</td><td>CS-03: 6-hour surface release of 250 m^3 MDO after vessel fuel tank rupture at CK-4 well</td><td></td></tr>
<tr><td></td><td>Minimum time to floating hydrocarbon contact with the offshore edge(s) of any shoreline receptor polygon (at a concentration of 10 g/m^2)</td><td>No contact at threshold</td><td>No contact at threshold</td><td></td></tr>
<tr><td></td><td>Minimum time to shoreline contact (above 100 g/m^2)</td><td>No contact at threshold</td><td>No contact at threshold</td><td></td></tr>
<tr><td></td><td>Largest volume ashore at any single Response Protection Area (RPA) (above 100 g/m^2)</td><td>No contact at threshold</td><td>No contact at threshold</td><td></td></tr>
<tr><td></td><td>Largest total shoreline accumulation (above 100 g/m^2) all shorelines</td><td>No contact at threshold</td><td>No contact at threshold</td><td></td></tr>
<tr><td></td><td>Minimum time to dissolved hydrocarbon contact with the offshore</td><td>Rankin Bank – 72 hours (1% probability)</td><td>No contact at threshold</td><td></td></tr>
</table>

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

	edges of any receptor polygon (at a threshold of 10 ppb)			
Net Environmental Benefit Analysis	Monitor and evaluate, source control and oiled wildlife response are all identified as potentially having a net environmental benefit (dependent on the actual spill scenario) and carried forward for further assessment.			Section 4
ALARP evaluation of selected response techniques	The evaluation of the selected response techniques shows the proposed controls reduced the risk to an ALARP and acceptable level for the risk presented in Section 2, without the implementation of considered additional, alternative or improved control measures.			Section 6

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

1 INTRODUCTION

1.1 Overview

Woodside Energy Limited (Woodside) has developed its oil spill preparedness and response position for the Cossack-4H (CK-4), Lambert-3 (LH-4), Wanaea-7 (WA-7), and Wanaea-8 (WA-8) well intervention activities, hereafter known as the Petroleum Activity. This document outlines Woodside's decisions and techniques for responding to a hydrocarbon loss of containment event and the process for determining its level of hydrocarbon spill preparedness.

1.2 Purpose

This document, together with the documents listed below, meet the requirements of the Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023 (Environment Regulations) relating to hydrocarbon spill response arrangements.

- The Okha Light Well Intervention Environment Plan (EP)
- Hydrocarbon Spill Australia Regulatory Framework1
- The Okha Light Well Intervention Oil Pollution Emergency Plan (OPEP) including
  - Oil Pollution First Strike Plan (FSP)
  - Operational and Scientific Monitoring Bridging Implementation Plan (OSM BIP)[2]
  - Relevant Operations Plans
  - Relevant Tactical Response Plans (TRPs)
  - Relevant Supporting Plans
  - Data Directory.

1.3 Scope

This document demonstrates that the risks and impacts from an unplanned hydrocarbon release, and the associated response operations, are controlled to ALARP and an acceptable level. It achieves this by evaluating response options to address the potential environmental risks and impacts resulting from an unplanned loss of hydrocarbon containment associated with the Petroleum Activity described in the EP. This document then outlines Woodside's decisions and techniques for responding to a hydrocarbon release event and the process for determining its level of hydrocarbon spill preparedness. It should be read in conjunction with the documents listed in Table 1-1. The location of the Petroleum Activity is shown in Figure 3-1 of the EP.

1.4 Oil spill response document overview

The documents outlined in Table 1-1 and Figure 1-1 are collectively used to manage the preparedness and response for a hydrocarbon release.

The Oil Pollution First Strike Plan (FSP) contains a pre-operational Net Environmental Benefit Analysis (NEBA) summary, outlining the selected response techniques for this Petroleum Activity. Relevant Operational Plans to be initiated for associated response techniques are identified in the FSP and relevant forms to initiate a response are appended to the FSP.

The process to develop an Incident Action Plan (IAP) begins once the oil pollution FSP is underway. The IAP includes inputs from monitor and evaluate and operational monitoring activities and the operational NEBA (Section 4). Planning, coordination and resource management are initiated by the Corporate Incident

[1] In accordance with Regulation 56 of the Environmental Regulations, references to the Hydrocarbon Spill Australia Regulatory Framework within this document refer to the version submitted with accepted North West Shelf Phase 1 Plug and Abandonment and TPA03 Well Intervention Environment Plan, which is available on NOPSEMA's website at: https://docs.nopsema.gov.au/A1282743

[2] In accordance with Regulation 56 of the Environmental Regulations, references to the Operational and Scientific Monitoring Bridging Implementation Plan (OSM-BIP) within this document refer to the OSM-BIP submitted with accepted North West Shelf Phase 1 Plug and Abandonment and TPA03 Well Intervention Environment Plan, which is available on NOPSEMA's website at: https://docs.nopsema.gov.au/A1282743

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

Management Team (CIMT). In some instances, technical specialists may be utilised to provide expert advice. The planning may also involve liaison officers from supporting government agencies.

During each operational period, field reports are continually reviewed to evaluate the effectiveness of response operations. In addition, the operational NEBA is continually reviewed and updated to confirm the response techniques implemented continue to result in a net environmental benefit (Section 4).

The response will continue as described in Section 5 until the response termination criteria have been met.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

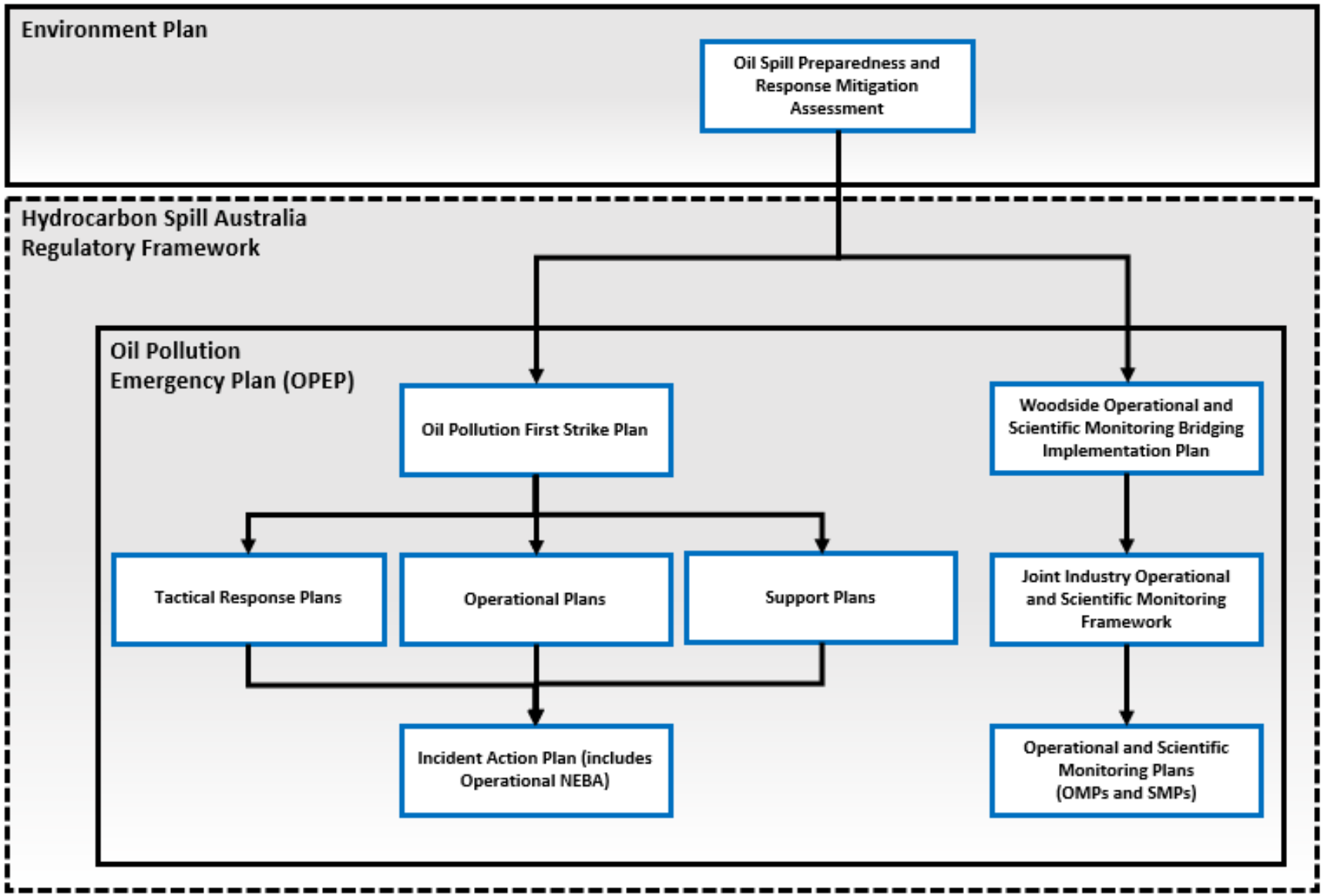


Figure 1-1: Woodside hydrocarbon spill document structure

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

Table 1-1: Hydrocarbon Spill preparedness and response – document references

Document	Document overview	Stakeholders	Relevant information	Document subsections (if applicable)
Okha Light Well Intervention Environment Plan (EP)	Demonstrates that potential adverse impacts on the environment associated with the Okha Light Well Intervention (during both routine and non-routine operations) are mitigated and managed to As Low As Reasonably Practicable (ALARP) and will be of an acceptable level.	National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) Woodside internal	EP Section 6 (Identification and evaluation of environmental risks and impacts, including credible spill scenarios) EP Section 6 (Performance outcomes, standards and measurement criteria) EP Section 7 (Implementation strategy – including emergency preparedness and response, and Reporting and compliance)	
Hydrocarbon Spill Australia Regulatory Framework[1]	Describes the arrangements and processes adopted by Woodside when responding to a hydrocarbon spill from a petroleum activity.	Regulatory agencies Woodside internal	All	
Oil Spill Preparedness and Response Mitigation Assessment for the Okha Light Well Intervention (this document)	Evaluates response options to address the potential environmental impacts resulting from an unplanned loss of hydrocarbon containment associated with the Petroleum Activity described in the EP.	Regulatory agencies Corporate Incident Management Team (CIMT): Control function in an ongoing spill response for activity-specific response information.	All Performance outcomes, standards and measurement criteria related to hydrocarbon spill preparedness and response are included in this document.	
Okha Light Well Intervention Oil Pollution First Strike Plan	Facility specific document providing details and tasks required to mobilise a first strike response. Primarily applied to the first 24 hours of a response until a full Incident Action Plan (IAP) specific to the event is developed. Oil Pollution First Strike Plans are intended to be the first document used to provide immediate guidance to the responding Incident Management Team (IMT).	Site-based IMT for initial response, activation and notification. CIMT for initial response, activation and notification. CIMT: Control function in an ongoing spill response for activity-specific response information.	Initial notifications and reporting required within the first 24 hours of a spill event. Relevant spill response options that could be initiated for mobilisation in the event of a spill. Recommended pre-planned tactics. Details and forms for use in immediate response. Activation process for oil spill trajectory modelling, aerial surveillance and oil spill tracking buoy details.	

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

Document	Document overview	Stakeholders	Relevant information	Document subsections (if applicable)
Operational Plans	Lists the actions required to activate, mobilise and deploy personnel and resources to commence response operations. Includes details on access to equipment and personnel (available immediately) and steps to mobilise additional resources depending on the nature and scale of a release. Relevant operational plans will be initially selected based on the Oil Pollution First Strike Plan; additional operational plans will be activated depending on the nature and scale of the release.	CIMT: Operations and Logistics Sections for first strike activities. CIMT: Planning Section to help inform the IAP on resources available.	Locations from where resources may be mobilised. How resources will be mobilised. Details of where resources may be mobilised to and what facilities are required once the resources arrive. Details on how to implement resources to undertake a response.	Operational Monitoring Operational Plan Wells Global Source Control Emergency Response Plan Oiled wildlife response
Operational and Scientific Monitoring (OSM) Bridging Implementation Plan	Describes a program of monitoring oil pollution that will be adopted in the event of a hydrocarbon spill incident (Level 2–3) to marine waters. It is aligned to the Joint Industry Operational and Scientific Monitoring Framework (Australian Petroleum Production & Exploration Association (APPEA) [now Australian Energy Producers (AEP)]), 2021) and describes how this Framework applies to Woodside's activities and spill risks in Australian waters.	Site-based IMT for initial activation and notification. OSM Service Providers Regulatory agencies	Mobilisation and notification process for OSM, including activation of OSM Service Providers Information on first-strike scientific monitoring priorities OSM arrangements and capability Permitting and access requirements for OSM	

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

Document	Document overview	Stakeholders	Relevant information	Document subsections (if applicable)
Tactical Response Plans	Provides options for response techniques in selected RPAs. Provides site, access and deployment information to support a response at the location.	CIMT: Planning Section to help develop IAPs, and Logistics Section to assist with determining resources required.	Indicative response techniques. Access requirements and/or permissions. Relevant information for undertaking a response at that site. Where applicable, may include equipment deployment locations and site layouts.	Modelling for this Petroleum Activity predicts no shoreline contact. If RPAs are predicted to be at risk of contact during a real incident, refer to ANNEX D for available Tactical Response Plans.
Support Plans	Support Plans detail Woodside's approach to resourcing and the provision of services during a hydrocarbon spill response.	CIMT: Operations, Logistics and Planning Sections.	Technique for mobilising and managing additional resources outside of Woodside's immediate preparedness arrangements.	Logistics Support Plan Aviation Support Plan Marine Support Plan Waste Management Plan – Australia Health and Safety Support Plan Hydrocarbon Spill Responder Health Monitoring Guidelines People and Global Capability (Surge Labour Requirements) Support Plan Stakeholder Engagement Support Plan Guidance for Hydrocarbon Spill Claims Management

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

2 RESPONSE PLANNING PROCESS

This document details Woodside's process for identifying potential response options for the hydrocarbon release scenarios, identified in the EP. Figure 2-1 outlines the interaction between Woodside's response, planning, preparedness and selection process.

This structure has been used because it shows how the planning and preparedness activities inform a response and provides indicative guidance on what activities would be undertaken, in sequential order, if a real event were to occur. The process also evaluates alternative, additional and/or improved control measures specific to the Petroleum Activity.

The Okha Light Well Intervention Oil Pollution First Strike Plan (FSP) then summarises the outcome of the response planning process and provides initial response guidance and a summary of ongoing response activities if an incident were to occur.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

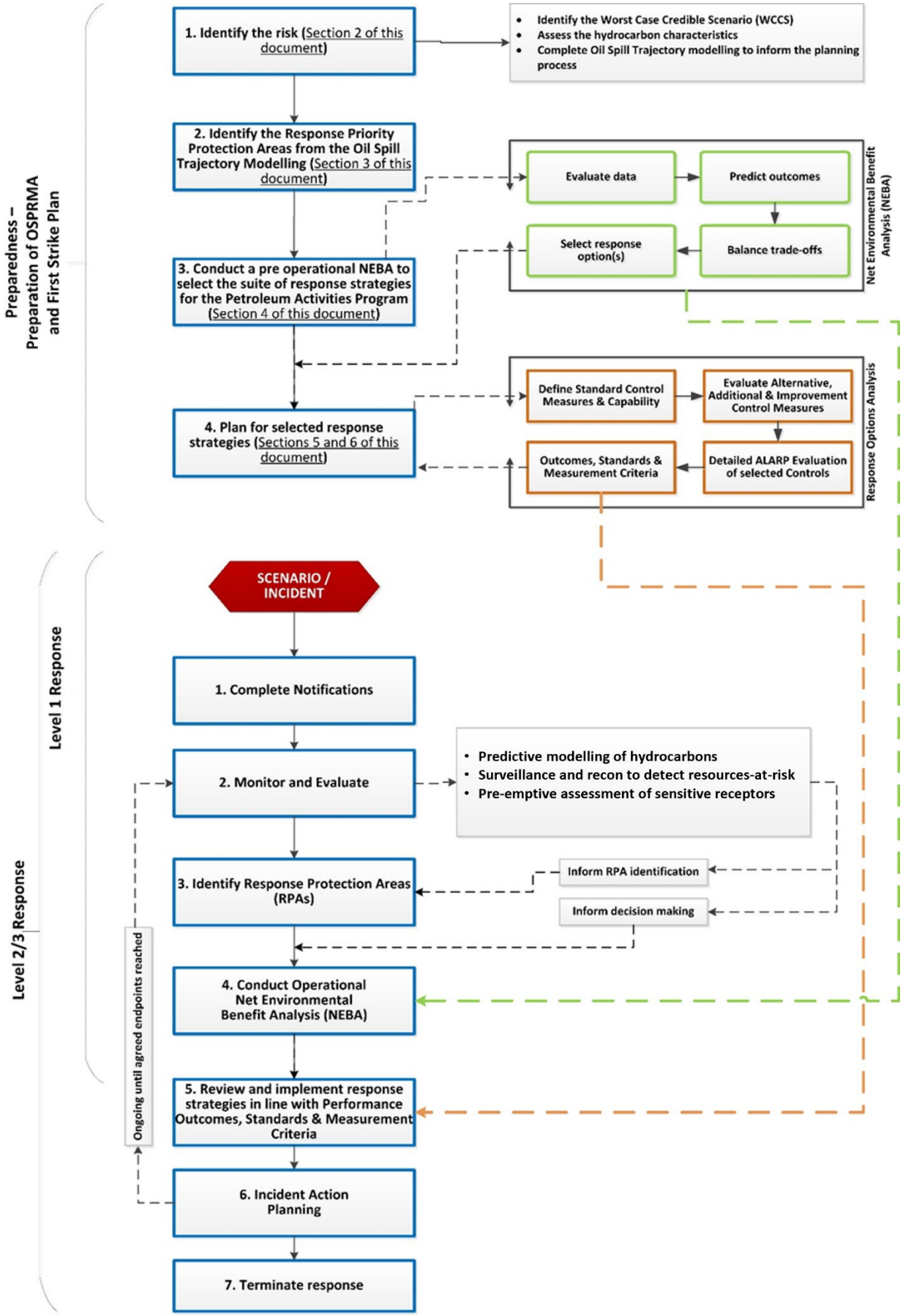


Figure 2-1: Response planning and selection process

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

2.1 Response planning process outline

This document is expanded below to provide additional context on the key steps in determining capability, evaluating ALARP and hydrocarbon spill response requirements.

- Section 1: Introduction
- Section 2: Response planning process
  - identification of worst-case credible scenario(s) (WCCS)
  - spill modelling for WCCS.
- Section 3: Identify response protection areas (RPAs)
  - areas predicted to be contacted at concentration >100 g/m^2.
- Section 4: Net environmental benefit analysis (NEBA)
  - pre-operational NEBA (during planning/ALARP evaluation): this must be reviewed during the initial response to an incident to confirm its accuracy
  - selected response techniques prioritised and carried forward for ALARP assessment.
- Section 5: Hydrocarbon spill ALARP process
  - determines the response need based on predicted consequence parameters.
  - details the environmental performance of the selected response options based on need.
  - sets the environmental performance outcomes, environmental performance standards and measurement criteria.
- Section 6: ALARP evaluation
  - evaluates alternative, additional, and improved options for each response technique to demonstrate the risk has been reduced to ALARP.
  - provides a detailed ALARP assessment of selected control measure options against:
    - predicted cost associated with implementing the option
    - predicted change to environmental benefit
    - predicted effectiveness / feasibility of the control measure.
- Section 7: Environmental risk assessment of selected response techniques
  - evaluation of impacts and risks from implementing selected response options.
- Section 8: ALARP conclusion
- Section 9: Acceptability conclusion

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

2.1.1 Response Planning Assumptions

Figure 2-2 illustrates the initial steps of a response to an oil spill event and, where available, the indicative timing. For the latter stages, the timing will be specific to the selective response option.

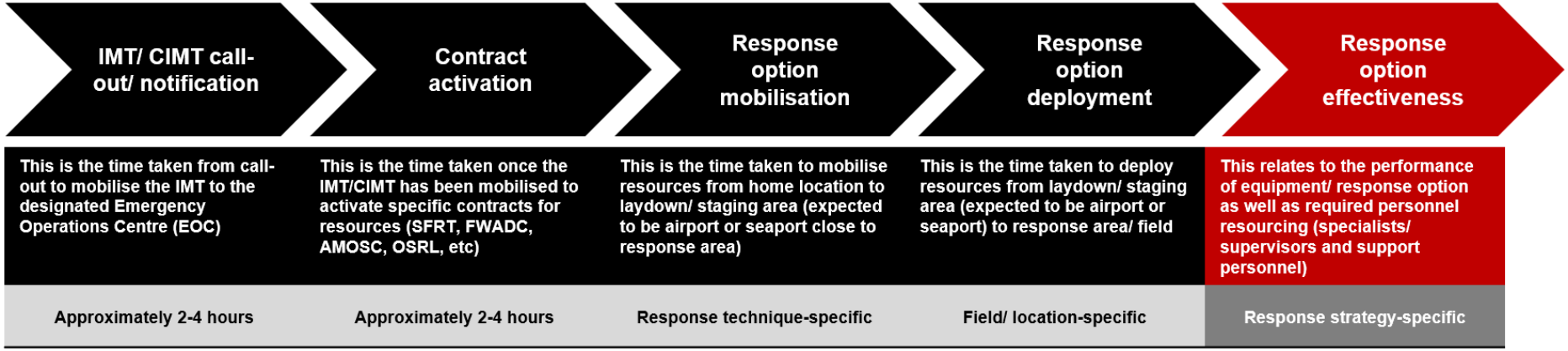


Figure 2-2: Response planning assumption – timing, resourcing and effectiveness

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

2.2 Environment plan risk assessment (credible spill scenarios)

Potential hydrocarbon release scenarios from the Petroleum Activity have been identified during the risk assessment process (Section 6 of the EP). Further descriptions of risk, impacts and mitigation measures (which are not related to hydrocarbon preparedness and response) are provided in Section 6 of the EP. Two unplanned events or credible spill scenarios for the Petroleum Activity have been selected as representative across types, sources and incident/response levels, up to and including the WCCS.

Table 2-1 presents the credible scenarios for the Petroleum Activity. The WCCS for the activity is then used for response planning purposes, as all other scenarios are of a lesser scale and extent. By demonstrating capability to manage the response to the WCCS, Woodside assumes other scenarios that are smaller in nature and scale can also be managed by the same capability. Response performance measures have been defined based on a response to the WCCS.

The hydrocarbon release caused by loss of well containment (CS-01) is considered the worst case given the volume (550 m^3) of Cossack Light Crude released over a short period of time (12 hours). Credible Scenario-03 is considered the largest volume (250 m^3) of MDO and is released over a short period of time (6 hours). CS-01 and CS-03 were the only credible spill scenarios that were modelled. All other scenarios have a smaller hydrocarbon release volume and are considered to be within the risk profile and spill response requirements of CS-01 and CS-03.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

Table 2-1: Petroleum Activities Program credible spill scenarios

Credible Spill Scenarios	Scenario selected for planning purposes	Scenario description	Maximum credible volume released (liquid m^3)[1]	Incident level	Hydrocarbon type	Residual proportion	Residual volume (m^3)
Credible Spill Scenario-01 (CS-01) (WCCS)	Yes	Subsea hydrocarbon release caused by loss of well containment during well intervention at CK-4 well (19° 33' 22.91" S 116° 29' 35.75" E).	550 m^3 over 12 hours.	3	Cossack Light Crude	15.2%	83.6 m^3
Credible Spill Scenario-02 (CS-02)	No	Subsea hydrocarbon release caused by loss of well containment during well intervention at LH-3 well (19° 26′ 58.469″ S, 116° 29′ 16.227″ E).	117 m^3 over 12 hours	3	Cossack Light Crude	15.2%	17.8 m^3
Credible Spill Scenario-03 (CS-03)	Yes	Surface hydrocarbon release caused by vessel tank rupture due to vessel collision near the CK-4 well (19° 33' 22.91" S 116° 29' 35.75" E).	250 m^3 over 6 hours.	3	Marine Diesel Oil	5%	12.5 m^3
Credible Spill Scenario-04 (CS-04)	No	Surface hydrocarbon release caused by rupture of the 8-inch production flowline due to a dropped object near the Lambert Hermes manifold (LHM).	414 m^3 over 72 hours.	3	Cossack Light Crude	15.2%	62.9 m^3
Credible Spill Scenario-05 (CS-05)	No	Surface hydrocarbon release caused by failure of a fuel transfer hose or fittings curing marine diesel bunkering operations for the LWIV.	24 m^3 over 15 minutes.	3	Marine Diesel Oil	5%	1.2 m^3

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

Credible Spill Scenarios	Scenario selected for planning purposes	Scenario description	Maximum credible volume released (liquid m^3)[1]	Incident level	Hydrocarbon type	Residual proportion	Residual volume (m^3)
Credible Spill Scenario-06 (CS-06)	No	Subsea hydrocarbon release caused by loss of containment from the CK4 SCSSV control line leak path during XT changeout, resulting in release of well fluids and crude oil inventory.	42 m^3 over 32 hours	3	Cossack Light Crude	15.2%	6.4 m^3

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

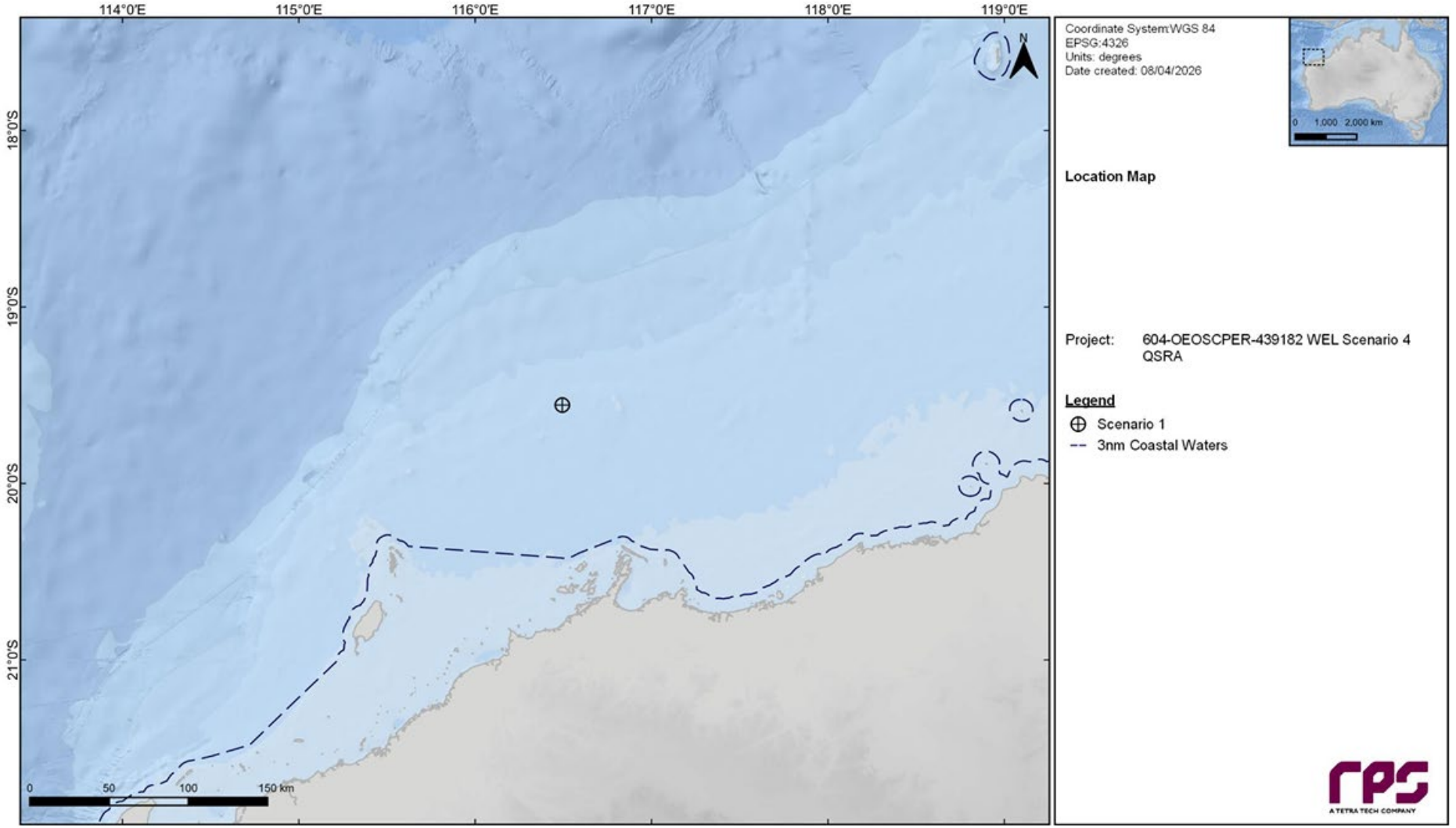


Figure 2-3: Location of CS-01 and CS-03

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

2.2.1 Hydrocarbon characteristics

Hydrocarbon characteristics, including modelled weathering data and ecotoxicity, are included in Section 6 of the EP.

Cossack light crude

Cossack Light Crude (API 48.1) contains a moderate proportion (15.2% by mass) of hydrocarbon compounds that will not evaporate at atmospheric temperatures. These compounds will persist in the marine environment.

The unweathered mixture has a dynamic viscosity of 1.40 cP. The pour point of the whole oil (-24°C) ensures it will remain in a liquid state over the annual temperature range observed on the North West Shelf. The mixture is composed of hydrocarbons that have a wide range of boiling points and volatilities at atmospheric temperatures, and which will begin to evaporate at different rates on exposure to the atmosphere.

Evaporation rates will increase with temperature, but in general about 52.2% of the oil mass should evaporate within the first 12 hours (boiling point <180°C); a further 20.5% should evaporate within the first 24 hours (180°C < boiling point <265°C); and a further 12.0% should evaporate over several days (265°C < boiling point <380°C).

The whole oil has low asphaltene content (< 0.5%), indicating a low propensity for the mixture to take up water to form water-in-oil emulsion over the weathering cycle.

Soluble aromatic hydrocarbons contribute approximately 14.5% by mass of the whole oil, with a moderate proportion (7.4%) in the C4 to C10 range of hydrocarbons. These compounds will evaporate rapidly, reducing the potential for dissolving a proportion of them into the water.

Marine Diesel Oil

Marine Diesel Oil (MDO) is typically classed as an International Tanker Owners Pollution Federation (ITOPF) Group I/II oil. Group I oils are non-persistent and tend to dissipate completely through evaporation within a few hours and do not normally form emulsions.

Marine diesel is a mixture of volatile and persistent hydrocarbons with low proportions of highly volatile and residual components. In general, about 6% of the oil mass should evaporate within the first 12 hours (BP < 180 °C); a further 35% should evaporate within the first 24 hours (180 °C < BP < 265 °C); and a further 54% should evaporate over several days (265 °C < BP < 380 °C). Approximately 5% of the oil is shown to be persistent. The aromatic content of the oil is approximately 3%.

If released in the marine environment and in contact with the atmosphere (i.e., surface spill), approximately 41% by mass of this oil is predicted to evaporate over the first couple of days depending upon the prevailing conditions, with further evaporation slowing over time. The heavier (low volatility) components of the oil tend to entrain into the upper water column due to wind-generated waves but can subsequently resurface if wind-waves abate. Therefore, the heavier components of this oil can remain entrained or on the sea surface for an extended period, with associated potential for dissolution of the soluble aromatic fraction.

2.3 Hydrocarbon spill modelling

Oil spill trajectory modelling (OSTM) tools are used for environmental impact assessment and during response planning to understand spatial scale and timeframes for response operations. Woodside recognises there is a degree of uncertainty related to the use of modelling data and has subsequently utilised conservative approaches to volumes, weathering, spatial areas, timing and response effectiveness to scale capability to need.

The Oil Spill Model and Response System (OILMAP) and Integrated Oil Spill Impact Model System (SIMAP) models are both used for stochastic and deterministic trajectory modelling. They have been developed over three decades of planning, exercises, actual responses, several peer reviews, and validation studies. OILMAP was originally derived from the United States Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Type A model (French et al. 1996), for assessing marine transport, biological impact and economic damage that was also used under the United States Oil Pollution Act 1990 Natural Resource Damage Assessment (NRDA) regulations. Notable spills where the model has been used and validated against actual field observations include, Exxon Valdez (French McCay 2004), North Cape Oil Spill (French McCay 2003), along with an assessment of 20 other spills (French McCay and Rowe, 2004). In addition, test spills designed to verify fate, weathering and movement algorithms have been conducted regularly and in a

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

range of climate conditions (French and Rines 1997; French et al. 1997; Payne et al. 2007; French McCay et al. 2007).

Further to this, the algorithms have been updated using the latest findings from the Macondo/Deepwater Horizon well blowout in the Gulf of Mexico and validated according to the Deepwater Horizon (DWH) oil spill in support of the NRDA (Spaulding et al. 2015; French McCay et al. 2015, 2016). Finally, the OILMAP and SIMAP models have been used extensively in Australia to prosecute pollution offences, predict discharge locations and likely spill volumes based on weathering and surveillance observations, and has been used as expert witness evidence in Australian court proceedings, aiding the prosecution to determine spill quantum estimates.

2.3.1 Stochastic modelling

Quantitative, stochastic assessments have been undertaken for the credible spill scenarios (refer to Table 2-1) to help assess the environmental consequences of a hydrocarbon spill.

A total of 200 replicate simulations were completed for each of the scenarios to test for trends and variations in the trajectory and weathering of the spilled oil, with an even number of replicates completed using samples of metocean data that commenced within each calendar quarter (50 simulations per quarter). Further details relating to the assessments for the scenarios can be found in Section 6 of the EP.

2.3.1.1 Environmental impact thresholds – Environment that May Be Affected (EMBA) and hydrocarbon exposure

The outputs of the stochastic spill modelling are used to assess the potential environmental impact from the credible scenarios. The stochastic modelling results are used to delineate areas of the marine and shoreline environment that could be exposed to hydrocarbon levels exceeding environmental impact threshold concentrations. The summary of all the locations where hydrocarbon thresholds could be exceeded by any of the simulations modelled is defined as the EMBA and is discussed further in Section 6 of the EP. As the weathering of different fates of hydrocarbons (surface, entrained and dissolved) differs due to the influence of the metocean mechanism of transportation, a different EMBA is presented for each fate within the EP.

A conservative approach – adopting accepted accumulation thresholds for impacts on the marine environment – is used to define the EMBA. These hydrocarbon thresholds are presented in Table 2-2 below and described in Section 6 of the EP.

Table 2-2: Summary of thresholds applied to the stochastic hydrocarbon spill modelling to determine the EMBA and inform operational and scientific monitoring

Hydrocarbon	Surface hydrocarbon (g/m^2)	Dissolved hydrocarbon (ppb)	Entrained hydrocarbon (ppb)	Accumulated hydrocarbon (g/m^2)
EMBA				
Cossack Light Crude	10	10	1,000	100
Diesel	10	10	1,000	100
Operational and scientific monitoring (OSM) assessment (see ANNEX C: Petroleum Activity OSM Activity Specific Requirement and Verification of OSM-BIP Adequacy)				
All hydrocarbon types	1	10	10	10

2.3.2 Deterministic modelling

Woodside uses deterministic modelling to evaluate risks and impacts and response capability requirements. For planning and scaling the clean-up element of the response, deterministic modelling is undertaken where initial stochastic modelling has indicated that hydrocarbons are present at the minimum feasible clean-up thresholds of >50 g/m^2 for floating hydrocarbons, and/or >100 g/m^2 for shoreline accumulations and where such shoreline contact is predicted at multiple locations. The deterministic modelling outputs are then used to scale the required capability for the offshore (surface dispersant and containment and recovery) and/or shoreline responses.

Stochastic modelling for CS-01 and CS-03 does not predict floating hydrocarbons at >50 g/m^2 or shoreline contact at the 100 g/m^2 response threshold (see Table 2-5). Deterministic modelling was therefore not required and stochastic modelling has thus been used to scale the clean-up response within this assessment.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

Deterministic modelling may also be used for planning Operational and Scientific Monitoring (OSM) activities. This is undertaken where stochastic modelling predicts that the existing response capability, required to resource monitoring at receptors forecast to be contacted by floating, shoreline and/or dissolved hydrocarbons (at >10% probability and within the initial 14 days), has been exceeded. For this Petroleum Activity, stochastic modelling does not predict that existing capability would be exceeded and therefore deterministic modelling for OSM planning is not required and stochastic modelling has been used to plan the OSM activities as detailed in Annex C.

Woodside is committed to a realistic, scalable response capability commensurate to the level of risk and able to be practically implemented and feasibly sustained.

2.3.3 Response planning thresholds for surface and shoreline hydrocarbon exposure

Thresholds to determine the EMBA and inform OSM are used to predict and assess environmental impacts, however they do not appropriately represent the thresholds at which an effective clean-up response can be implemented. Additional response thresholds are used for response planning and to determine areas where response techniques would be most effective. These thresholds are provided as a guide for response planning based on case studies that have demonstrated some response strategies (e.g. containment and recovery, chemical dispersant application) require certain oil spill thicknesses and conditions to be effective.

Response planning thresholds assist with understanding worst-case spill scenario response strategy capability requirements when used in conjunction with oil spill trajectory modelling results. Modelling informs the predicted spatial extent of the spill at certain response thresholds, which in turn can inform response strategy capability.

2.3.3.1 Surface hydrocarbon concentrations

Table 2-3: Surface hydrocarbon thresholds for response planning

Surface hydrocarbon threshold (g/m^2)	Description	Bonn Agreement Oil Appearance Code	Mass per area (m^3/km^2)
>10	Predicted minimum threshold for commencing monitor and evaluate[3]	Code 3 – Dull metallic colours	5 to 50
50	Predicted minimum floating oil threshold for containment and recovery and surface dispersant application [4]	Code 4 – Discontinuous true oil colour	50 to 200
100	Predicted optimum floating oil threshold for containment and recovery and surface dispersant application	Code 5 – Continuous true oil colour	>200
Shoreline hydrocarbon threshold (g/m^2)	**Description**	**National Plan Guidance on Oil Contaminated Foreshores**	**Mass per area (m^3/km^2)**
100	Predicted minimum shoreline accumulation threshold for shoreline assessment operations	Stain	>100
250	Predicted minimum threshold for commencing shoreline clean-up operations	Level 3 – Thin Coating	200 to 1000

The surface thickness of oil at which dispersants are typically effective is approximately 100 g/m^2. However, substantial variations occur in the thickness of the oil within the slick, and most fresh crude oils spread within a few hours, so overall the average thickness is 0.1 mm (or approx. 100 g/m^2 ITOPF 2011). Additionally, the recommended rate of application for surface dispersant is typically one part dispersant to 20 or 25 parts of

[3] Monitor and evaluate will be undertaken from the outset of a spill whether or not this threshold has been reached. Monitoring is needed throughout the response to assess the nature of the spill, track its location and inform the need for any additional monitoring and/or response techniques. It also informs when the spill has entered State Waters and control of the incident passes to statutory authorities e.g. Western Australia Department of Transport and Major Infrastructure (WA DTMI) or AMSA.

[4] At 50 g/m^2, containment and recovery and surface dispersant application operations are not expected to be particularly effective. This threshold represents a conservative approach to planning response capability and containing the spread of surface oil.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

spilled oil. These figures assume a 0.1 mm slick thickness, averaged over the thickest part of the spill, to calculate a litres/hectare application rate from vessels and aircraft. In practice this can be difficult to achieve as it is not possible to accurately assess the thickness of the floating oil.

Some degree of localised over-dosage and under-dosage is inevitable in dispersant response. An average oil layer thickness of 0.1 mm is often assumed, although the actual thickness can vary over a wide range (from less than 0.0001 mm to more than 1 mm) over short distances (International Petroleum Industry Environment Conservation Association [IPIECA] 2015).

Guidance from the Australian Maritime Safety Authority (AMSA, 2020) indicates spreading of spills of Group II or III products will rapidly decrease slick thickness over the first 24 hours of a spill resulting in the potential requirement of up to a ten (10) fold increase in capability on day 2 to achieve the same level of performance.

Further guidance from the European Maritime Safety Authority (EMSA) states spraying the 'metallic' looking area of an oil slick (Bonn Agreement Oil Appearance Code [BAOAC] 3, approx. 5 – 50 µm) with dispersant from spraying gear designed to treat an oil layer 0.1 mm (100 µm) thick, will inevitably cause dispersant over-treatment by a factor of 2 to 20 times (EMSA 2012).

Therefore, dispersant application should be concentrated on the thickest areas of an oil slick and Woodside intends on applying surface dispersants to only BAOAC 4 and 5. Spraying areas of oil designated as BAOAC Code 4 (Discontinuous true oil colour) with dispersant will, on average, deliver approximately the recommended treatment rate of dispersant.

Spraying areas of oil designated as BAOAC Code 5 with dispersant (Continuous true oil colour and more than 0.2 mm thick) will, on average, deliver approximately half the recommended treatment rate of dispersant. Repeated application of these areas of thicker oil, or increased dosage ratios, will be required to achieve the recommended treatment rate of dispersant (EMSA 2012).

Guidance from the National Oceanic and Atmospheric Administration (NOAA) in the United States is found in the document: *Characteristics of Response Strategies: A Guide for Spill Response Planning in Marine Environments 2013 (NOAA 2013).* This guide outlines advice for response planning across all common techniques, including surface dispersant spraying and containment and recovery. It states oil thickness can vary by orders of magnitude within distinct areas of a slick, thus the actual slick thickness and oil distribution of target areas are crucial for determining response method feasibility. Further to this, ITOPF also states in terms of oil spill response, sheen can be disregarded as it represents a negligible quantity of oil, cannot be recovered or otherwise dealt with to a significant degree by existing response techniques, and is likely to dissipate readily and naturally (ITOPF, 2014a, 2014b).

Figure 2-4 below from AMSA's Identification of Oil on Water – Aerial Observation and Identification Guide (AMSA, 2014) shows expected percent coverage of surface hydrocarbons as a proportion of total surface area. Wind-rows, heavy oil patches and tar balls, for example, must be considered, as they influence oil encounter rates, chemical dosages and ignition potential. Each method has different thickness thresholds for effective response.

From this information and other relevant sources (Allen and Dale, 1996, EMSA, 2012, Spence, 2018) the surface threshold of 50 g/m^2 was chosen as an average/equilibrium thickness for offshore response operations (50 g/m^2 is an average of 50% coverage of 0.1 mm Bonn Agreement Code 4 – discontinuous true oil colour, or 25% coverage of 0.2 mm Bonn Agreement Code 5 – continuous true oil colour which would represent small patches of thick oil or wind-rows).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

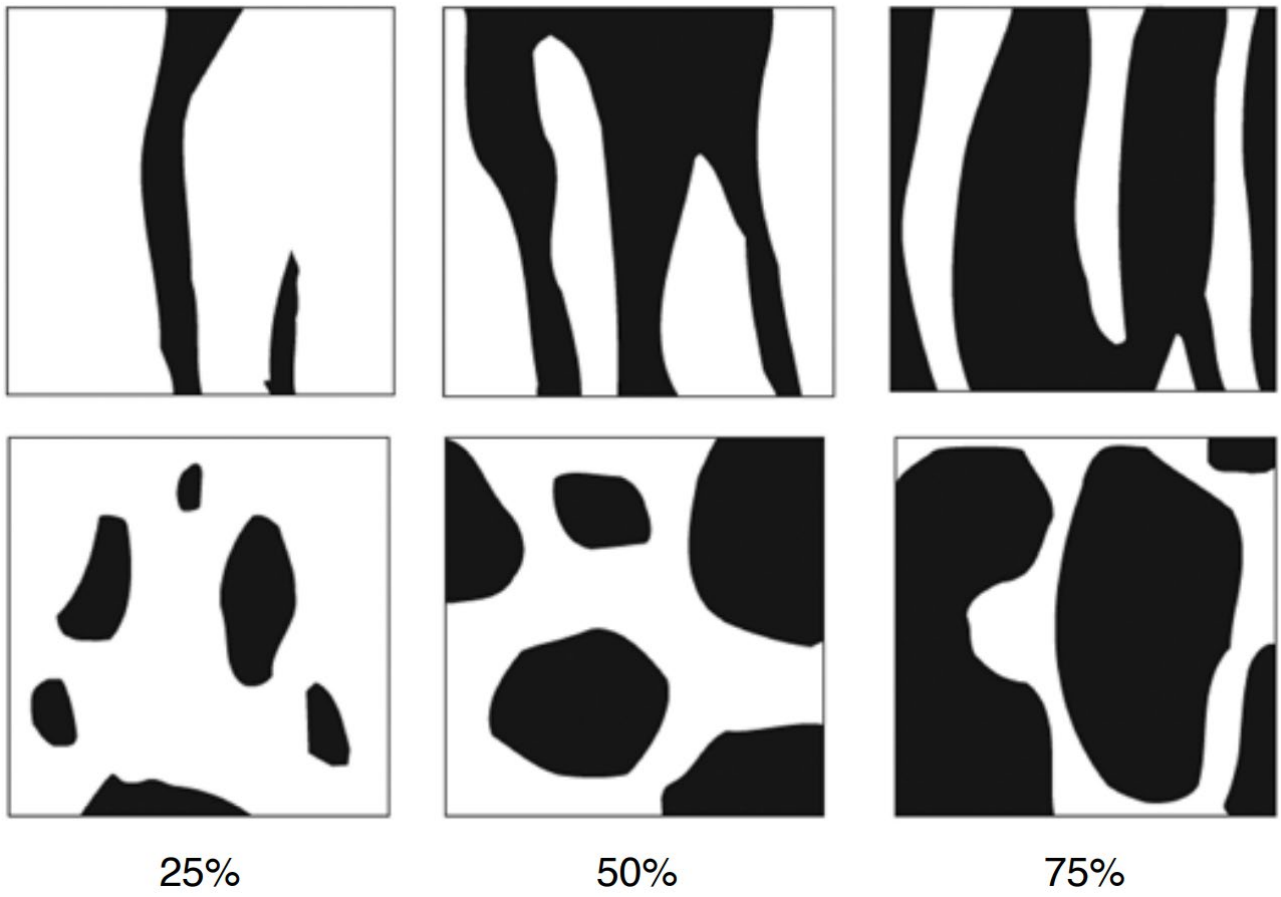


Figure 2-4: Proportion of total area coverage (AMSA, 2014)

Figure 2-5 illustrates the general relationships between on-water response techniques and slick thickness. Wind-rows, heavy oil patches and tar balls, for example, must be considered, as they influence oil encounter rates, chemical dosages and ignition potential. Each method has different thickness thresholds for effective response.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

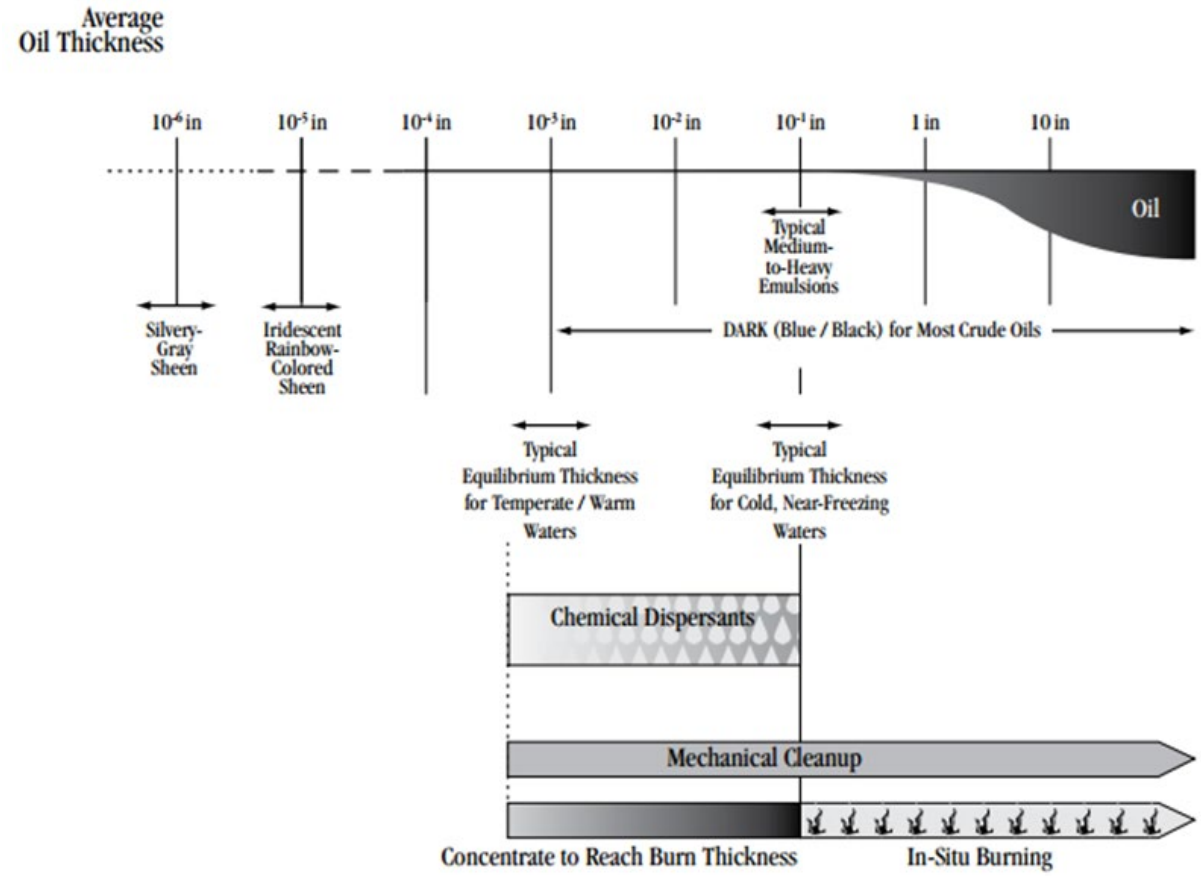


Figure 2-5: Oil thickness versus potential response options (from Allen & Dale 1996)

Wind and wave influence on the feasibility of response operations are also considered below (adapted from NOAA 2013):

- Mechanical Clean-up: Effectiveness drops significantly because of entrainment and/or splash-over as short period waves develop beyond 2–3 ft. (0.6–0.9m) in height. The ability to contain and recover oil decreases rapidly as the slick thickness becomes less than a thousandth of an inch (0.025 mm) (i.e., very low oil encounter rates). Waves and wind can also be limiting factors for the safe operation of vessels and aircraft.
- Dispersants: Effective dispersion requires a threshold amount of surface mixing energy (typically a few knots of wind and a light chop) to be effective. At higher wind and sea conditions, dispersant evaporation and wind-drift will limit chemical dispersion application effectiveness; and, there is a point (~25-kt winds, 10-ft waves) where natural dispersion forces become greater, particularly for light oils. Because of droplet size versus slick thickness constraints and application dose-rate limitations, dispersants work best on slick thicknesses of a few thousandths (approx. 50 g/m^2) to hundredths of an inch (approx. 250 g/m^2). Improved dispersants, higher dose rates, and multiple-pass techniques may extend the thickness limitation to 0.1 inch (2.5 mm) or more.

As offshore response operations (surface dispersant and containment and recovery) are intended to be undertaken at the thickest part of the slick, 50 g/m^2 and 100 g/m^2 (aligning with the lower limit of BAOAC 4 and midpoint of BAOAC 5) are utilised by Woodside when using deterministic modelling (if required) to identify the most likely locations for surface dispersant application and containment and recovery operations.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

2.3.3.2 Surface hydrocarbon viscosity

Table 2-4: Surface hydrocarbon viscosity thresholds

Surface viscosity threshold (cSt)	Description	European Maritime Safety Authority (EMSA)	Viscosity at sea temperature (cSt)
5,000*	Predicted optimum viscosity for surface dispersant operations	Generally possible to disperse	500-5,000
10,000*	Predicted maximum viscosity for effective surface dispersant operations	Sometimes possible to disperse	5,000-10,000

*Measured at sea surface temperature

Further to the required thickness for surface dispersant application and containment and recovery to be deployed effectively as outlined above, changes to viscosity will also limit the treatment of offshore response techniques. As outlined in the EMSA Manual on the Applicability of Oil Spill Dispersants (EMSA, 2012), guidance around changes to viscosity and likely effectiveness of surface dispersant application is provided.

This includes the following statements: “It has been known for many years that it is more difficult to disperse a high viscosity oil than a low or medium viscosity oil. Laboratory testing had shown that the effectiveness of dispersants is related to oil viscosity, being highest for modern ‘Concentrate, UK Type 2/3’ dispersants at an oil viscosity of about 1,000 or 2,000 mPa (1,000 – 2,000 cSt) and then declining to a low level with an oil viscosity of 10,000 mPa (10,000 cSt). It was considered that some generally applicable viscosity limit, such as 2,000 or 5,000 mPa (2,000 – 5,000 cSt), could be applied to all oils.”

However, modern oil spill dispersants are generally effective up to an oil viscosity of 5,000 mPa (5,000 cSt) or more, and their performance gradually decreases with increasing viscosity; oils with a viscosity of more than 10,000 cSt are, in most cases, no longer dispersible. Guidance from CEDRE (EMSA, 2012) also indicates products with a range of 500 – 5,000 cSt at sea temperature are generally possible to disperse, while 5,000 – 10,000 cSt at sea temperature above pour point are sometimes possible to disperse, with products beyond 10,000 cSt at sea temperature below pour point are generally impossible to disperse.

To support decision making and response planning, a threshold of 10,000 cSt at sea temperature was chosen as a conservative estimate of maximum viscosity for surface dispersant spraying operations.

The thresholds described above are compared with the modelling results for the WCCS (Table 2-5).

2.3.4 Spill modelling results

2.3.4.1 Stochastic modelling results

The scenarios listed in Table 2-1 have been stochastically modelled. Modelling of surface (floating) and shoreline contact is ordinarily required for planning and scaling spill clean-up, however, for this Petroleum Activity, no receptors were predicted to be contacted at any of the assessed exposure values (Table 2-5).

Contact within the water column, i.e. the predicted presence of dissolved and entrained hydrocarbons, is relevant for planning operational and scientific monitoring (OSM) activities. As such, these results are included in the OSM planning assessment in ANNEX C, Table C - 1.

2.3.4.2 Deterministic modelling results

Based upon the stochastic modelling results (Table 2-5), and as discussed in Section 2.3.2, neither scenario meets the trigger criteria for undertaking deterministic modelling, i.e. they do not meet the minimum exposure values required for feasible offshore and shoreline clean-up, or the criteria for OSM deterministic modelling. As such, no deterministic modelling has been undertaken for this Petroleum Activity.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

Table 2-5: Stochastic modelling results – probability and timing of surface and shoreline exposure values

	Probability (%) of floating oil contacting a receptor cell at	Minimum time (days) for contact by floating oil at	Probability (%) of floating oil contacting a receptor at	Minimum time (days) for contact by floating oil at	Probability (%) of floating oil contacting a receptor at	Minimum time (days) for contact by floating oil at	Probability (%) of oil accumulating on any shoreline at	Minimum time (days) for accumulation on shoreline at	Probability (%) of oil accumulating on any shoreline at	Minimum time (days) for accumulation on shoreline at	Probability (%) of oil accumulating on any shoreline at	Minimum time (days) for accumulation on shoreline at	Maximum accumulated volume along receptor shoreline (m^3)	Maximum accumulated volume along receptor shoreline (m^3)
	≥ 1 g/m²	≥ 1 g/m²	≥ 10 g/m²	≥ 10 g/m²	≥ 50 g/m²	≥ 50 g/m²	≥ 10 g/m²	≥ 10 g/m²	≥ 100 g/m²	≥ 100 g/m²	≥ 1,000 g/m²^^	≥ 1,000 g/m²^^	averaged over all replicate simulations	worst replicate simulation (>100 g/m^2)
Credible Scenario-01														
Worst case for all receptors	< 0.5	NC	< 0.5	NC	< 0.5	NC	< 0.5	NC	< 0.5	NC	< 0.5	NC	<1	<1
Credible Scenario-02														
Worst case for all receptors	< 0.5	NC	< 0.5	NC	< 0.5	NC	< 0.5	NC	< 0.5	NC	< 0.5	NC	<1	<1

Key:

NC No contact

NA Not applicable

^^ Results are at an exposure value of 250 g/m^2 – considered conservative as probability for 1,000 g/m^2 will be lower with longer time to contact

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

3 IDENTIFY RESPONSE PROTECTION AREAS (RPAS)

In a response, monitor and evaluate – including trajectory modelling and vessel/aerial observations – would be used to predict RPAs that may be impacted. For the purposes of planning and appropriately scaling a response, modelling has been used to identify RPAs as outlined below in Figure 3-1.

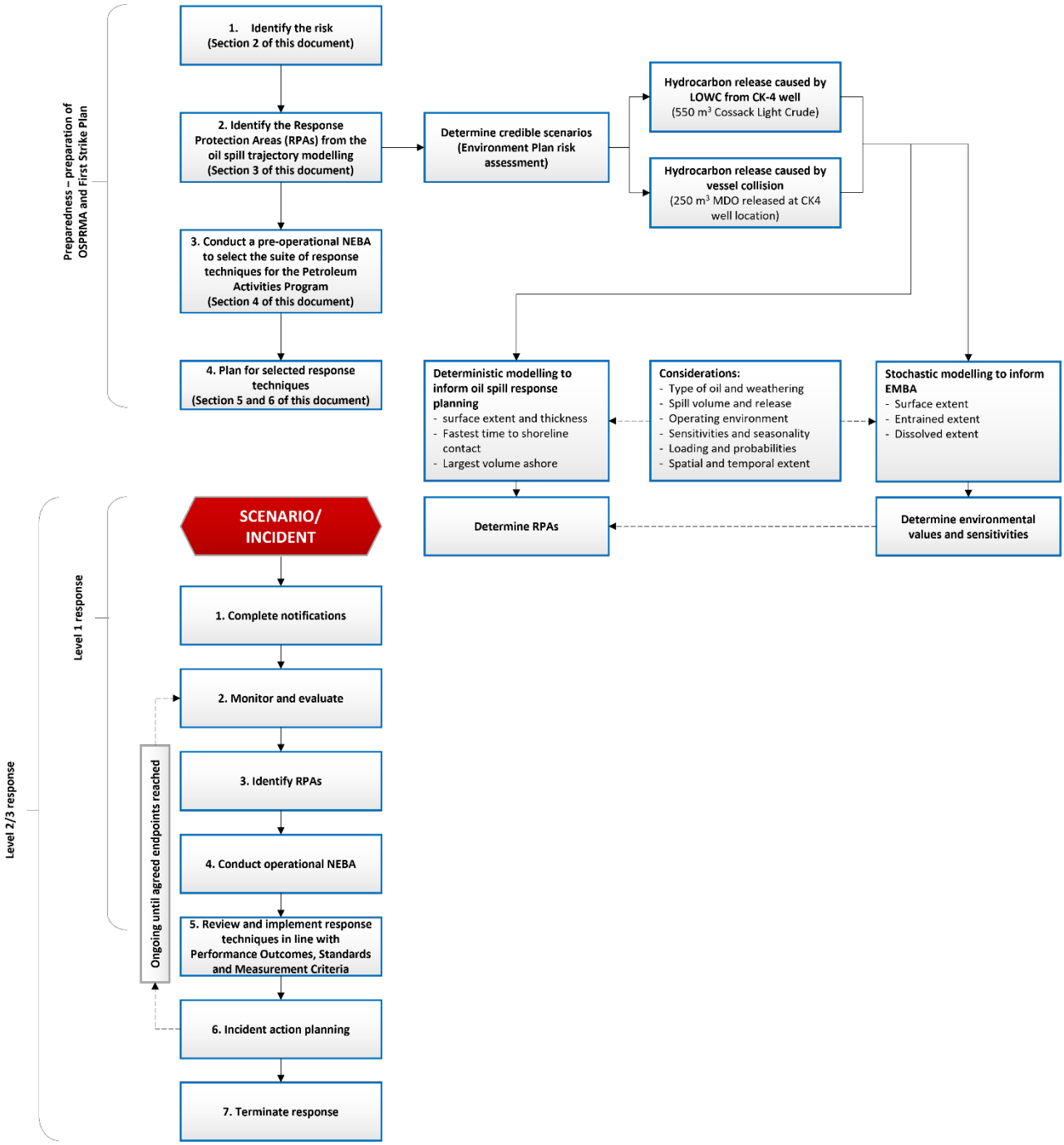


Figure 3-1: Identify Response Protection Areas (RPAs) flowchart

3.1 Identified sensitive receptor locations

Sections 6.7.2 and 6.7.3 of the EP includes the list of sensitive receptor locations that have been identified by stochastic modelling as meeting the requirements outlined below:

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

- receptors with the potential to incur surface, entrained or shoreline accumulation contact above environmental impact thresholds
- receptors within the EMBA which meet the following:
  - a number of priority protection criteria/categories
  - International Union of Conservation of Nature (IUCN) marine protected area categories
  - high conservation value habitat and species
  - important socio-economic/heritage value.

3.2 Identify Response Protection Areas (RPAs)

RPAs are selected on the basis of their environmental ecological, social, economic, cultural and heritage values and sensitivities and the ability to conduct a response based on the minimum response thresholds (Section 2.3.3).

Contact from floating hydrocarbons above 10 g/m^2 is not predicted for any shoreline receptor based on the stochastic modelling. Additionally, accumulation above 100 g/m^2 on any shoreline is not predicted and no accumulated volume of hydrocarbons is predicted at any shorelines. Consequently, no RPAs have been selected for response planning.

For this Petroleum Activity, deterministic modelling was not required because the stochastic spill modelling predicted no shoreline contact at feasible response thresholds.

The pre-operational NEBA (ANNEX A) includes any additional RPAs contacted at lower thresholds to allow consideration of all feasible response techniques in the planning phase.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

4 NET ENVIRONMENTAL BENEFIT ANALYSIS (NEBA)

A Net Environmental Benefit Analysis (NEBA) is a structured process to consider which response techniques are likely to provide the greatest net environmental benefit.

The NEBA process is stage 3 of the preparedness process and typically involves four key steps outlined in Figure 4-1: evaluate data, predict outcomes, balance trade-offs, and select response options. These steps are followed both in the planning/preparedness process and during a response.

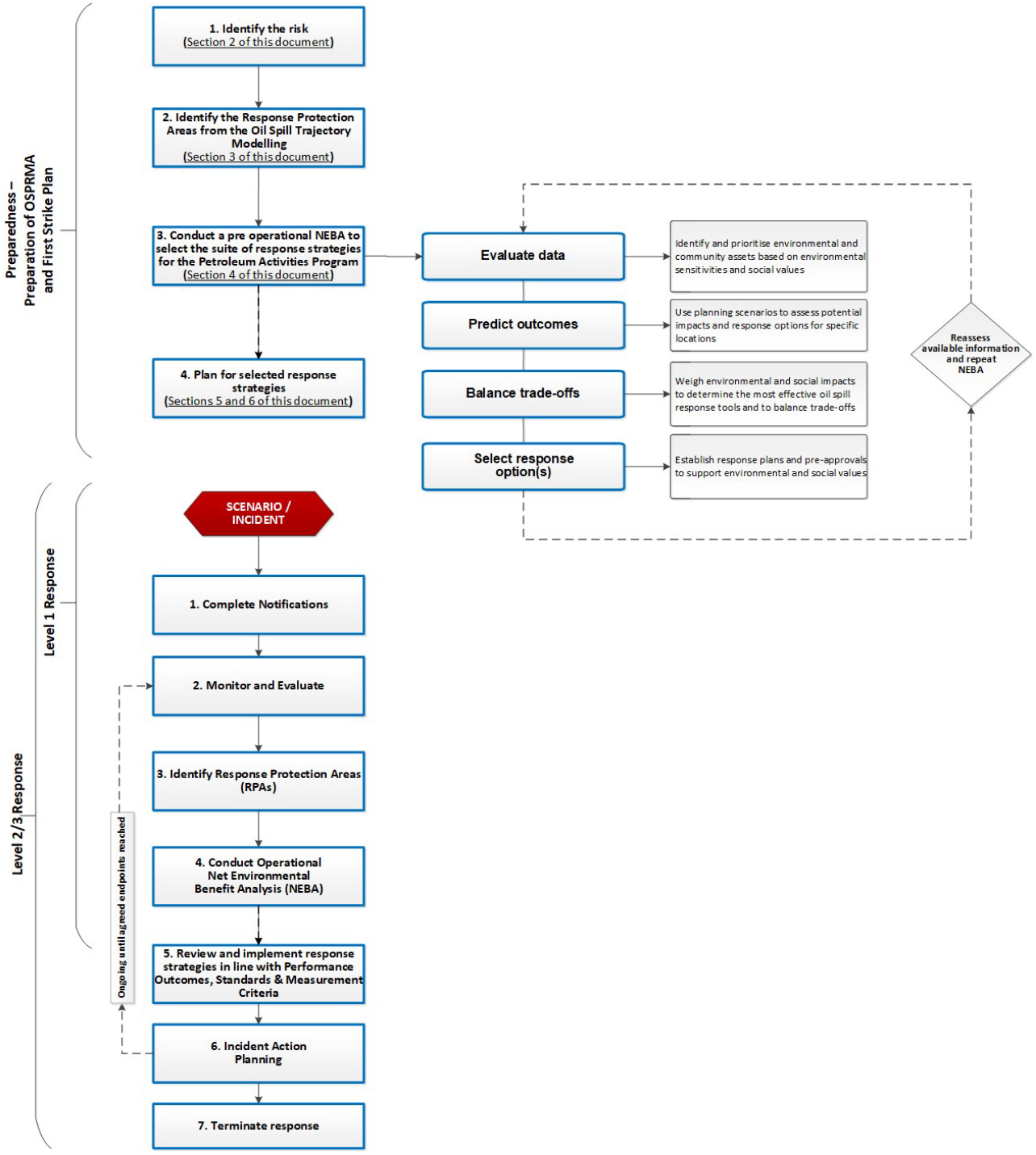


Figure 4-1: Net Environmental Benefit Analysis (NEBA) flowchart

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

4.1 Pre-operational / Strategic NEBA

The pre-operational NEBA identifies positive and negative impacts to sensitive receptors from implementing the response techniques. Feasibility is considered by assessing the receptors potentially impacted above response thresholds (Section 2.3.3) and the surface concentrations (Section 2.3.3.1) from the modelling.

Completing a pre-operational NEBA is a key response planning control that reduces the environmental risks and impacts of implementing the selected response techniques. Comprehensive details of the pre-operational NEBA for this Petroleum Activity are contained in **ANNEX A**: Net Environmental Benefit Analysis detailed outcomes.

4.2 Stage 1: Evaluate data

Woodside identifies and prioritises environmental and community assets based on environmental sensitivities and social values, informed through the use of trajectory modelling. Interpretation of stochastic oil spill modelling determines the EMBA for the release, which defines the spatial area that may be potentially impacted by the Petroleum Activity activities.

4.2.1 Define the scenario(s)

Woodside uses scenarios identified from the risk assessment in the EP to assess potential impacts and response options for specific locations. The WCCS is then selected for deterministic modelling (if required) and is used for this pre-operational NEBA. Outlier locations with potential environmental impacts, selected from the stochastic modelling may also be included for assessment. Response thresholds and deterministic modelling (if required) are then used to assess the feasibility/effectiveness and scale of the response. Modelling results are available in Table 2-5.

4.3 Stage 2: Predict Outcomes

Woodside uses planning scenarios to assess potential impacts and response options for specific locations. Locations with potential environmental impacts, selected from the stochastic modelling are included for assessment. Response thresholds and deterministic modelling are then used to assess the feasibility/ effectiveness of a response.

4.4 Stage 3: Balance trade-offs

Woodside considers environmental impacts and response effectiveness/ feasibility to determine the most effective oil spill response tools and balance trade-offs, using an automated NEBA tool. The tool considers potential benefits and impacts associated with a response at sensitive receptors and then considers the effectiveness/ feasibility of the response to select the response techniques carried forward to the ALARP assessment. The NEBA can be found in **ANNEX A: Net Environmental Benefit Analysis detailed outcomes**.

4.5 Stage 4: Select Best Response Options

To select the response technique, all the other stages in the NEBA process are considered and used to establish response plans and any pre-approvals to support protection of identified environmental and social values.

The response techniques implemented may vary according to a particular spill. The hydrocarbon type released and the sensitivities of the receptors (both ecological and socio-economic) may influence the response. The pre-operational NEBA broadly evaluates each response technique and supports decisions on whether they are feasible and of net environmental benefit. Response techniques that are not feasible or beneficial are rejected at this stage and not progressed to planning.

Further risks and impacts from implementing these selected response options are outlined in Section 7.

4.5.1 Determining potential response options

The available response techniques based on current technology can be summarised under the following headings:

- Monitor and evaluate

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

- Source control
  - Remotely operated vehicle (ROV) intervention
  - debris clearance and/or removal
  - capping stack
  - relief well drilling
- Source control via Shipboard Oil Pollution Emergency Plan (SOPEP)
- Subsea dispersant injection
- Surface dispersant application:
  - aerial dispersant application
  - vessel dispersant application
- Mechanical dispersion
- In-situ burning
- Containment and recovery
- Shoreline protection and deflection:
  - protection
  - deflection
- Shoreline clean-up:
  - Phase 1 – mechanical clean-up
  - Phase 2 – manual clean-up
  - Phase 3 – final polishing
- Oiled wildlife response (including hazing)

Support functions may include:

- Waste management
- Operational and scientific monitoring

Table 4-1 and Table 4-2 include scenario-specific assessments of feasible response options and justification for the exclusion of inappropriate options. These options are evaluated against the scenario parameters including oil type, volume, characteristics, prevailing weather conditions, logistical support, and resource availability to determine deployment feasibility.

A shortlist of the feasible response options is then carried forward for the ALARP assessment. This assessment will typically result in a range of available options, that are deployed at different areas (at-source, offshore, nearshore and onshore) and different times during the response. The NEBA process assists in prioritising which options to use where and when, and timings throughout the response.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

Table 4-1: Response technique evaluation – Loss of Well Containment (LOWC) (CS-01)

Response Technique	Effectiveness	Feasibility	Decision	Rationale for the decision
Hydrocarbon: Cossack Light Crude				
Monitor and evaluate	Will be effective in tracking the location of the spill, informing when it has entered State Waters, predicting potential impacts and triggering further monitoring and response techniques as required. Monitoring techniques include: • Predictive modelling of hydrocarbons – used throughout spill. 'Ground-truthed' using the outputs of all other monitoring techniques. • Surveillance and reconnaissance to detect hydrocarbons and resources at risk – from outset of spill. • Pre-emptive assessment of sensitive receptors at risk – triggered once monitor and evaluate informs likely RPAs at risk.	Monitoring of a Cossack Light Crude spill is a feasible response technique and an essential element of all spill response incidents. Outputs will be used to guide decision making on the use of other monitoring/response techniques and providing required information to regulatory agencies including AMSA and Western Australia Department of Transport and Major Infrastructure (WA DTMI).	Yes	Monitoring the spill will be necessary to: • validate trajectory and weathering models • determine the location and state of the slick • provide forecasts of spill trajectory • determine appropriate response techniques • determine effectiveness of response techniques • confirm impact pathways to receptors • provide regulatory agencies with required information.
Source control via ROV override of WCP (light well intervention (LWI) vessel or subsea first response toolkit (SFRT))	SFRT blowout preventer (BOP) intervention skid can be used on third party vessel to execute independent contingency closure of WCP. This would be the most effective way to limit release of hydrocarbons from the Xmas tree. These overrides can also be conducted via the LWI vessel ROV.	LWI vessel ROV will be capable of conducting WCP ROV overrides as part of base scope. SFRT BOP intervention skid is an industry standard response that will be capable of undertaking this operation.	Yes	The use of WCP secondary closure via ROV and hot stab will reduce or stop quantity of hydrocarbons entering the marine environment.
Source control via debris clearance and capping stack	Controlling a loss of well containment at source via capping stack would be an effective way to limit the quantity of hydrocarbon entering the marine environment where no other means exist to shut in the well. In the case of the CK-4 and LH-3 wells this would mean the Xmas tree was no longer on the wellhead prior to suspension. This scenario is not considered credible.	Capping stack would only be appropriate if the Xmas tree was no longer on the wellhead prior to suspension. This scenario is not considered credible. Additionally, the weight of the capping stack may exceed the wellhead capacity.	No	Deployment of the capping stack is not feasible with the vertical Xmas tree and/or light well intervention (LWI) stack in place. In this case the vertical Xmas tree and/or LWI stack provides a similar functionality to the capping stack, having multiple layers of redundancy. The capping stack could be utilised in specific cases where the vertical Xmas tree has failed and is no longer connected to the wellhead, however, this scenario not considered credible.
Source control via relief well drilling	Relief well is an effective way to kill a well which is blowing out where no other means exist to shut in the well. In the case of the CK-4 and LH-3 wells this would mean the Xmas tree was no longer on the wellhead prior to suspension. This scenario is not considered credible.	Relief well would only be appropriate if the Xmas tree was no longer on the wellhead prior to suspension This scenario is not considered credible.	No	Relief well does not reduce risk, given the intervention is carried out through a vertical Xmas tree. This means there are additional barriers available to close in the well. There are no credible scenarios identified that could permanently compromise all available barriers in the Xmas tree and Well Control Package.
Subsea dispersant injection	Application of subsea dispersant may reduce the scale and extent of hydrocarbons reaching the surface and thus may reduce spill volumes contacting predicted RPAs. SSDI can increase dispersed/entrained hydrocarbons which can potentially have higher toxicity to biota in shallow water than naturally dispersed hydrocarbons. Entrained oil could potentially impact on sensitive shallow-water receptors e.g. corals and fish, which may be otherwise unaffected. Entrained oil plume likely to be increased resulting in greater spatial extent of entrained oil.	The goal of this technique is to reduce oil reaching surface waters in order to lessen exposure of surface-dwelling organisms. Despite the considerable amount of research and experimental work completed since the Deepwater Horizon spill in 2010, efficacy of SSDI remains uncertain however (Quigg et al. 2021). Given floating oil above the 10 g/m^2 threshold and shoreline accumulations are not predicted by modelling for the loss of well control scenario, there is unlikely to be a net environmental benefit from the use of subsea dispersant.	No	Due to the relatively small volume and nature of the subsea release, as well as the lack of shoreline exposure predicted at sensitive receptors, together with this technique not being required to facilitate other source control techniques, the use of SSDI is not deemed appropriate for this activity. The application of subsea dispersant would unnecessarily introduce additional chemical substances to the marine environment and further increase exposure of subsea ecosystems to entrained hydrocarbons without providing a net environmental benefit. There may be general safety risks associated with responding in close proximity to release of volatile hydrocarbons from the wellhead.
Surface dispersant application	Application of surface dispersant would likely reduce the volumes of hydrocarbons contacting sensitive surface receptors. Dispersant can also enhance biodegradation and may reduce volatile organic compounds (VOCs) in some circumstances therefore reducing potential health and safety risk to responders. Dispersant can increase dispersed/entrained hydrocarbons which can potentially have higher toxicity to biota in shallow water than naturally dispersed hydrocarbons. Subsurface oil plume likely to increase in size resulting in greater spatial extent of entrained oil. Entrained oil could potentially impact on sensitive shallow-water receptors e.g. corals, which otherwise may have been unaffected.	Surface dispersant application can potentially provide a net environmental benefit where its use would reduce the volume of shoreline accumulations in sensitive regions. At certain times it may not provide an environmental benefit, for example, during coral spawning seasons due to coral larvae being highly sensitivity to dispersants (Negri et al, 2018). Given modelling predicts very spatially limited floating oil at feasible response thresholds (>50 g/m^2), and no shoreline accumulations >100 g/m^2, for the duration of a loss of well control scenario (CS-01), there is unlikely to be a net environmental benefit from the use of surface dispersant.	No	Due to modelling predicting limited presence of floating hydrocarbons and no shoreline contact at feasible response thresholds, the use of surface dispersant for this scenario is not appropriate as it would not provide a net environmental benefit.
Mechanical dispersion	Mechanical dispersion involves the use of a vessel's prop wash and/or fire hose to target surface hydrocarbons to achieve dispersion into the water column. However,	Although the technique is feasible, highly volatile hydrocarbons are likely to weather, spread and evaporate quickly.	No	Given the limited benefit of mechanical dispersion over natural wind and wave action, secondary contamination and waste issues, and the associated safety risk of

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

Response Technique	Effectiveness	Feasibility	Decision	Rationale for the decision
	this technique is of limited benefit in an open ocean environment where wind and wave action are likely to deliver similar advantages.	The volatile nature of the oil likely to lead to unsafe conditions in the vicinity of fresh hydrocarbon. Additionally, any vessel used for mechanical dispersion activities would be contaminated by the hydrocarbon and could potentially cause secondary contamination of unimpacted areas when exiting the spill area. The decontamination of a vessel used for mechanical dispersion activities would result in additional quantities of oily waste requiring appropriate handling and treatment.		implementing the response for this activity, this strategy is deemed unsuitable.
In-situ burning	In-situ burning is only effective where minimum slick thickness can be achieved and where calm metocean conditions can be confirmed. Use of this technique would also cause an increase the release of atmospheric pollutants.	There is a limited window of opportunity in which this technique can be applied (prior to evaporation of the volatiles) which would be difficult to achieve. Furthermore, this technique may be prevented from being undertaken due to personnel safety issues arising from predicted high local concentrations of atmospheric volatiles.	No	The safety concerns and the predicted low effectiveness associated with implementing an in-situ burning response outweigh the potential environmental benefit.
Containment and recovery	Containment and recovery has an effective recovery rate of 5-10% when a hydrocarbon encounter rate of 25-50% is achieved at BAOAC 4 and 5. It has the potential to reduce the magnitude, probability, extent, contact and accumulation of hydrocarbon on shorelines receptors when suitable encounter rates can be achieved. It also has the potential to reduce the magnitude and extent of contact with submerged receptors by removing oil before further natural entraining/dissolving of hydrocarbons occurs.	Floating oil is predicted to meet the required minimum threshold (>50 g/m^2) concentration in open ocean Commonwealth waters, however, this is spatially limited to within 16 km of the release location and is not predicted to contact any sensitive receptors at even the lowest assessed thresholds. Meteorological conditions and sea-state would need to allow for the safe and effective deployment of booms and skimmers, and for surface hydrocarbons to be able to be corralled to a sufficient thickness to permit efficient recovery by skimmers. While this technique is technically feasible, due to the small spill volume and prevailing offshore metocean conditions, the surface slick is likely to rapidly break into patches and windrows, diminishing feasible and efficient recovery of floating hydrocarbons.	No	Whilst floating oil is predicted to meet the 50 g/m^2 minimum concentration required for feasible recovery, this is spatially limited. Attaining the feasible hydrocarbon thickness is likely to be precluded due to the limited spill volume and prevailing metocean conditions.
Shoreline protection and deflection	Shoreline protection and deflection can be effective at preventing contamination of sensitive resources and can be used to corral oil into slicks thick enough to skim effectively.	Given floating oil above the 10 g/m^2 threshold from a loss of well control scenario is not predicted by modelling with no shoreline accumulation at any of the assessed thresholds, there is unlikely to be a requirement for shoreline protection and deflection. If real-time Operational Monitoring activities were to indicate surface hydrocarbons moving toward shorelines, pre-emptive assessments of sensitive receptors at risk and existing TRPs will be utilised to guide shoreline protection and deflection operations, in agreement with WA DTMI (for Level 2/3 spills). Protection strategies can be used for targeted protection of sensitive resources. Access to sensitive areas may cause more negative impact than benefit.	No	The modelling does not predict any shoreline contact at any of the assessed thresholds at any shoreline receptor.
Shoreline clean-up	Shoreline clean-up is an effective means of hydrocarbon removal from contaminated shorelines where coverage is at an optimum level of 250 g/m^2.	Given floating oil above the 10 g/m^2 threshold from a loss of well control scenario is not predicted by modelling with no shoreline accumulation predicted, there is unlikely to be a requirement for shoreline clean-up. If real-time Operational Monitoring activities were to indicate hydrocarbons will contact shorelines, pre-emptive assessments of sensitive receptors at risk, shoreline assessments and existing TRPs will be utilised to guide shoreline protection and deflection operations, in agreement with WA DTMI (for Level 2/3 spills). This technique can reduce or prevent impact on sensitive receptors in most cases (where required). If required, shoreline assessment must confirm that sensitive sites will benefit from clean-up activities as the response itself may cause more negative impact than benefit through disturbance of habitats and species.	No	The modelling does not predict any shoreline contact at any of the assessed thresholds at any shoreline receptor.
Oiled wildlife response	Oiled wildlife response is an effective response technique for reducing the overall impact of a spill on wildlife. This is mostly achieved through hazing to prevent additional wildlife from being contaminated and through rehabilitation of those already subject to contamination.	The modelling undertaken predicts that no sensitive areas will be impacted thus it is unlikely that this technique would be required. Monitor and evaluate will, however, be deployed from the outset of a spill to track the spill location and fate in real-time thus, in the event that wildlife are at risk of contamination, oiled wildlife response will be undertaken in accordance with the Wildlife Response Operational Plan as and where required. In addition, any rehabilitation could only be undertaken by trained specialists.	Yes	The modelling undertaken predicts that no sensitive areas will be impacted thus it is unlikely that this technique would be required. However, in the event that wildlife are at risk of contamination, oiled wildlife response will be undertaken as and where required. This technique may prevent impact to and/or treat oiled wildlife providing net environmental benefit.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

Table 4-2: Response technique evaluation – vessel collision (CS-03)

Response Technique	Effectiveness	Feasibility	Decision	Rationale for the decision
Hydrocarbon: Marine Diesel Oil				
Operational Monitoring	Will be effective in tracking the location of the spill, informing when it has entered State Waters, predicting potential impacts and triggering further monitoring and response techniques as required. Monitoring techniques include: • Predictive modelling of hydrocarbons – used throughout spill. 'Ground-truthed' using the outputs of all other monitoring techniques. • Surveillance and reconnaissance to detect hydrocarbons and resources at risk – from outset of spill. • Pre-emptive assessment of sensitive receptors at risk – triggered once operational monitoring informs likely RPAs at risk.	Monitoring of a marine diesel spill is a feasible response technique and outputs will be used to guide decision making on the use of other monitoring/response techniques and providing information to regulatory agencies including AMSA and WA DTMI. Practicable techniques that could be used for this scenario include predictive modelling, surveillance and reconnaissance and monitoring of hydrocarbon presence in water. Modelling does not predict impact of any shoreline receptors at threshold, however, pre-emptive assessment of sensitive receptors at risk and monitoring of contaminated resources would be utilised if any sensitive shoreline receptors are deemed to be at risk of impact.	Yes	Monitoring the spill will be necessary to: • validate trajectory and weathering models • determine the location and state of the slick • provide forecasts of spill trajectory • determine appropriate response techniques • determine effectiveness of response techniques • confirm impact pathways to receptors • provide regulatory agencies with required information.
Source control via vessel SOPEP	Controlling the spill of diesel at source would be the most effective way to limit the quantity of hydrocarbon entering the marine environment.	A spill of diesel from a vessel collision will be over six hours and source control will be limited to what the vessel or facility can safely achieve whilst responding to the incident.	Yes	Ability to stop the spill at source will be dependent upon the specific spill circumstances and whether or not it is safe for response personnel to access/isolate the source of the spill.
Surface dispersant application	Application of surface dispersant would likely reduce the volumes of hydrocarbons contacting sensitive surface receptors. Dispersant can also enhance biodegradation and may reduce VOCs in some circumstances therefore reducing potential health and safety risk to responders. Dispersant can increase dispersed/entrained hydrocarbons which can potentially have higher toxicity to biota in shallow water than naturally dispersed hydrocarbons. Subsurface oil plume likely to increase in size resulting in greater spatial extent of entrained oil. Entrained oil could potentially impact on sensitive shallow-water receptors e.g. corals, which otherwise may have been unaffected.	This technique is not suitable for MDO spills as this hydrocarbon is prone to rapid spreading and evaporation. Dispersants are not considered effective when applied on thin surface films such as MDO as the dispersant droplets tend to pass through the surface films without binding to the hydrocarbon resulting in the unnecessary addition of chemicals to the marine environment. The volatile nature of MDO is also likely to lead to unsafe conditions in the vicinity of fresh hydrocarbon thus this response technique is deemed inappropriate.	No	The application of dispersant to MDO is unnecessary as this hydrocarbon will rapidly evaporate. Dispersant use would thus unnecessarily introduce additional chemical substances to the marine environment. The additional entrainment would also increase exposure of subsea species and habitats to hydrocarbons.
Mechanical dispersion	Mechanical dispersion involves the use of a vessel's prop wash and/or fire hose to target surface hydrocarbons to achieve dispersion into the water column. However, this technique is of limited benefit in an open ocean environment where wind and wave action are likely to deliver similar advantages.	Although the technique is feasible, highly volatile hydrocarbons are likely to weather, spread and evaporate quickly. The volatile nature of the oil likely to lead to unsafe conditions in the vicinity of fresh hydrocarbon. Additionally, any vessel used for mechanical dispersion activities would be contaminated by the hydrocarbon and could potentially cause secondary contamination of unimpacted areas when exiting the spill area. The decontamination of a vessel used for mechanical dispersion activities would result in additional quantities of oily waste requiring appropriate handling and treatment.	No	Given the limited benefit of mechanical dispersion over natural wind and wave action, secondary contamination and waste issues, and the associated safety risk of implementing the response for this activity, this strategy is deemed unsuitable.
In-situ burning	In-situ burning is only effective where minimum slick thickness can be achieved.	Use of in-situ burning as a response technique for marine diesel is unfeasible as the minimum slick thickness cannot be attained due to rapid spreading. In addition, there is a limited window of opportunity in which this technique can be applied (prior to evaporation of the volatiles) which is unlikely to be achieved. Furthermore, entering a volatile environment to undertake this technique would be unsafe for response personnel and its used would unnecessarily cause an increase the release of atmospheric pollutants.	No	Diesel characteristics are not appropriate for the use of in-situ burning and would unnecessarily cause an increase the release of atmospheric pollutants.
Containment and recovery	Containment and recovery has an effective recovery rate of 5-10% when a hydrocarbon encounter rate of 25-50% is achieved at BAOAC 4 and 5 with a 50-100% coverage of 100 g/m^2 to 200 g/m^2.	Whilst modelling predicts that floating oil will reach the minimum feasible threshold at which to commence containment and recovery (50 g/m^2) in open waters, this technique is not suitable for MDO spills as it is prone to rapid spreading and evaporation and is deemed unsuitable for effective containment and recovery operations. The volatile nature of marine diesel is also likely to lead to unsafe conditions in the vicinity of the hydrocarbon thus this response technique is deemed inappropriate.	No	Containment and recovery would be an inappropriate response technique for a spill of marine diesel. Corralling a volatile hydrocarbon such as MDO is deemed unsafe for response personnel thus this response strategy is not considered feasible. In addition to the safety issues, most of the spilled diesel would have been subject to rapid evaporation prior to the commencement of containment and recovery operations.
Shoreline protection and deflection	Shoreline protection and deflection can be effective at preventing contamination of at-risk areas.	A marine diesel spill would be prone to rapid spreading and evaporation and modelling predicts that no shoreline receptors will be contacted at any of the assessed thresholds. Furthermore, the volatile nature of marine diesel is also likely to lead to unsafe conditions in the vicinity of the hydrocarbon.	No	In addition to safety issues and the rapid spreading and evaporation of the diesel, the modelling undertaken predicts that no shoreline receptors would be contacted by floating oil concentrations at any of the assessed thresholds.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

Response Technique	Effectiveness	Feasibility	Decision	Rationale for the decision
		Operational monitoring will, however, be deployed from the outset of a spill to track the spill location and fate in real-time.		
Shoreline clean-up	Shoreline clean-up is an effective means of hydrocarbon removal from contaminated shorelines where coverage is at an optimum level of 250 g/m^2.	A marine diesel spill would be prone to rapid spreading and evaporation, and the modelling predicts that no shoreline receptors will be contacted at any of the assessed thresholds – any minor contact is significantly below any threshold concentration that would allow a response to be feasible. Furthermore, the volatile nature of marine diesel is also likely to lead to unsafe conditions in the vicinity of the hydrocarbon. Operational monitoring will, however, be deployed from the outset of a spill to track the spill location and fate in real-time.	No	In addition to safety issues, the modelling undertaken predicts that no shoreline receptors would be contacted by floating oil concentrations at any of the assessed thresholds. A spill of marine diesel is unlikely to accumulate at concentrations appropriate for shoreline clean-up techniques.
Oiled wildlife response	Oiled wildlife response is an effective response technique for reducing the overall impact of a spill on wildlife. This is mostly achieved through hazing to prevent additional wildlife from being contaminated and through rehabilitation of those already subject to contamination.	Due to the likely volatile atmospheric conditions surrounding a diesel spill, response options may be limited to hazing to ensure the safety of response personnel. The modelling undertaken predicts that no sensitive areas will be impacted thus it is unlikely that this technique would be required. Monitor and evaluate will, however, be deployed from the outset of a spill to track the spill location and fate in real-time. Thus, in the event that wildlife are at risk of contamination, oiled wildlife response will be undertaken in accordance with the Wildlife Response Operational Plan as and where required. In addition, any rehabilitation could only be undertaken by trained specialists.	Yes	The modelling undertaken predicts that no sensitive areas will be impacted thus it is unlikely that this technique would be required. However, in the event that wildlife are at risk of contamination, oiled wildlife response will be undertaken as and where required. This technique may prevent impact to and/or treat oiled wildlife providing net environmental benefit.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

5 HYDROCARBON SPILL ALARP PROCESS

Woodside's hydrocarbon spill ALARP process is aligned with guidance provided by NOPSEMA in *ALARP Guidance Note N-04300-GN0166* (2022) and *Oil Spill Risk Management Guidance Note N-04750-GN1488 A382148* (2026) and is set out in the 'Woodside Oil Spill Preparedness and Response Mitigation Assessment (OSPRMA) Guidelines'.

From the identified response planning need and pre-operational NEBA/ Spill Impact Mitigation and Assessment (SIMA), Woodside conducts a structured, semi-quantitative hydrocarbon spill process which has the following steps:

- considers the Response Planning Need identified in terms of surface area (km^2) and available surface hydrocarbon volumes (m^3) against existing Woodside capability
- considers alternative, additional, and improved options for each response technique/control measure by providing an initial and, if required, detailed evaluation of:
  - predicted cost associated with adopting the control measure
  - predicted change/environmental benefit
  - predicted effectiveness/feasibility of the control measure.
- evaluates the risks and impacts of implementing the proposed response techniques, and any further control measures with associated environmental performance to manage these additional risks and impacts.

Woodside considers the risks and impacts from a hydrocarbon spill to have been reduced to ALARP when:

- a structured process for identifying and considering alternative, additional, and improved options has been completed for each selected response technique
- the analysis of alternate, additional, and improved control measures meets one of the following criteria:
  - all identified, reasonably practicable control measures have been adopted; or
  - no identified reasonably practicable additional, alternative and/or improved control measures would provide further overall increased proportionate environmental benefit; or
  - no reasonably practical additional, alternative, and/or improved control measures have been identified.
- where an alternative, additional and/or improved control measure is adopted, a measurable level of environmental performance has been assigned
- higher order impacts/ risks have received more comprehensive alternative, additional, and improved control measure evaluations and do not just compare the cost of the adopted control measures to the costs of an extreme or clearly unreasonable control measure
- cumulative effects have been analysed when considered in combination across the whole activity.

The response technique selection is based on the risk assessment conducted in the EP. The risk assessment identifies the type of oil, volume of release, duration of release, predicted fate, weathering and the EMBA (along with other requirements such as time to impact and predicted volumes ashore). Modelling is then used to inform the NEBA and the prioritisation of suitable response options. The scale of the response techniques selected in the pre-operational NEBA is informed through the assessment of results from deterministic modelling.

For the purpose of the ALARP assessment, the following terms and definitions have been used:

- response techniques are considered the control measures that reduce consequences from hydrocarbon spill events. The terms 'response technique' and 'control measure' are used interchangeably
- cost is defined as the time, effort and/or trouble taken in financial, safety, design/storage/installation, capital/lease, and/or operations/maintenance terms to adopt a control measure
- where the predicted change to environmental impact is compared against standard environmental values and sensitivities impacts using positive or negative criteria from the NEBA Impact Ranking Classification Guidance in ANNEX A.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

5.1 Monitor and evaluate

Monitor and evaluate includes the gathering and evaluation of data to inform the oil spill response planning and operations. It includes fate and trajectory modelling, spill tracking, weather updates and field observations. This response option is deployed in some capacity for every event.

Techniques may include:

- Predictive modelling of hydrocarbons to assess resources at risk
- Surveillance and reconnaissance to detect hydrocarbons and resources at risk
- Pre-emptive assessment of sensitive receptors at risk.

Woodside maintains an *Operational Monitoring Operational Plan*. If shoreline contact is predicted, Response Protection Areas (RPAs) will be identified and assessed before contact. If shorelines are contacted, a shoreline assessment survey (SCAT) will be completed to guide effective shoreline clean-up operations per arrangements detailed in Woodside's Operational and Scientific Monitoring Bridging Implementation Plan[2] (OSM-BIP) (see Section 5.6). This plan includes the process for the CIMT to mobilise resources depending on the nature and scale of the spill. Modelling indicates no shoreline contact is predicted for the Okha Light Well Intervention Petroleum Activity.

The proximity of Dampier, Karratha and Exmouth to the spill event location means that multiple logistical options are available to monitor the spill in relatively short timeframes. The primary mobilisation base for initial monitoring activities would be Dampier.

5.1.1 Response need based on predicted consequence parameters

The following statements identify the key parameters upon which a response need can be based:

- Floating surface oil in sufficient concentrations for effective operational monitoring is expected to be present in open waters with surface concentrations of 50 g/m^2 up to 16 km from the location of CS-01, and up to 7 km from the location of CS-03.
- No shoreline contact or accumulation is predicted at threshold concentrations for any scenario.
- The time to contact for oil at concentrations of dissolved hydrocarbons greater than 10 ppb at sensitive receptors is 72 hours at Rankin Bank for CS-01 (probability of 1%). No contact of sensitive receptors at this threshold concentration is predicted for CS-03.
- Arrangements for support organisations who provide specialist services or resources should be tested regularly.
- Plans, procedures and support documents need to be in place for Operational and Support Sections. These should be reviewed and updated regularly.
- The duration of the spill would be over 12 hours with response operations extending until operational and scientific monitoring termination criteria are met, and no additional response to oiled wildlife is required.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

5.1.2 Environmental performance based on need

Table 5-1: Environmental Performance – Monitor and evaluate

Environmental Performance Outcome		To gather information from multiple sources to establish an accurate common operating picture as soon as possible and predict the fate and behaviour of the spill to validate planning assumptions and adjust response plans as appropriate to the scenario.		
Control measure		**Performance Standard**		**Measurement Criteria (Section 5.8)**
1	Oil spill trajectory modelling	1.1	Initial modelling available within 6 hours using the Rapid Assessment Tool	1, 3B, 3C, 4
		1.2	Detailed modelling available within 4 hours of RPS receiving information from Woodside	
		1.3	Detailed modelling service available for the duration of the incident upon contract activation	
2	Tracking buoy	2.1	Tracking buoy located on facility/ lead vessel and ready for deployment 24/7	1, 3A, 3C, 4
		2.2	Deploy tracking buoy from facility/ lead vessel within 2 hours as per the First Strike Plan.	1, 3A, 3B, 4
		2.3	Contract in place with service provider to allow data from tracking buoy to be received 24/7 and processed.	1, 3B, 3C, 4
		2.4	Data received to be uploaded into Woodside common operating picture (COP) daily to improve the accuracy of other Operational Monitoring techniques.	1, 3B, 4
3	Satellite imagery	3.1	Contract in place with 3rd party provider to enable access and analysis of satellite imagery. Imagery source/type requested on activation of service.	1, 3C, 4
		3.2	3rd party provider will confirm availability of an initial acquisition within 2 hours	1, 3B, 3C, 4
		3.3	First image received with 24 hours of Woodside confirming to 3rd party provider its acceptance of the proposed acquisition plan.	1
		3.4	3rd party provider to submit report to Woodside per image. Report is to include a polygon of any possible or identified slick(s) with metadata.	1
		3.5	Data received to be uploaded into Woodside COP daily to improve accuracy of other Operational Monitoring techniques.	1, 3B, 4
		3.6	Satellite Imagery services available and employed during response	1, 3C, 4
4	Aerial surveillance	4.1	2 trained aerial observers available to be deployed by day 1 from resource pool.	1, 2, 3B, 3C, 4
		4.2	1 aircraft available for two sorties per day, available for the duration of the response from day 1	1, 3C, 4
		4.3	Observer to compile report during flight as per FSP. Observers report available to the IMT within 2 hours of landing after each sortie.	1, 2, 3B, 4
5	Pre-emptive assessment of sensitive receptors	5.1	10 days prior to any predicted impact, in agreement with WA DTMI (for Level 2/3 incidents), deployment of 2 specialists from resource pool in establishing the status of sensitive receptors.	1, 2, 3B, 3C, 4
		5.2	Daily reports provided to IMT on the status of the receptors to prioritise sensitive receptors and maximise effective utilisation of resources.	1, 3B, 4

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

The control measures and capability of Woodside and its third-party service providers are shown to support monitor and evaluate activities up to and including the identified WCCS. This is demonstrated by the following:

- Woodside has a documented, structured and tested capability for Operational Monitoring operations including internal trajectory modelling capabilities, tracking buoys located offshore and contracted aerial observation platforms with access to trained observers.
- Woodside and its third-party service providers seek to maintain sufficient capability for the duration of the response.
- Woodside has assessed the existing capability available and considered potential alternative, additional and improved control measures. Where control measures have been selected and implemented, they are included in Section 6.1.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

5.2 Source control and well intervention

The worst-case credible scenario for a loss of well containment is considered to be loss of well control during intervention operations. In order to have an uncontrolled release from the well, several simultaneous events have to occur, including the failure of the autonomous emergency disconnect system.

There is no credible scenario in which the vessel could put sufficient load onto the Xmas Tree or wellhead to cause complete structural failure of the lower well control package, Xmas Tree or wellhead.

It is possible, if an umbilical or guidewire snagged during a drive off, that the upper well control package could be damaged. As such, the credible spill scenario is a 12-hour subsea release of 550 m^3 from the CK-4 or LH-3 well.

In the event of a loss of well containment, the primary response would be use of the LWI intervention vessel ROV to isolate the well via the Xmas tree or WCP. The Woodside Wells Global Source Control Emergency Response Plan includes the process for the IMT to mobilise resources for response to a source control incident including mobilising the SFRT and independent vessel..

Source control operations cannot be implemented if the safety of response personnel cannot be guaranteed. Circumstances that limit the safe execution of this control measure include lower explosive limit (LEL) concentrations, volatile concentrations of hydrocarbons in the atmosphere, weather window, waves and/or sea states (>1.5m waves) and high ambient temperatures.

5.2.1 Response need based on predicted consequence parameters

The following statements identify the key parameters upon which a response need can be based:

- Prior to any source control activities, Woodside will implement protocols to confirm that the site is safe including subsea ROV surveys and surface air monitoring.
- Hydrocarbons will flow from the well until the following intervention can be made:
  - closure of the tubing retrievable safety valve (TRSV) via ROV
  - WCP closed via ROV
  - Xmas Tree closed via ROV
- Arrangements for support organisations who provide specialist services or resources should be tested regularly.
- Plans, procedures and support documents need to be in place for Operational and Support Sections. These should be reviewed and updated regularly.
- The duration of the spill may be up to 12 hours.

In addition, a number of assumptions are required to estimate the response need for source control. These assumptions have been described in the table below.

Table 5-2: Response Planning Assumptions – Source Control

Response planning assumptions	
Safety considerations	Source control operations cannot be implemented if the safety of response personnel cannot be guaranteed. This requires an initial and ongoing risk assessment of health and safety hazards and risks at the site, in accordance with the Woodside Management System (WMS). Personnel safety issues may include: • hydrocarbon gas and/or liquid exposure • high winds, waves and/or sea states • high ambient temperatures.
Feasibility considerations	Woodside's primary source control option is ROV intervention to close Xmas tree or subsea intervention device WCP valves within 12 hours. Other options that are typically considered for a large LOWC scenario such as relief well drilling are not feasible for this scenario (refer to Table 4-2).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

5.2.2 Environmental performance based on need

Table 5-3: Environmental Performance – Source Control

Environmental Performance Outcome		To stop the flow of hydrocarbons into the marine environment		
Control measure		**Performance Standard**		**Measurement Criteria (Section 5.8)**
6	Subsea First Response Toolkit (SFRT)	6.1	Oceaneering support staff available all year round, via contract, to assist with the mobilisation, deployment, and operation of the SFRT equipment.	1, 3B, 3C
		6.2	Intervention vessel with minimum requirement of a working class ROV and operator.	1, 3C
		6.3	Mobilised to site for deployment within 11 days.	1, 3B, 3C
		6.4	Open communication line to be maintained between IMT and infield operations to confirm awareness of progress against plan(s).	1, 3A, 3B
7	Well intervention	7.1	Vessel on location with ROV equipment deployed within 12 hours	1, 3B, 3C
		7.2	Hotstab and/or well intervention attempt made using ROV within 12 hours	1, 3B, 3C
		7.3	Open communication line(s) to be maintained between IMT and infield operations to confirm awareness of progress against plan(s).	1, 3A, 3B
8	Support vessels	8.1	Access to 24/7 vessel tracking software to monitor availability of suitable vessels to meet specifications for source control.	3C
		8.2	Frame agreements in place for access to installation support vessels (ISVs)..	1, 3B, 3C
9	Safety Case	9.1	Woodside will prioritise vessel(s) for emergency intervention work(s) that have an existing safety case	1, 3C
		9.2	Woodside Planning, Logistics, and Safety Officers (on roster/Call 24/7) to assist in expediting the safety case assessment process as far as practicable.	1, 3C
		9.3	Woodside will maintain minimum safe operating standards that can be provided to vessel operators for Safety Case guidance.	1, 3C

The resulting source control capability has been assessed against the WCCS. The range of techniques provide a feasible and viable approach to relief well drilling operations to stop the well flowing.

- The health and safety, financial, capital and operations/maintenance costs of implementing the alternative, additional or improved control measures identified and not carried forward are considered grossly disproportionate to the insignificant environmental benefit gained and/or not reasonably practicable for this Petroleum Activity.
- Woodside has assessed the existing capability available and considered potential alternative, additional and improved control measures. Where control measures have been selected and implemented, they are included in Section 6.2.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

5.3 Source Control via vessel Shipboard Oil Pollution Emergency Plan (SOPEP)

Vessel source control will be conducted, where feasible and in accordance with MARPOL 73/78 Annex I, by the Vessel Master under the Shipboard Oil Pollution Emergency Plan (SOPEP) triggered by any loss of containment from the Petroleum Activity vessels.

The SOPEP provides guidance to the Master and Officers on board the vessel with respect to the extra steps to be taken when an unexpected pollution incident has occurred or is likely to occur. The SOPEP contains all information and operational instructions required by International Maritime Organization (IMO) Resolution MEPC.54 (32) adopted on 6 March 1992, as amended by resolution MEPC.86 (44) adopted on 13 March 2000.

Its purpose is to set in motion the necessary actions to stop or minimise oil discharge and mitigate its effects and outlines responsibilities, pollution reporting requirements, procedures and resources needed in the event of a hydrocarbon spill from vessel activities.

In the event of the WCCS vessel collision event, the vessel master may engage precautionary marine manoeuvres to avoid collision or commence pumping operations to transfer marine diesel and thus minimise the release.

5.3.1 Environmental performance based on need

Woodside has established control measures, environmental performance outcomes, performance standards and measurement criteria to be used for vessel-source oil spill response during the Petroleum Activity which are detailed in Section 6.7.3 of the EP. The vessel master's roles and responsibilities are described in EP Section 7.3.

Performance standards for each contracted Petroleum Activity vessel are detailed in the vessel's specific SOPEP.

These standards maintain availability of sufficient resources and are adequately tested for successful implementation of the SOPEP in the event of a hydrocarbon spill.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

5.4 Oiled wildlife response (including hazing)

Oiled wildlife response (OWR) includes wildlife surveillance/reconnaissance, wildlife hazing, pre-emptive capture, and the capture, cleaning, treatment, and rehabilitation of animals that have been oiled. In addition, it includes the collection, post-mortem examination, and disposal of deceased animals that have succumbed to the effects of oiling.

For a petroleum activity spill in Commonwealth waters, Woodside will act as the Control Agency and will be responsible for the wildlife response. In such circumstances, Woodside would implement a response in accordance with the *Oiled Wildlife Operational Plan*, the WA Oiled Wildlife Response Plan (WAOWRP) (DBCA, 2022a) and the WA OWR Manual (DBCA, 2022b). The *Oiled Wildlife Operational Plan* includes the process for the IMT to mobilise resources depending on the nature and scale of the spill. Oiled wildlife operations would be implemented with advice and assistance from the Oiled Wildlife Advisor from the Department of Biodiversity, Conservation and Attractions (DBCA).

The key plan for OWR in WA is the WAOWRP (DBCA, 2022a). The WAOWRP establishes the framework for preparing and responding to potential or actual wildlife impacts during a spill and sets out the management arrangements for implementing an OWR in conjunction with the DTMI *State Hazard Plan – Maritime Environmental Emergencies* (SHP-MEE). It is the responsibility of DBCA to administer the WAOWRP under the direction of the DTMI. The WA OWR Manual (DBCA, 2022b) supports, and should be used in conjunction with, the WAOWRP. The purpose of the WA OWR Manual is to standardise the operating procedures, protocols and processes for an OWR during a spill event in WA waters, and to create alignment between the wildlife response processes and the overall incident response (DBCA, 2022b).

If a spill occurs in WA State waters or enters State waters, DBCA is the Jurisdictional Authority for wildlife, for level 2/3 spills, and will also lead the oiled wildlife response under the control of the DTMI. DBCA is the State Government agency responsible for administering the *Biodiversity Conservation Act 2016 (BC Act)* which has provisions for authorising activities that affect wildlife.

For level 1 spills in State waters, Woodside will be the Control Agency, including for wildlife response. It is, however, also an expectation that for level 2/3 petroleum activity spills, Woodside will conduct the initial first-strike response actions for wildlife response and continue to manage those operations until DBCA is activated as the lead agency for wildlife response and formal handover occurs. Following formal handover, Woodside will function as a support organisation for the OWR and will be expected to continue to provide planning and resources as required.

Woodside retains specialist personnel to support and manage oiled wildlife operations, including trained and competent responders for deployment in Exmouth and Dampier. Additional personnel would be sourced through Woodside's arrangements to support an oiled wildlife response as required.

5.4.1 Response need based on predicted consequence parameters

Wildlife response priority areas and assessment of wildlife impact

French-McCay et al. (2002), based on a review of existing literature at the time, determined lethal thresholds for floating and shoreline oil for the external coating of wildlife to be 10 g/m^2 for floating, and 100 g/m^2 for shoreline accumulation. It should however be noted that toxicity thresholds for wildlife are likely to be highly variable due to differences in species sensitivity, type of hydrocarbon, type of exposure (ingestion or external oiling), life-stage, and on-water versus land habitat.

For planning purposes, determination of wildlife priority protection areas is based on stochastic modelling of the worst-case spill scenarios at 10 g/m^2 for floating, and 100 g/m^2 for shoreline accumulation (acknowledging that impacts to wildlife may occur at lower concentrations), the known presence of wildlife, and in consideration of the following:

- Presence of high densities of wildlife, threatened species, and/or endemic species with high site fidelity
- Greatest probability of shoreline accumulation
- Shortest timeframe to contact

Table 5-4 outlines the wildlife response areas for this activity. At the time of a spill, identification and allocation of wildlife response should also take into consideration any key biological activities. Additional detail regarding species and their key biological activities within the vicinity of the Petroleum Activity are described in Section 4 of the CK-4 and Well Intervention Environment Plan.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

For WA, the Pilbara and Kimberley Regional Oiled Wildlife Plans (DBCA (formerly Department of Parks and Wildlife), 2014) provide useful information relating to wildlife priority response areas in their respective regions.

Table 5-4: Key at-risk species potentially in open ocean

Species	Open Ocean
Marine turtles	✓
Whale sharks	✓
Seabirds and/or migratory shorebirds	✓
Cetaceans – migratory whales	✓
Cetaceans – dolphins and porpoises	✓
Dugongs	✓
Sharks and rays	✓

The following statements identify the key parameters upon which a wildlife response need can be based:

- Modelling predicts floating oil with surface concentrations of 10 g/m^2 up to 38 km from the location of CS-01 and up to 13 km from the location of CS-03.
- Floating oil at >10 g/m^2 is not predicted to contact any sensitive receptors.
- No shoreline receptors are predicted to be contacted by floating oil concentrations at any of the assessed thresholds and no accumulation of oil on shorelines is predicted.
- At sea there are likely to be low numbers of at risk or impacted wildlife, and limited opportunities to rescue wildlife, given the distribution and behaviour of animals in the open marine environment. At sea, continued wildlife reconnaissance, carcass recovery, sampling of carcasses that cannot be retrieved and operational and scientific monitoring are more likely to be the focus of response efforts.
- As the surface oil approaches shorelines and as oil accumulates on the shoreline, potential for oiled wildlife impacts is likely to increase as well as opportunities to rescue wildlife.
- It is estimated that the wildlife impact would be between medium and high, as defined in the WAOWRP (DBCA, 2022a) (Table 5-5).

Table 5-5: WAOWRP Guide for rating wildlife impact of an oil spill (DBCA, 2022)

Wildlife Impact Rating	Low	Medium	High
What is the likely duration of the wildlife response?	<3 days	3-10 days	>10 days
What is the likely total intake of animals?	<10	11-25	>25
What is the likely daily intake of animals?	0-2	2-5	>5
Are threatened species, or species protected by treaty, likely to be impacted, either directly or by pollution of habitat or breeding areas?	No	Yes – possible	Yes – likely
Is there likely to be a requirement for building primary care facility for treatment, cleaning and rehabilitation?	No	Yes – possible	Yes – likely

Tactics

Where there is imminent or actual impact to wildlife, Woodside will activate the Wildlife Division and follow the oiled wildlife incident management framework and implementation plan outlined in the Woodside *Oiled Wildlife Operational Plan*.

In Commonwealth waters, Woodside will be responsible for the planning and implementation of the OWR in its entirety. Noting that at sea, and in comparison, to the shoreline, there are likely to be less wildlife impacted by an oil spill and limited opportunities to rescue wildlife, given the distribution and behaviour of animals in the open marine environment. At sea, continued wildlife reconnaissance, carcass recovery, sampling of carcasses that cannot be retrieved and integration with operational and scientific monitoring are more likely to be the focus of the OWR.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

In State waters, Woodside will conduct the initial first-strike response actions for wildlife and continue to manage those operations until DBCA is activated as the lead agency for wildlife response and formal handover occurs. Following formal handover, Woodside will function as a support organisation for the OWR and will be expected to continue to provide planning and resources as required.

If a protracted response is likely, requiring preventative actions and/or wildlife rescue, and formal hand over to the Control Agency (in State waters) has not yet occurred, the Wildlife Division will be responsible for the development of the Wildlife Division portion of the IAP. Preventative actions, such as hazing, along with capture, intake and treatment require a higher degree of planning, approval (licenses) and skills and will be planned for and carried out under the IAP as outlined in the *Oiled Wildlife Operational Plan* and in accordance with the WAOWRP (DBCA, 2022a) and WA OWR Manual (DBAC, 2022b).

The oiled wildlife response technique targets key wildlife populations at risk within Commonwealth open waters and the nearshore waters as described in Section 4 of the EP.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

5.4.2 Environmental performance based on need

Table 5-6: Environmental Performance – Oiled Wildlife Response (OWR)

Environmental Performance Outcome		OWR is conducted in accordance with the Western Australian Oiled Wildlife Response Plan (WAOWRP, 2022) to meet legislative requirements to house, release or euthanise wildlife under the *Biodiversity Conservation Act 2016*.		
Control measure		**Performance Standard**		**Measurement Criteria (Section 5.8)**
10	Wildlife response arrangements	10.1	Oiled Wildlife Operational Plan in place and utilised during a response to plan, coordinate, implement and terminate operations	1, 3A, 4
		10.2	Initiate a wildlife first strike response within 24 hours of confirmed or imminent wildlife contact as directed by Operational Monitoring Plan (OMP): Marine Fauna Assessment and in liaison with DBCA.	1
11	Wildlife response equipment	11.1	Maintain contract with AMOSC for immediate access to oiled wildlife response equipment.	1, 3C, 4
		11.2	Maintain contract with OSRL to access additional oiled wildlife response equipment.	1, 3C, 4
12	Wildlife responders	12.1	Two Oiled Wildlife Team Members to supervise the oiled wildlife operations who have completed an OWR Management course.	1, 2, 3B
		12.2	Maintain contract with AMOSC for immediate access to trained oiled wildlife response specialists	1, 3B, 3C
		12.3	Maintain contract with OSRL to access additional trained OWR specialists	1, 3B, 3C
		12.4	Open communication line to be maintained between IMT and infield operations to ensure awareness of progress against plan(s).	1, 3A, 3B
13	Management of environmental impacts of response risks	13.1	Oiled wildlife operations (including hazing) would be implemented with advice and assistance from the Oiled Wildlife Advisor from the DBCA, and in accordance with the processes and methodologies described in the WA Oiled Wildlife Response Plan (OWRP) and the relevant regional plan.	1

The resulting wildlife response capability has been assessed against the WCCS. The range of techniques provide an ongoing approach to response.

Under optimal conditions, during the subsea or surface release, the capability available meets the need identified. It indicates that, the wildlife response capability has the following expected performance:

- undertake OWR first strike response:
  - mobilisation of monitor and evaluate and/or OMP: Marine Fauna Assessment to identify wildlife contacted or at imminent risk of contact by hydrocarbons.
- availability and mobilisation of trained OWR personnel to supervise OWR activities.
- access to wildlife resources (personnel and equipment) to meet the needs where there are medium or high levels of wildlife impact.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

5.5 Waste Management

Waste management is considered a support technique to wildlife response, containment and recovery and shoreline clean-up. Waste generated and collected during the response that will require handling, management and disposal may consist of:

- Liquids (hydrocarbons and contaminated liquids) collected during oiled wildlife response, and/or
- Solids/semi-solids (oily solids, garbage, contaminated materials) and debris (e.g. seaweed, sand, woods, and plastics) collected during oiled wildlife response.

Expected waste volumes during an event are likely to vary depending on oil type, volume released, response techniques employed and how weathering of hydrocarbons. Waste management, handling and capacity should be scalable to maintain continuous response operations.

All waste management activities will follow the Environment Protection (Controlled Waste) Regulations 2004 and the waste will be managed to minimise final disposal volumes. Waste treatment techniques will consider contaminated solids treatment to allow disposal to landfill and solids with high concentrations of hydrocarbon will be treated and recycled where possible or used in clean fill if suitable.

The waste products would be transported from response locations to the nearest suitable staging area/waste transfer station for treatment, disposal or recycling. Waste will be transferred with appropriately licensed vehicles. Containers will be available for temporary waste storage and will be:

- labelled with the waste type
- provided with appropriate lids to prevent waste being blown overboard
- bunded if storing liquid wastes.
- processes will be in place for transfers of bulk liquid wastes and include:
  - inspection of transfer hose undertaken prior to transfer
  - watchman equipped with radio visually monitors loading hose during transfer
  - tank gauges monitored throughout operation to prevent overflow

The *Oil Spill Preparedness Waste Management Support Plan* details the procedures, capability and capacity in place between Woodside and its primary waste services contractor to manage waste volumes generated from response activities.

5.5.1 Response need based on predicted consequence parameters

Table 5-7: Response Planning Assumptions – Waste Management

Response planning assumptions: Waste management	
Waste loading per m^3 oil recovered (multiplier)	Oiled wildlife response – approximately 1 m^3 of oily solid and liquid waste generated for each wildlife unit cleaned

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

5.5.2 Environmental performance based on need

Table 5-8: Environmental Performance – Waste Management

Environmental Performance Outcome		To minimise further impacts, waste will be managed, tracked and disposed of in accordance with laws and regulations.		
Control measure		**Performance Standard**		**Measurement Criteria (Section 5.8)**
14	Waste Management	14.1	Contract with waste management services for transport, removal, treatment and disposal of waste	1, 3A, 3B, 3C, 4
		14.2	Access to at least 50 m^3 of solid and liquid waste storage available within one week of activation of 3rd party contract.	
		14.3	Recovered hydrocarbons and wastes will be transferred to licensed treatment facility for reprocessing or disposal.	
		14.4	Waste management provider support staff available year-round to assist in the event of an incident with waste management as detailed in contract.	
		14.5	Open communication line to be maintained between IMT and waste management services to ensure the reliable flow of accurate information between parties.	1, 3A, 3B
		14.6	Waste management to be conducted in accordance with Australian laws and regulations	1, 3A, 3B, 3C, 4
		14.7	Waste management services available and employed during response	
15	Management of environmental impacts of response risks	15.1	Teams will segregate liquid and solid wastes at the earliest opportunity.	1, 3A, 3B, 3C, 4

The resulting waste management capability has been assessed against the WCCS. The range of techniques provide an ongoing approach to waste management.

It indicates that the waste management capability has the following expected performance:

- Woodside has assessed the existing capability available and considered potential alternative, additional and improved control measures. Where control measures have been selected and implemented, they are included in Section 6.5.
- The waste management requirements are within Woodside's and its service providers existing capacity.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

5.6 Operational and Scientific monitoring

Operational and scientific monitoring (OSM) is a key component of the environmental management document framework for offshore petroleum activities, which includes activity EPs and OPEPs. The key elements and differences between operational monitoring and scientific monitoring include:

- **Operational Monitoring (OM)** – Is undertaken during the course of the spill and includes any physical. chemical and biological assessments that may guide operational decisions such as selecting the appropriate response and mitigation methods and/or to determine a response activity. This monitoring is additional to the activities (aerial/vessel surveillance, tracking buoys, oil spill trajectory modelling and satellite tracking) performed as part of the Monitor and Evaluate Strategy (Section 5.1). Information needs to be collected and processed rapidly to suit response needs, with a lower level of sampling and accuracy needed than for scientific purposes. For the OMP initiation and termination criteria during a Level 2-3 spill event refer to Table 9-1 of the Joint Industry OSM Framework (APPEA [now Australian Energy Producers (AEP)] 2021).
- **Scientific Monitoring (SM)** – Is the principal tool for determining the extent, severity and persistence of possible environmental impacts from a hydrocarbon spill and for informing resultant remediation activities. Consequently, such studies are required to account for natural or sampling variation, and study designs must be robust and produce defensible data. Scientific monitoring is typically conducted over a wider study area, extending beyond the spill footprint, and a longer time period, extending beyond the spill response. For the Scientific Monitoring Plan (SMP) initiation and termination criteria during a Level 2-3 spill event refer to Table 9-2 of the Joint Industry OSM Framework (APPEA [now AEP] 2021).

Woodside has developed a Woodside OSM Bridging Implementation Plan (OSM-BIP), which describes a program of monitoring oil pollution that will be adopted in the event of a hydrocarbon spill incident (Level 2–3) to marine waters. It aligns with the Joint Industry OSM Framework (APPEA [now AEP], 2021) and describes how this Framework applies to Woodside activities and spill risks.

A series of Operational Monitoring Plans (OMPs) and Scientific Monitoring Plans (SMPs) form part of the Joint Industry OSM Framework and provide detail on monitoring design, standard operating procedures, data management, quality assurance and quality control and reporting.

Table 5-9 lists the Joint Industry OMPs and SMPs that are relevant to the Petroleum Activity. The aims/objectives of each OMP and SMP are listed in Tables 5-1 and 6-1 of the Joint Industry OSM Framework respectively. Woodside confirms it has reviewed these aims/objectives and determined they are all appropriate to address the potential impacts, risks and response activities of this activity, noting that dispersant application is not a suitable response strategy for this activity.

The OSM-BIP is structured so that it can provide a flexible framework that can be adapted to individual spill incidents. The Combined OSM Planning Area (refer to section 2.1 of the OSM-BIP), derived from all Woodside worst-case scenarios, represents the geographical extent of the Woodside OSM-BIP.

The OSM requirements for this activities credible spill scenarios, including monitoring priorities, implementation timeframes and capability is provided in ANNEX C: Petroleum Activity OSM Activity Specific Requirement and Verification of OSM-BIP Adequacy.

Woodside will review the initiation criteria for OMPs and SMPs (provided in Table 9-1 [OMPs] and Table 9-2 [SMPs] of the Joint Industry Operational and Scientific Monitoring Framework (APPEA [now AEP], 2021)) during the preparation of the initial IAPs, and subsequent IAPs. If any initiation criteria are met, then that relevant OMP and/or SMP will be activated via the OSM Services Provider.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

Table 5-9 Joint industry OSM plans relevant to the Petroleum Activity

Operational Monitoring	Relevant for the activity	Scientific Monitoring	Relevant for the activity
OM1: Hydrocarbon Characterisation	✓	SM1: Water Quality Impact Assessment	✓
OM2: Hydrocarbon in Water Assessment	✓	SM2: Sediment Quality Impact Assessment	✓
OM3: Hydrocarbon in Sediment Assessment	✓	SM3: Intertidal & Coastal Habitat Assessment	×
OM4a: Dispersant Effectiveness Monitoring (Subsea)	×	SM4: Seabirds and Shorebirds Assessment	✓
OM4b: Dispersant Effectiveness Monitoring (Surface)	×	SM5: Marine mega-fauna Assessment	✓
OM5: Rapid Marine Fauna Surveillance	✓	SM6: Benthic habitat Assessment	✓
OM6: Shoreline Clean-up Assessment (SCAT)	×	SM7: Marine fish and elasmobranch assemblages assessment	✓
		SM8: Fisheries Impact Assessment	✓
		SM9: Heritage Features Assessment	✓
		SM10: Social Impact Assessment	✓

5.6.1 Summary – operational and scientific monitoring

A detailed OSM preparedness assessment is provided in ANNEX C: Petroleum Activity OSM Activity Specific Requirement and Verification of OSM-BIP Adequacy.

The ALARP assessment for operational and scientific monitoring (Section 6.6) considers alternate, additional, and/or improved control measures on each selected response technique.

Known, reasonably practicable control measures have been adopted with the cost and organisational complexity of these options determined to be moderate and the overall delivery effectiveness determined to be medium. The OSM program's main objectives can be met, with no additional, alternative or improved control measures providing further benefit.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

5.6.2 Environmental performance based on need

Table 5-10: Operational and scientific monitoring

Environmental Performance Outcome		Implement OSM programs to assess and report on the impact, extent, severity, persistence and recovery of sensitive receptors contacted by a spill or affected by spill response.		
Control measure		**Performance Standard**		**Measurement Criteria (Section 5.8)**
16	OSM arrangements	16.1	Maintain access to OSM expertise qualified to fulfil OSM Implementation Lead role during a Level 2/3 spill event per Joint Industry OSM Framework requirements.	3A, 3B, 3C, 4
		16.2	OSM Implementation Lead responsible for overseeing implementation of OMP and SMP components in accordance with the Woodside OSM Bridging Implementation Plan[2].	
17	Access to adequate OSM capability to provide both initial and ongoing monitoring	17.1	Maintain contract with third-party OSM Services Provider to provide access to suitably qualified and competent personnel and equipment to assist in the implementation of monitoring in accordance with the capability and resourcing requirement described in Sections 8–10 of the OSM-BIP and the activity-specific capability assessment in Table C - 7 and Table C - 8.	3A, 3B, 3C, 4
		17.2	Obtain monthly capability reports from OSM Service Provider to demonstrate the capability described in Section 10 of the OSM-BIP is available throughout the activity	
		17.3	Annual testing of OSM Service Provider standby arrangements and activation process	
18	Baseline studies assurance	18.1	Annual review of environmental baseline data for all locations where spill modelling has predicted contact at relevant hydrocarbon thresholds within 7 days	3C
19	OSM-BIP maintenance	19.1	Annual review will be conducted according to the criteria in Section 11 of the OSM-BIP	3A, 3B, 3C, 4
20	OSM response	20.1	OMPs and SMPs will be activated in accordance with the initiation criteria provided in Tables 9-1 and 9-2 of the Joint Industry OSM Framework (APPEA [now AEP] 2021)	1
		20.2	Initiation criteria of OMPs and SMPs will be reviewed during the preparation of the initial Incident Action Plan (IAPs) and subsequent IAPs; and if any criteria are met, relevant OMPs and SMPs will be activated	
		20.3	If the OSM Implementation Lead identifies that additional monitoring capability is required beyond that described in Section 10 of the OSM-BIP, the need for these resources will be identified as soon as practicable and mobilised through the OSM Services Provider Contract, which includes provisions for scaling up personnel to meet monitoring program requirements	
		20.4	Decisions regarding co-mobilisation of monitoring teams will be determined following a spill event, as part of the Incident Action Planning process. These decisions will be made by the CIMT in consultation with the OSM Services Provider and relevant stakeholders, with due consideration given to safety, access to sensitive receptors, timing, and data quality requirements	
		20.5	OSM to be conducted in accordance with the Woodside OSM-BIP and, where relevant to the activity, the	

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

			assessment detailed in ANNEX C: Petroleum Activity OSM Activity Specific Requirement and Verification of OSM-BIP Adequacy	
		20.6	Monitoring prioritisation will be undertaken in accordance with the process and checklist provided in Table 13-1, informed by the guidance in Section C.2 of the OSPRMA	
		20.7	Mobilisation and implementation of OMPs and SMPs will be undertaken in accordance with the indicative timeframes and sequencing described in Section C.3 of the OSPRMA and Part B of the OSM-BIP	
		20.8	Implementation of OSM will comply with the minimum standards listed in Appendix A of the Joint Industry OSM Framework	
		20.9	Once Scientific Monitoring data reports are drafted they will be peer reviewed by an expert panel for data integrity	
		20.10	OMPs and SMPs will be terminated in accordance with the termination criteria provided in Table 9-1 and 9-2 of the Joint Industry OSM Framework (APPEA [now AEP], 2021)	

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

5.7 Incident Management System (IMS)

The Incident Management System (IMS) is both a control measure and a measurement criteria. As a control measure the IMS function is to prompt, facilitate and record the completion of the key response planning processes detailed below (see Sections 5.7.1, 5.7.2 and 5.7.3). As a measurement criteria the IMS records the evidence of the timeliness of all response actions included in the environmental performance standards and the plans used of the Petroleum Activity.

As the IMS does not directly remove hydrocarbons spilt into the marine environment there is no direct relationship to the response planning need.

5.7.1 Incident action planning

The CIMT will be required to collect and interpret information from the scene of the incident to determine support requirements to the site-based IMT, develop an IAP and assist the IMT with the execution of that plan. The site-based Incident Commander (IC) may request the CIMT to complete notifications internally within Woodside, to relevant persons/ organisations and government agencies as required. Depending on the type and scale of the incident either the CIMT IC will be responsible for ensuring the development of the IAP. Incident Action Planning is an ongoing process that involves continual review to confirm the appropriateness of techniques to control the incident for the situation at the time.

5.7.2 Operational NEBA process

In the event of a response Woodside will confirm that the response techniques adopted at the time of EP/ OPEP acceptance remain appropriate to reduce the consequences of the spill. This process verifies that there is a continuing net environmental benefit associated with continuing the response technique through the operational NEBA process. This process manages the environmental risks and impacts of response techniques during the spill response, An operational NEBA will be undertaken throughout the response, for each operational period.

The operational NEBA will consider the risks and benefits of conducting and response activity. For example, if vessels are required for access to nearshore or onshore areas, anchoring locations will be selected to minimise disturbance to benthic habitats. Vessel cleanliness would be commensurate with the receiving environment. The operational NEBA will consider the risks and benefits of conducting other response techniques.

The operational NEBA process is also used to terminate a response. Using data from operational and scientific monitoring activities the response to a hydrocarbon spill will be terminated in accordance with the termination process outlined in the Joint Industry OSM Framework (APPEA, 2021). In effect the operational NEBA will determine whether there is net environmental benefit to continue response operations.

5.7.3 Consultation engagement process

Woodside will consult relevant persons/ organisations are engaged during the spill response in accordance with internal standards. This process requires that Woodside will:

- Undertake all required notifications (including government notifications) for relevant persons/ organisations in the region (identified in the First Strike Plan). This includes notification to mariners to communicate navigational hazards introduced through response equipment and personnel.
- In the event of a response, identify and engage with relevant persons/ organisations and continually assess and review.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

5.7.4 Environmental performance based on need

Table 5-11: Environmental Performance – Incident Management System

Environmental Performance Outcome		To support the effectiveness of all other control measures and monitor/record the performance levels achieved.		
Control measure		**Performance Standard**		**Measurement Criteria (Section 5.8)**
21	Operational SIMA	21.1	Confirm that the response techniques adopted at the time of acceptance remain appropriate to reduce the consequences of the spill within 24 hours.	1, 3A
		21.2	Record the evidence and justification for any deviation from the planned response activities.	
		21.3	Record the information and data from operational and scientific monitoring activities used to inform the SIMA.	
22	Stakeholder engagement	22.1	Prompt and record all notifications (including government notifications) for persons/ organisations in the region are made	
		22.2	In the event of a response, identification of relevant persons/ organisations will be re-assessed throughout the response period.	
		22.3	Undertake communications in accordance with: • Functional Support Team Guideline – Reputation External Communication and Continuous Disclosure Procedure	
23	Personnel required to support any response	23.1	Action planning is an ongoing process that involves continual review to confirm the appropriateness of techniques to control the incident are appropriate to the situation at the time.	1, 3B
		23.2	A duty roster of trained and competent people will be maintained to maintain minimum manning requirements are met all year round.	3C
		23.3	Immediately activate the CIMT with personnel filling one or more of the following roles: • CIMT Incident Commander • CIMT Deputy Incident Commander • Operations Section Chief • Planning Section Chief • Logistics Section Chief • Documentation Unit Leader • Safety Officer • Environment Unit Leader • Human Resources Officer • Public Information Officer • Situation Unit Leader • Finance Section Chief • Source Control Section Chief	1, 2, 3B, 3C, 4
		23.4	Collect and interpret information from the scene of the incident to determine support requirements to the site-based IMT, develop an IAP and assist with the execution of that plan.	
		23.5	Security and emergency management (S&EM) advisors will be integrated into CIMT to monitor performance of all functional roles.	

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

		23.6	Continually communicate the status of the spill and support Woodside to determine the most appropriate response by delivering on the responsibilities of their role.	
		23.7	Follow the Hydrocarbon Spill Australia Regulatory Framework[1], Operational Plans, FSPs, support plans and the IAPs developed.	1, 2, 3A, 4
		23.8	Contribute to Woodside's response in accordance with the aims and objectives set by the Incident Commander.	1, 2, 3B, 3C, 4

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

5.8 Measurement criteria for all response techniques

Woodside measures compliance with environmental performance outcomes and standards through four primary mechanisms. The aforementioned performance tables identify which of these four mechanisms monitors the readiness and records the effectiveness and performance of the control measures adopted.

1. The Incident Management System

The Incident Management System (IMS) supports the implementation of the Crisis and Emergency and Crisis Management Procedure Standard. The IMS provides a near real-time, single source of information for monitoring and recording an incident and measuring the performance of those control measures.

The Crisis and Emergency Management (CEM) Procedure Standard defines the management framework, including roles and responsibilities, to be applied to any size incident (including hydrocarbon spills). The organisational structure required to manage an incident is developed in a modular fashion and is based on the specific requirements of each incident. The structure can be scaled up or down. The IAP process formally documents and communicates the:

- Incident objectives
- Status of assets
- Operational period objectives
- Response techniques (defined during response planning)
- The effectiveness of response techniques.

The information captured in the IMS (including information from personal logs and assigned tasks/close outs) confirms the response techniques implemented remain appropriate to reduce the consequences of the spill. The system also records all information and data that can be used to support the site-based IMT, development and the execution of the IAP.

2. The CEM Competency Dashboard

The CEM competency dashboard records the number of trained and competent responders that are available across Woodside to participate in a response.

This number varies dependent on expiry of competency certificates, staff attrition, internal rotations, leave and other absences. As such the Dashboard is designed to identify the minimum manning requirements and to identify sufficient redundancy to cater for the variances listed above.

Figure 5-1 shows the minimum manning numbers for the different hydrocarbon spill response roles and the number of qualified persons against those roles.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

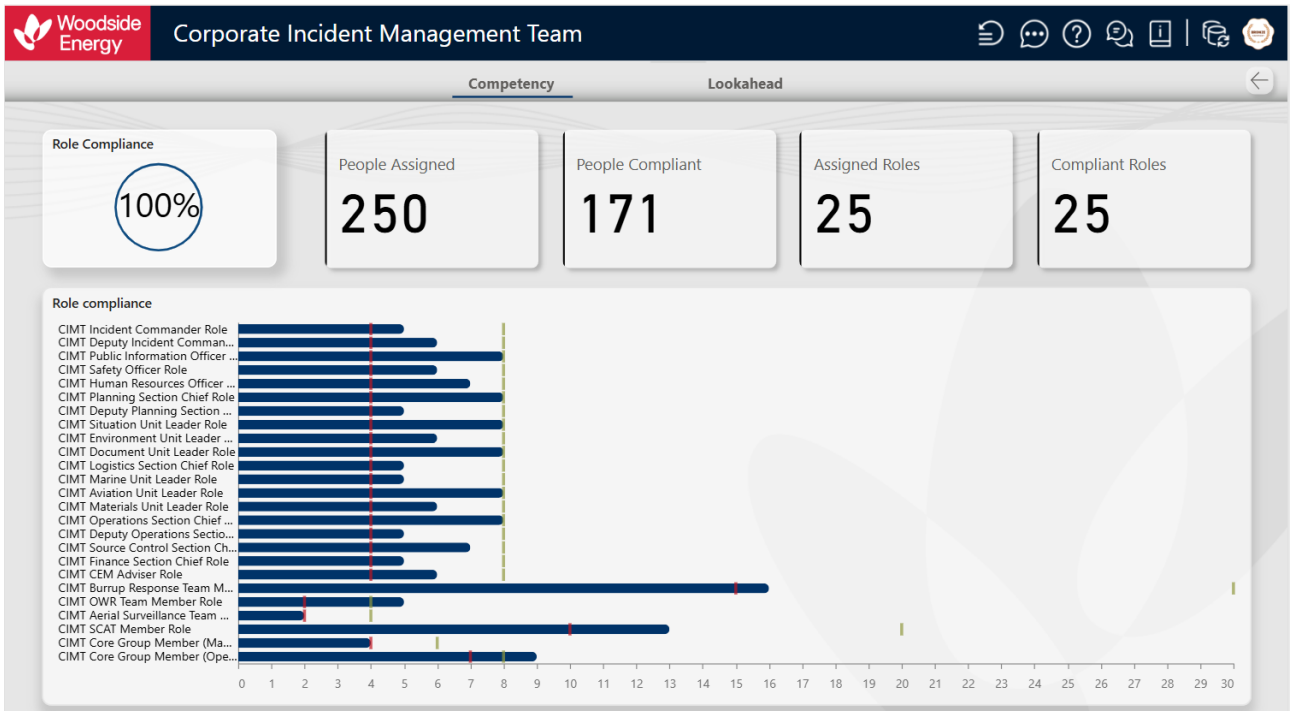


Figure 5-1: Example screenshot of the CEM dashboard

The Dashboard is one of Woodside's key means of monitoring its readiness to respond. It also demonstrates Woodside's ability to meet the requirements of the environmental performance standards that relate to filling certain response roles.

Figure 5-2 shows an example of the SCAT role and the training modules required to show competence.

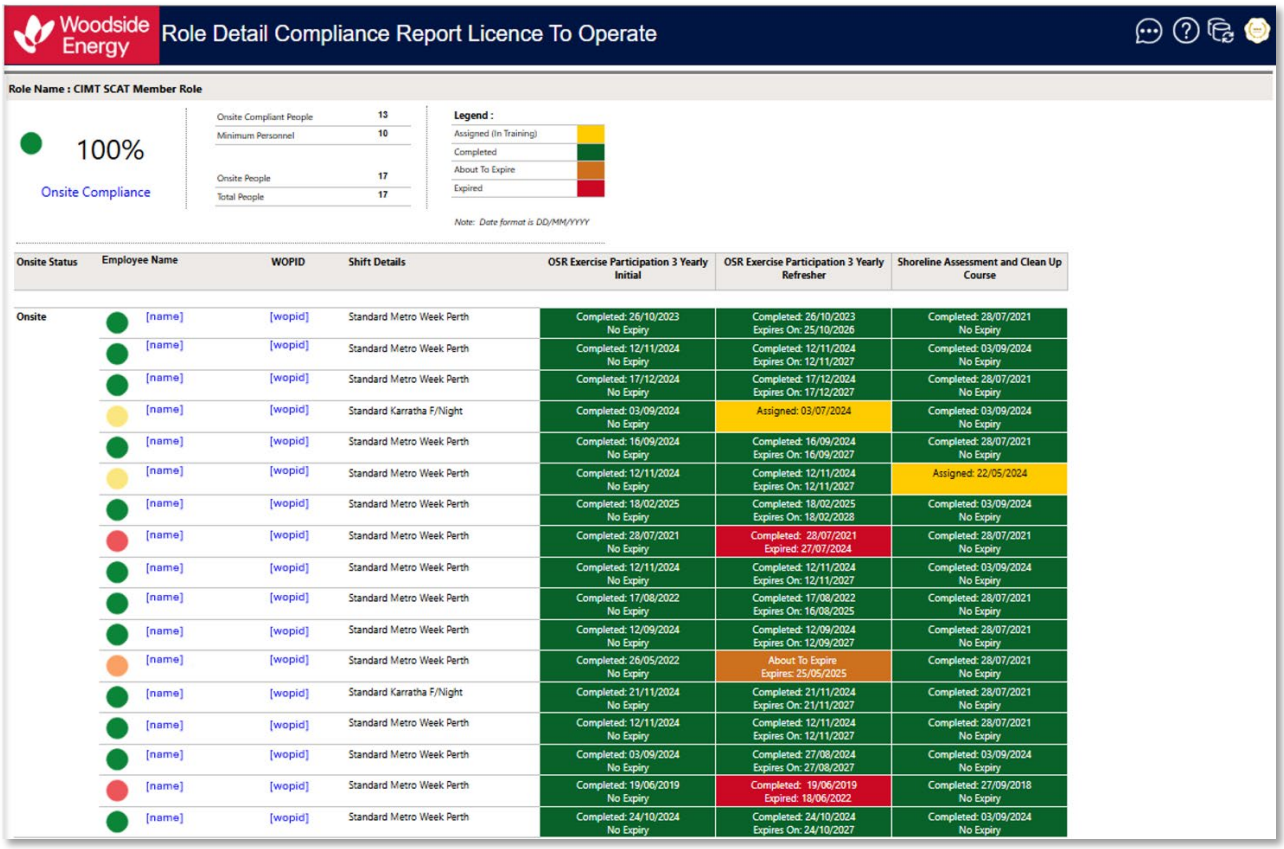


Figure 5-2: Example screenshot for the SCAT role

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

Woodside also maintains a pool of trained responders which is composed of but not limited to personnel from the following organisations:

- Australian Marine Oil Spill Centre (AMOSC) core group
- AMOSC
- Oil Spill Response Limited (OSRL)
- Marine Spill Response Corporation (MSRC)
- Woodside contracted workforce

3. The Hydrocarbon Spill Preparedness Assurance Process

The Hydrocarbon Spill Response Team uses Woodside's assurance process to track compliance over three key control areas:

a. **Plans** – confirms all plans (including: Hydrocarbon Spill Australia Regulatory Framework[1], first strike plans, operational plans, support plans and tactical response plans) are current and in line with regulatory and internal requirements.

b. **Competency (personnel and testing)** – confirms the competency dashboard is up to date and there are the minimum numbers across CIMT, Crisis Management Team (CMT) and hydrocarbon spill response roles. The hydrocarbon spill training plan and exercise schedule, including testing of arrangements is also tracked. The Testing of Arrangements (ToA) register tracks the testing of all hydrocarbon spill response arrangements, key contracts and agreements in place with internal and external parties to ensure compliance.

c. **Capability (equipment and contracts)** – tracks and monitors capability that could be required in a hydrocarbon incident, including but not limited to: integrated fleet[5] vessel schedule, dispersant availability, rig/vessels monitoring, equipment stockpiles, tracking buoy locations and the CIMT duty roster.

The assurance process records how each commitment listed in the performance tables above is managed for ongoing compliance monitoring. The level of compliance can be reviewed in real time and is reported on a monthly basis through the CEM Function.

4. The Hydrocarbon Spill Planning Standard, Hydrocarbon Spill Planning Work Instruction (Australia), Hydrocarbon Spill Capability and Competency Standard, and Hydrocarbon Spill Response Standard

The Hydrocarbon Spill Planning Standard sets out how to plan and prepare for a liquid hydrocarbon spill to the marine environment. (Note, this standard does not apply to scenarios relating to gas releases in the marine environment). This standard details the requirement for an OPEP to be developed, maintained, reviewed, and approved by appropriate regulators (where applicable).

The Hydrocarbon Spill Planning Work Instruction (Australia) details planning for hydrocarbon spill response preparedness including:

- Developing OPEPs.
- Defining how spill scenarios are developed on an activity specific basis
- Priority response receptor determination.
- ALARP determination.

The Hydrocarbon Spill Capability and Competency Standard details:

- Developing spill training requirements and ongoing maintenance of training and competency for personnel
- Developing requirements for spill exercising / testing of spill response arrangements

[5] The Integrated fleet consists of vessels from multiple operators that have been contracted to Woodside to undertake a number of duties including hydrocarbon spill response.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

- Maintaining access to identified equipment, personnel and contracts.
- Ensuring compliance and assurance is undertaken in accordance with external and internal requirements.

The Hydrocarbon Spill Response Standard details requirements for appropriate hydrocarbon spill response standards including:

- safeguarding the safety and health of people (responders and communities)
- stopping the source of the spill as quickly as possible
- minimising the environmental and community impact

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

6 ALARP EVALUATION

This Section should be read in conjunction with Section 5 which is the capability planned for this activity.

6.1 Monitor and evaluate – ALARP Assessment

Alternative, additional and improved options have been identified and assessed against the base capability described in Section 5.1. Those that have been selected for implementation are highlighted in green. Items highlighted in red have been considered and rejected on the basis that they are not feasible, the costs are clearly disproportionate to the environmental benefit, and/or the option is not reasonably practical. Control measures where there is not a clear justification for their inclusion or exclusion may be subject to a detailed ALARP assessment.

6.1.1 Monitor and evaluate – Control Measure Options Analysis

6.1.1.1 Alternative Control Measures

Alternative Control Measures considered *Alternative, including potentially more effective and/or novel control measures are evaluated as replacements for an adopted control*					
Option considered	**Environmental consideration**	**Feasibility**	**Approximate Cost**	**Assessment conclusions**	**Implemented**
Aerostat (or similar inflatable observation platform) for localised aerial surveillance.	Lead time to Aerostat surveillance is disproportionate to the environmental benefit. The system also provides a very limited field of visibility around the vessel it is deployed from.	Long lead time to access (>10 days). Each system would require an operator to interpret data and direct vessels accordingly. Requires multiple systems for shoreline use.	Purchase cost per system is approximately A$300,000.	This option is not adopted as the minimal environmental benefit gained is disproportionate to the cost and complexity of its implementation.	**No**

6.1.1.2 Additional Control Measures

Additional Control Measures considered *Additional control measures are evaluated in terms of them reducing an environmental impact or an environmental risk when added to the existing suite of control measures*					
Option considered	**Environmental consideration**	**Feasibility**	**Approximate Cost**	**Assessment conclusions**	**Implemented**
Additional personnel trained to use systems.	Current arrangement provides an environmental benefit in the availability of trained personnel facilitating access to Monitor and evaluate data used to inform all other response techniques. No improvement required.	Woodside considers no improvement can be made, all personnel in technical roles e.g. intelligence unit are trained and competent on the software systems. Personnel are trained and exercised regularly. Use of the software and systems forms part of regular work assignments and projects.	Cost for training in-house staff would be approximately A$25,000.	This option is not adopted as the current capability meets the need.	**No**
Additional satellite tracking buoys to enable greater area coverage.	Increased capability does not provide an environmental benefit compared to the disproportionate cost in having an additional contract in place.	Tracking buoy on location at manned facility and additional needs are met from Woodside-owned stocks in King Bay Support Facility (KBSF) and Exmouth or can be provided by service provider.	Cost for an additional satellite tracking buoy would be A$200 per day or A$6000 to purchase.	This option is not adopted as the current capability meets the need, but additional units are available if required.	**No**
Additional trained aerial observers.	Current capability meets need. Woodside has access to a pool of trained, competent observers at strategic locations to allow timely and sustainable response. Additional observers are available through current contracts with AMOSC and OSRL.	Aviation standards and guidelines confirm all aircraft crews are competent for their roles. Woodside maintains a pool of trained and competent aerial observers with various home base locations to be called upon at the time of an incident. Regular audits of oil spill response organisations maintain training and competency.	Cost for additional trained aerial observers would be A$2000 per person per day.	This option is not adopted as the current capability meets the need, but additional observers are available via response contractors if required.	**No**

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

6.1.1.3 Improved Control Measures

Improved Control Measures considered *Improved control measures are evaluated for improvements they could bring to the effectiveness of adopted control measures in terms of functionality, availability, reliability, survivability, independence and compatibility*					
Option considered	**Environmental consideration**	**Feasibility**	**Approximate Cost**	**Assessment conclusions**	**Implemented**
Faster turnaround time from modelling contractor.	Improved control measure does not provide an environmental benefit compared to the disproportionate cost in having an additional contract in place.	External contractor on CIMT roster to be called as soon as required. However initial information needs to be gathered by CIMT team to request an accurate model. External contractor has person on call to respond from their own location.	Modelling service with a faster activation time would be achieved via membership of an alternative modelling service at an annual cost of A$50,000 for 24hr access plus an initial A$5000 per modelling run.	This option is not adopted as the minimal environmental benefit gained is disproportionate to the cost and complexity of its implementation.	**No**
Nighttime aerial surveillance.	The risk of undertaking the aerial observations at night is disproportionate to the limited environmental benefit. The images would be of low quality and as such the variable is not adopted.	Flights will only occur when deemed safe by the pilot. The risk of night operations is disproportionate to the benefit gained, as images from sensors (infrared, ultraviolet, etc). will be low quality. Flight time limitations will be adhered to.	No improvement can be made without risk to personnel health and safety and breaching Woodside's Golden Safety Rules.	This option is not adopted as the safety considerations outweigh any environmental benefit gained.	**No**

6.1.2 Selected Control Measures

Following review of alternative, additional and improved control measures as outlined above, the following controls were selected for implementation for the Petroleum Activity.

- alternative – none selected
- additional – none selected
- improved – none selected.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

6.2 Source Control – ALARP Assessment

Woodside has based its response planning on the worst-case credible scenarios (as described in Section 2.2). This would be undertaken via ROV intervention on the well control package or Xmas Tree. This allows barriers to be closed isolating the well.

6.2.1 ROV Intervention

In the case of a subsea hydrocarbon release, the intervention vessel ROV will be available to close either the WCP or Xmas Tree within 12 hours.

There are various failure scenarios that can result in a subsea release. All of these scenarios require failure of separate systems to occur simultaneously. Failure of the vessel and/or ROV in isolation does not result in a release. It is not considered credible to have a failure of the WCP requiring intervention in addition to failure of the vessel or both ROVs.

Where possible, the light well intervention vessel (LWIV) on location would perform inspection activities.

If additional or inspection class ROV support is subsequently required, Woodside would mobilise suitable ROVs via existing frame agreements to undertake inspection activities. Such ROVs would be available for deployment within seven days.

6.2.1.1 Safety Case considerations

Woodside has assessed against the NOPSEMA safety case guidance (NOPSEMA N-09000-GN1661), confirming that vessels conducting subsea intervention operations are not classified as an “associated offshore place” but as a facility and therefore require the appropriate Safety Case arrangements to be in place. In the event of an emergency, Woodside has access to suitable vessels (ISVs) for well intervention through existing frame agreements. The frame agreements for ISV vessels require the vessels to maintain in-force safety case approval covering a range of subsea activities. This would cover the requirement for intervention operations such as subsea manifold installation, maintenance and repair, commissioning, cargo transfer (including bulk liquids) and ROV operations. Therefore, the Safety Case scenario will have no impact on the delivery of the strategy.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

Table 6-1: Safety case revision conditions and assumptions

Case	No safety case revision required	Safety case revision and submission	Safety case revision and scope of validation
Description	Vessel has a safety case in place appropriate for activities.	Vessel has an existing safety case, however, a revision is required.	Vessel has an existing safety case, however, a revision is required plus scope of validation.
Conditions/ assumptions	Assumes that existing vessel safety case covers working under the same conditions or the loss of containment is not severe enough to result in any risk on the sea surface.	Safety case timing assumes vessel selected and crew and available for workshops and safety case studies.	Safety case timing assumes vessel selected and crew and available for workshops and safety case studies.
		Assumes nil scope of validation. This assumes that the vessel for source control allows for working in a hydrocarbon environment and control measures are already in place in the existing safety case.	Validation will be required for new facilities only. The time needed for the validator to complete the review (from the last document received) and prepare validation statement is undetermined. This is not accounted for here as the safety case submission is not dependent on the validation statement, however the safety case acceptance is.
		Assumes safety case preparation is undertaken 24/7.	Assumes safety case preparation is undertaken 24/7.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

6.2.2 Activation/Mobilisation – Control Measure Options Analysis

Alternative, additional and improved options have been identified and assessed against the base capability described in Section 6.2. Those that have been selected for implementation are highlighted in green. Items highlighted in red have been considered and rejected on the basis that they are not feasible, the costs are clearly disproportionate to the environmental benefit, and/or the option is not reasonably practical. Control measures where there is not a clear justification for their inclusion or exclusion may be subject to a detailed ALARP assessment.

6.2.2.1 Alternative Control Measures

Alternative Control Measures considered
Alternative, including potentially more effective and/or novel control measures are evaluated as replacements for an adopted control

Option considered	Environmental consideration	Feasibility	Approximate Cost	Assessment conclusions	Implemented
No reasonably practical alternative control measures identified.					

6.2.2.2 Additional Control Measures

Additional Control Measures considered
Additional control measures are evaluated in terms of them reducing an environmental impact or an environmental risk when added to the existing suite of control measures

Option considered	Environmental consideration	Feasibility	Approximate Cost	Assessment conclusions	Implemented
No reasonably practical additional control measures identified.					

6.2.2.3 Improved Control Measures

Improved Control Measures considered
Improved control measures are evaluated for improvements they could bring to the effectiveness of adopted control measures in terms of functionality, availability, reliability, survivability, independence and compatibility

Option considered	Environmental consideration	Feasibility	Approximate Cost	Assessment conclusions	Implemented
No reasonably practical improved control measures identified.					

6.2.3 Deployment Options Analysis

6.2.3.1 Alternative Control Measures

Alternative Control Measures considered
Alternative, including potentially more effective and/or novel control measures are evaluated as replacements for an adopted control

Option considered	Environmental consideration	Feasibility	Approximate Cost	Assessment conclusions	Implemented
No reasonably practical alternative control measures identified					

6.2.3.2 Additional Control Measures

Additional Control Measures considered
Additional control measures are evaluated in terms of them reducing an environmental impact or an environmental risk when added to the existing suite of control measures

Option considered	Environmental consideration	Feasibility	Approximate Cost	Assessment conclusions	Implemented
Contract in place with Wild Well Control and Oceaneering	Woodside has an agreement in place with Wild Well Control Inc and Oceaneering to provide trained personnel in the event of an incident. This will ensure that competent personnel are available in the shortest possible timeframe.	Having contracts in place to access trained, competent personnel in the event of an incident would reduce mobilization times. This option is considered reasonably practicable.	Minimal cost implications – Woodside has standing contract in place to provide assistance across all activities.	This control measure is adopted as the costs and complexity are not considered disproportionate to any environmental benefit that might be realised.	**Yes**

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

6.2.3.3 Improved Control Measures

Improved Control Measures considered *Improved control measures are evaluated for improvements they could bring to the effectiveness of adopted control measures in terms of functionality, availability, reliability, survivability, independence and compatibility*					
Option considered	**Environmental consideration**	**Feasibility**	**Approximate Cost**	**Assessment conclusions**	**Implemented**
No reasonably practical improved control measures identified.					

6.2.4 Selected Control Measures

Following review of alternative, additional and improved control measures as outlined above, the following controls were selected for implementation for the Petroleum Activity.

- alternative – none selected
- additional – contract in place with Wild Well Control and Oceaneering to supply trained, competent personnel
- improved – none selected.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

6.3 Source Control via Vessel SOPEP – ALARP Assessment

Alternative, additional and improved options have been assessed against the base capability described in Section 5.3. Those that have been selected for implementation are highlighted in green. Items highlighted in red have been considered and rejected on the basis that they are not feasible, the costs are disproportionate to the environmental benefit, and/or the option is not reasonably practical. Control measures where there is not a clear justification for their inclusion or exclusion may be subject to a detailed ALARP assessment.

6.3.1 Source Control via Vessel SOPEP – Control Measure Options Analysis

6.3.1.1 Alternative Control Measures

Alternative Control Measures considered

Alternative control measures including potentially more effective and/or novel control measures are evaluated as replacements for an adopted control

Option considered	Environmental consideration	Feasibility	Approximate Cost	Assessment conclusions	Implemented
No reasonably practical alternative control measures identified					

6.3.1.2 Additional Control Measures

Additional Control Measures considered

Additional control measures are evaluated in terms of them reducing an environmental impact or an environmental risk when added to the existing suite of control measures

Option considered	Environmental consideration	Feasibility	Approximate Cost	Assessment conclusions	Implemented
No reasonably practical additional control measures identified					

6.3.1.3 Improved Control Measures

Improved Control Measures considered

Improved control measures are evaluated for improvements they could bring to the effectiveness of adopted control measures in terms of functionality, availability, reliability, survivability, independence and compatibility

Option considered	Environmental consideration	Feasibility	Approximate Cost	Assessment conclusions	Implemented
No reasonably practical improved control measures identified					

6.3.2 Selected control measures

Following review of alternative, additional and improved control measures, the following controls were selected for implementation for the Petroleum Activity.

- alternative – none selected
- additional – none selected
- improved – none selected.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

6.4 Oiled Wildlife Response – ALARP Assessment

Alternative, additional and improved options have been identified and assessed against the base capability described in Section 5.4. Those that have been selected for implementation are highlighted in green. Items highlighted in red have been considered and rejected on the basis that they are not feasible, the costs are clearly disproportionate to the environmental benefit, and/or the option is not reasonably practical. Control measures where there is not a clear justification for their inclusion or exclusion may be subject to a detailed ALARP assessment.

6.4.1 Existing Capability – Wildlife Response

Woodside's existing level of capability is based on internal and third-party resources that are available 24 hours, 7 days per week. The capability presented below is displayed as ranges to incorporate operational factors such as weather, crew/vessel/aircraft/vehicle location and duties, survey or classification society inspection requirements, overflight/port/quarantine permits and inspections, crew/pilot duty and fatigue hours, refuelling/re-stocking provisions, and other similar logistic and operational limitation that are beyond Woodside's direct control.

6.4.2 Oiled Wildlife Response - Control Measure Options Analysis

6.4.2.1 Alternative Control Measures

Alternative Control Measures considered

Alternative control measures including potentially more effective and/or novel control measures are evaluated as replacements for an adopted control

Option considered	Environmental consideration	Feasibility	Approximate Cost	Assessment conclusions	Implemented
Direct contracts with service providers	This option duplicates the capability accessed through AMOSC and OSRL and would compete for the same resources. Does not provide a significant increase in environmental benefit.	These delivery options provide increased effectiveness through more direct communication and control of specialists. However, no significant net benefit is anticipated.	Duplication of capability – already subscribed to through contracts with AMOSC and OSRL	This option is not adopted as the existing capability meets the need.	**No**

6.4.2.2 Additional Control Measures

Additional Control Measures considered

Additional control measures are evaluated in terms of them reducing an environmental impact or an environmental risk when added to the existing suite of control measures

Option considered	Environmental consideration	Feasibility	Approximate Cost	Assessment conclusions	Implemented
Additional wildlife treatment systems	The selected delivery options provide access to call-off contracts with selected specialist providers. The agreements ensure that these resources can be mobilised to meet the required response objectives, commensurate with the progressive nature of environmental impact and the time available to monitor hydrocarbon plume trajectories. Provides response equipment and personnel by Day 3. The additional cost in having a dedicated oiled wildlife response (equipment and personnel) in place is disproportionate to environmental benefit. These selected delivery options provide capacity to carry out an oiled wildlife response if contact is predicted; and to scale up the response if required to treat widespread contamination. Current capability meets the needs required and there is no additional environmental benefit in adopting the improvements.	Although hydrocarbon contact above wildlife response threshold concentrations (>10 g/m^2) with offshore waters is expected from day one (CS-01), given the low likelihood of such an event occurring and that the current capability meets the need, the cost of implementing measures to reduce the mobilisation time is considered disproportionate to the benefit. Additionally, the remote offshore location of the release site, with no predicted shoreline impact, provides sufficient opportunity for the ongoing monitoring and surveillance operations to inform the scale of the response. Numbers of oiled wildlife are expected to be low in the remote offshore setting of the oiled wildlife response, given the distance from known aggregation areas. Oiled wildlife response capacity would be addressed for open Commonwealth waters through the AMOSC arrangements, as informed by monitor and evaluate. The cost and organisational complexity of this approach is moderate, and the overall delivery effectiveness is high.	Additional wildlife response resources could total A$1,700 per operational site per day.	This option is not adopted as the existing capability meets the need.	**No**
Additional trained wildlife responders	Numbers of oiled wildlife are expected to be low in the remote offshore setting of the oiled wildlife response, given the distance from known aggregation areas. The potential environmental benefit of training additional personnel is expected to be low.	Current numbers meet the needs required and additional personnel are available through existing contracts with oil spill response organisations and environmental panel contractors. Additional equipment and facilities would be required to support ongoing response, depending on the scale of the event and the impact to wildlife and maybe sourced via existing contracts with OSROs. Materials for holding facilities, portable pools, enclosures and rehabilitation areas would be sourced as required.	Additional wildlife response personnel cost A$2,000 per person per day	This option is not adopted as the existing capability meets the need.	**No**

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

6.4.2.3 Improved Control Measures

Improved Control Measures considered *Improved control measures are evaluated for improvements they could bring to the effectiveness of adopted control measures in terms of functionality, availability, reliability, survivability, independence and compatibility*					
Option considered	**Environmental consideration**	**Feasibility**	**Approximate Cost**	**Assessment conclusions**	**Implemented**
Faster mobilisation time for wildlife response	Response time is limited by specialist personnel mobilisation time. Current timing is sufficient for expected first shoreline contact. This control measure provides increased effectiveness through faster mobilisation of specialists. However, no significant net environmental benefit is expected due to shoreline stranding times.	Pre-positioning vessels or equipment would reduce mobilisation time for oiled wildlife response activities. However, given the effectiveness of an oiled wildlife response is expected to be low, an earlier response would provide a marginal increase in environmental benefit.	Wildlife response packages to preposition at vulnerable sites identified through the deterministic modelling cost A$700 per package per day. The cost of having dedicated equipment and personnel available to respond faster is considered disproportionate to the environmental benefit.	This option is not adopted as the existing capability meets the need.	**No**

6.4.3 Selected control measures

Following review of alternative, additional and improved control measures, the following controls were selected for implementation for the Petroleum Activity.

- alternative – none selected
- additional – none selected
- improved – none selected.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

6.5 Waste Management – ALARP Assessment

Alternative, additional and improved options have been identified and assessed against the base capability described in Section 5.5. Those that have been selected for implementation are highlighted in green. Items highlighted in red have been considered and rejected on the basis that they are not feasible, the costs are clearly disproportionate to the environmental benefit, and/or the option is not reasonably practical. Control measures where there is not a clear justification for their inclusion or exclusion may be subject to a detailed ALARP assessment.

6.5.1 Existing Capability – Waste Management

Woodside's exiting level of capability is based on internal and third-party resources that are available 24 hours, 7 days per week. The capability presented below is displayed as ranges to incorporate operational factors such as weather, crew/vessel/aircraft/vehicle location and duties, survey or classification society inspection requirements, overflight/port/quarantine permits and inspections, crew/pilot duty and fatigue hours, refuelling/re-stocking provisions, and other similar logistic and operational limitation that are beyond Woodside's direct control.

6.5.2 Waste Management - Control Measure Options Analysis

6.5.2.1 Alternative Control Measures

Alternative Control Measures considered

Alternative control measures including potentially more effective and/or novel control measures are evaluated as replacements for an adopted control

Option considered	Environmental consideration	Feasibility	Approximate Cost	Assessment conclusions	Implemented
No reasonably practical alternative control measures identified					

6.5.2.2 Additional Control Measures

Additional Control Measures considered

Additional control measures are evaluated in terms of them reducing an environmental impact or an environmental risk when added to the existing suite of control measures

Option considered	Environmental consideration	Feasibility	Approximate Cost	Assessment conclusions	Implemented
Increased waste storage capability	The procurement of waste storage equipment options on the day of the event will allow immediate response and storage of collected waste. The environmental benefit of immediate waste storage is to reduce ecological consequence by safely securing waste, allowing continuous response operations to occur.	Access to Veolia's storage options provides the resources required to store and transport sufficient waste to meet the need. Access to waste contractors existing facilities enables waste to be stockpiled and gradually processed within the regional waste handling facilities. Additional temporary storage equipment is available through existing contract and arrangements with OSRL. Existing arrangements meet identified need for the Petroleum Activity.	Cost for increased waste disposal capability would be approx. A$1,300 per m^3. Cost for increased onshore temporary waste storage capability would be approx. A$40 per unit per day.	This option is not adopted as the existing capability meets the need.	**No**

6.5.2.3 Improved Control Measures

Improved Control Measures considered

Improved control measures are evaluated for improvements they could bring to the effectiveness of adopted control measures in terms of functionality, availability, reliability, survivability, independence and compatibility

Option considered	Environmental consideration	Feasibility	Approximate Cost	Assessment conclusions	Implemented
Faster response time	The access to Veolia waste storage options provides the resources to store and transport waste, permitting the wastes to be stockpiled and gradually processed within the regional waste handling facilities. Bulk transport to Veolia's licensed waste management facilities would be undertaken via controlled-waste-licensed vehicles and in accordance with Environmental Protection (Controlled Waste) Regulations 2004. The environmental benefit from successful waste storage will reduce pressure on the treatment and disposal facilities reducing ecological consequences by safely securing waste. In addition, waste storage and transport will allow continuous response operations to occur. This delivery option would increase known available storage, eliminating the risk of additional resources not being available at the time of the event. However, the environmental benefit of Woodside procuring	Woodside already maintains an equipment stockpile in Exmouth to enable shorter response times to incidents. This stockpile includes temporary waste storage equipment. Woodside has access to stockpiles of waste storage and equipment in Dampier and Exmouth through existing contracts and arrangements.	The incremental benefit of having a dedicated local Woodside owned stockpile of waste equipment and transport is considered minor and cost is considered disproportionate to the benefit gained given lack of shoreline contact.	This option is not adopted as the existing capability meets the need.	**No**

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

	additional waste storage is considered minor as the risk of additional storage not being available at the time of the event is considered low and existing arrangements provide adequate storage to support the response.				

6.5.3 Selected control measures

Following review of alternative, additional and improved control measures as outlined above, the following controls were selected for implementation for the Petroleum Activity.

- alternative – none selected
- additional – none selected
- improved – none selected.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

6.6 Operational and Scientific Monitoring – ALARP Assessment

Alternative, additional and improved options have been identified and assessed against the base capability described in Section 5.6. Those that have been selected for implementation which are highlighted in green. Items highlighted in red have been considered and rejected on the basis that they are not feasible, the costs are clearly disproportionate to the environmental benefit, and/or the option is not reasonably practical. Control measures where there is not a clear justification for their inclusion or exclusion may be subject to a detailed ALARP assessment.

6.6.1 Existing Capability – Operational and Scientific Monitoring

Woodside's existing level of capability is based on internal and third-party resources that are available 24 hours, 7 days per week. The capability presented below is displayed as ranges to incorporate operational factors such as weather, crew/ vessel/ aircraft/ vehicle location and duties, survey or classification society inspection requirements, overflight/ port/ quarantine permits and inspections, crew/ pilot duty and fatigue hours, refuelling/ re-stocking provisions, and other similar logistic and operational limitation that are beyond Woodside's direct control.

6.6.2 Operational and Scientific Monitoring – Control Measure Options Analysis

6.6.2.1 Alternative Control Measures

Alternative Control Measures considered *Alternative control measures including potentially more effective and/or novel control measures are evaluated as replacements for an adopted control*					
Option considered	**Environmental consideration**	**Feasibility**	**Approximate Cost**	**Assessment conclusions**	**Implemented**
Dedicated contracted OSM vessel (exclusive to Woodside)	Would provide marginally faster mobilisation time of first-strike monitoring resources. However, the timescale difference would be limited when compared to the availability of in-field support vessels which are equipped with water quality sampling equipment, meaning it would result in very minor to no environmental benefit.	Chartering and equipping additional vessels on standby for operational and scientific monitoring has been considered. The option is reasonably practicable but the sacrifice (charter costs and organisational complexity) is significant, particularly when existing contracted support vessels can be equipped with water quality sampling equipment. Additionally, vessels are not the limiting factor in deployment times, as the majority of operational and scientific monitoring components require trained specialists, who can take >72 hours to mobilise.	The cost and organisational complexity of contracting a dedicated response vessel is considered disproportionate to the marginal environmental benefit by adopting these delivery options.	This control measure is not adopted as the costs and complexity are considered disproportionate to any environmental benefit that might be realised.	**No**

6.6.2.2 Additional control measures

Additional Control Measures considered *Additional control measures are evaluated in terms of them reducing an environmental impact or an environmental risk when added to the existing suite of control measures*					
Option considered	**Environmental consideration**	**Feasibility**	**Approximate Cost**	**Assessment conclusions**	**Implemented**
Pre-position a team of trained scientific monitoring personnel on standby in Dampier	Pre-positioning a team of trained scientific monitoring personnel closer to the spill location would result in quicker mobilisation times for one or two priority OMPs or SMPs to be implemented.	A trained team of scientific monitoring personnel positioned in Dampier could result in a more rapid deployment of initial monitoring. However, this option is reliant on suitable vessels being readily available in Dampier and not requiring relocation from nearby ports or adjacent offshore locations.	The costs of having a small team of trained scientific monitoring personnel available on standby in Dampier would be in excess of $3-4M / annum and would be an associated cost to the activity whether there was a spill or not.	The cost of maintaining a team of trained scientific monitoring personnel on standby in Dampier is considered disproportionate, as multiple teams of trained personnel are required to implement multiple OMPs and SMPs. It is considered more cost effective and feasible to pre-position first strike sampling kits on support vessels (see below).	**No**
Contract additional OSM Service Providers to increase availability of monitoring personnel in the first 2 weeks of the spill	The availability of additional monitoring personnel could theoretically increase the number of receptors and locations able to be monitored, however, the ability to deploy personnel would be subject to a range of feasibility considerations.	This option has been considered and evaluated; however, it has been discounted on the basis that deploying a significantly larger number of monitoring teams concurrently with response operations would introduce additional safety, environmental, and operational risks. The current resource assessment In Section C.4 indicates that up to 17 monitoring teams may be required during the initial two weeks of the response. Expanding this effort further by engaging additional contracted monitoring teams would likely result in increased simultaneous operations (SIMOPs), elevating the potential for vessel interactions, collision risks, anchoring impacts, and waste discharges, thereby increasing the overall risk profile. To ensure risk remains ALARP, a staged and scalable approach to resourcing has been adopted. Should additional monitoring capacity be required from week 3 onwards, this will be identified early through ongoing review of monitor	Cost to contract an additional OSM Service Provider.	The option to contract an additional OSM Service Provider to increase the number of contracted monitoring teams during the initial stages of the spill response has been assessed and found not to be reasonably practicable due to the elevated safety and environmental risks associated with SIMOPs, including vessel collisions, anchoring impacts, and waste discharges. These risks outweigh the marginal benefit of increased early-stage monitoring coverage, particularly given the scale of the existing response and monitoring deployment already planned.	**No**

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

		and evaluate activities and existing monitoring efforts. Woodside will activate additional resourcing via its existing contract with the OSM Services Provider, thereby ensuring a streamlined and controlled expansion of effort. By this stage of the response, operational response activities are expected to have stabilised, reducing the likelihood and severity of SIMOPs-related risks. In addition, efficiencies may be gained by reallocating existing monitoring teams to other priority receptors where monitoring is still required, particularly in cases where termination criteria have been met at initial locations. This dynamic resourcing approach ensures that additional personnel are only deployed when necessary, thereby supporting both environmental and safety performance outcomes and maintaining ALARP principles throughout the monitoring program.			
Purchase initial water quality / hydrocarbon sampling kits for pre-positioning on nearby support vessels and develop technical procedure for sample collection	The availability of initial water quality / hydrocarbon sampling kits on nearby support vessels (and an accompanying technical procedure for sample collection) will provide an opportunity for more rapid initial measurements of hydrocarbon properties and concentrations. This information will provide important initial situational awareness information that will aid decision making in both monitoring and response efforts.	This control measure will improve the availability and timeframe for initial water quality sampling.	Implementing this additional control measure will involve time and effort to source and supply initial sampling kits to the selected supply vessels. There will also be employee time involved in developing and conducting training to vessel crews on the technical procedure for sample collection.	Adoption of this control measure will provide an additional and quicker opportunity for initial water quality sampling, resulting in improved situational awareness for decision making in monitoring and response teams.	**Yes**
Modify Woodside Aerial Surveillance Observer Log to enable observers to record marine fauna sightings (presence and type of fauna)	Initial aerial surveillance provides important information for decision making in response operations, but can also provide important initial environmental monitoring data. Amending the Woodside Aerial Surveillance Observer Log to include the ability to report on location, presence and type of fauna could assist in a more rapid, effective deployment of specialised OMP teams for Marine Fauna Assessment and Oiled Wildlife Response.	This control measure is considered reasonably practicable to implement.	Cost to modify the Aerial Surveillance Observer Log is minimal and is associated with time and effort of existing employees.	Adoption of this control measure is considered to be beneficial as it could assist in more effective and efficient deployment of fauna monitoring and response efforts.	**Yes**
Conduct periodical review of existing baseline data sources across receptors predicted to be contacted within 7 days at the low thresholds and a probability ≥10%	This ensures that receptors with deficient baseline data are identified. This a consideration for first-strike monitoring prioritisation and the finalisation of each SMP design	This control measure is considered reasonably practicable to implement.	Cost of contract with Service Provider.	Understanding the presence or absence, suitability and quality of baseline data for receptors predicted to be contacted within 7 days, at a probability ≥ 10%, is an important preparatory measure. Understanding which receptors have insufficient baseline data will help quickly guide monitoring prioritisation and the finalisation of each SMP design and whether there is a need to include alternative designs.	**Yes**

6.6.2.3 Improved Control Measures considered

Improved Control Measures considered

Improved control measures, including potentially more effective and/or novel control measures are evaluated as replacements for an adopted control

Option considered	Environmental consideration	Feasibility	Approximate Cost	Assessment conclusions	Implemented
Adoption of the OSRL OSM Supplementary Service Agreement for OSM capability provision	A Joint Industry capability provision has considerable benefits, including an improvement to industry OSM standards; improved reliability in accessing specialist personnel; efficiencies and capability growth associated with shared testing and exercising; and greater depth in Monitoring Service Provider (MSP) capability, with a centralised contract coordinating multiple consultancies and MSPs.	This control measure has already been developed by Industry and is considered reasonably practicable to implement.	Cost of annual subscription to OSRL OSM Supplementary Service Agreement	Adopting this control measure involves additional costs, but the benefits of a Joint Industry OSM capability provision outweighs the costs and therefore this additional measure has been accepted.	**Yes**
Determine the required specifications for suitable monitoring	Understanding vessel specification requirements for OSM at priority locations will result in quicker mobilisation times, and more effective monitoring, as	This control measure is considered reasonably practicable to implement.	Cost to determine vessel specifications is minimal and is associated with time and effort of existing employees.	This control measure would result in the correct vessels being mobilised for monitoring personnel and result in quicker implementation of monitoring.	**Yes**

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

vessels, including specialised equipment for OMPs and SMPs (i.e. hiab) and the requirement of shallow draft vessels to access offshore islands and priority monitoring areas	correctly equipped vessels will be made available at the commencement the monitoring effort.				

6.6.3 Selected Control Measures

Following review of alternative, additional and improved control measures as outlined above, the following controls were selected for implementation for the Petroleum Activity:

- alternative – none selected
- additional
  - purchase water quality/ hydrocarbon sampling kits for pre-positioning on nearby support vessels and develop technical procedure for sample collection
  - modify Woodside Aerial Surveillance Observer Log to enable observers to record marine fauna sightings (presence and type of fauna)
  - conduct periodical review of existing baseline data sources for receptors predicted to be contacted within 7 days, at the low thresholds and a probability ≥ 10%.
- improved
  - adoption of the OSRL OSM Supplementary Service Agreement for OSM capability provision
  - determine the required specifications for suitable monitoring vessels, including specialised equipment for OMPs and SMPs (i.e. hiab) and the requirement of shallow draft vessels to access offshore islands and priority monitoring areas.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

6.6.4 ALARP and Acceptability Summary

ALARP and Acceptability Summary		
Operational and Scientific Monitoring		
ALARP Summary	X	Known, reasonably practicable control measures have been adopted
	X	Three additional and two improved control measures have been adopted.
	X	No other reasonably practical additional, alternative, and/or improved control measure exists
	The resulting operational and scientific monitoring capability has been assessed against the credible spill scenarios. The range of techniques provide an ongoing approach to monitoring operations to assess and evaluate the scale and extent of impacts. Known, reasonably practicable control measures have been adopted with the cost and organisational complexity of these options determined to be Moderate and the overall delivery effectiveness considered Medium. The operational and scientific monitoring's main objectives can be met, with the addition of three additional and two improved control measures to provide further benefit.	
Acceptability Summary	• The control measures selected for implementation manage the potential impacts and risks to ALARP. • In the event of a hydrocarbon spill for the Petroleum Activity, the control measures selected, meet or exceed the requirements of Woodside Management System and industry best-practice. • Operational and scientific monitoring control and activities are compliant with relevant environmental legislation and regulations, including the EPBC Act. • Throughout the Petroleum Activity, relevant Australian standards and codes of practice will be followed to evaluate the impacts from a loss of containment event. • Stakeholder consultation undertaken for the Petroleum Activity did not receive feedback regarding concerns for Scientific Monitoring activities in response to a hydrocarbon spill. • The level of impact and risk to the environment has been considered with regards to the principles of Ecologically Sustainable Development (ESD); and risks and impacts from a range of identified scenarios were assessed in detail. The control measures described consider the conservation of biological and ecological diversity, through both the selection of control measures and the management of their performance. The control measures have been developed to account for credible case scenarios, and uncertainty has not been used as a reason for postponing control measures.	
On the basis from the ALARP and acceptability summary as presented above and in Section 6 of the EP Woodside considers the adopted controls discussed manage the impacts and risks associated with implementing operational and scientific monitoring activities to a level that is ALARP and acceptable.		

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

7 ENVIRONMENTAL RISK ASSESSMENT OF SELECTED RESPONSE TECHNIQUES

The implementation of response techniques may modify the impacts and risks identified in the EP and response activities can introduce additional impacts and risks from response operations themselves. Therefore, it is necessary to complete an assessment to ensure these impacts and risks have been considered and specific measures are put in place to continually review and manage these further impacts and risks to ALARP and Acceptable levels. A simplified assessment process has been used to complete this task which covers the identification, analysis, evaluation and treatment of impacts and risks introduced by responding to the event.

7.1 Identification of impacts and risks from implementing response techniques

Each of the control measures can modify the impacts and risks identified in the EP. These impacts and risks have been previously assessed within the scope of the EP. Refer to the EP for details regarding how these risks are being managed. They are not discussed further in this document.

- Atmospheric emissions
- Routine and non-routine discharges
- Physical presence, proximity to other vessels (shipping and fisheries)
- Routine acoustic emissions vessels
- Lighting for night work/navigational safety
- Invasive marine species
- Collision with marine fauna
- Disturbance to Seabed.

Additional impacts and risks associated with the control measures not included within the scope of the EP include:

- Vessel operations and anchoring
- Additional stress or injury caused to wildlife
- Secondary contamination from the management of waste.

7.2 Analysis of impacts and risks from implementing response techniques

The table below compares the adopted control measures for this activity against the environmental values that can be affected when they are implemented.

Table 7-1: Analysis of risks and impacts

	Environmental Value						
	Soil and Groundwater	Marine Sediment Quality	Water Quality	Air Quality	Ecosystems/ Habitat	Species	Socio-Economic
Monitor and evaluate	✓	✓	✓		✓	✓	
Source control		✓	✓	✓	✓	✓	✓
Oiled wildlife					✓	✓	
Operational and scientific monitoring	✓	✓	✓	✓	✓	✓	✓
Waste management	✓		✓		✓	✓	✓

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

7.3 Evaluation of impacts and risks from implementing response techniques

Vessel operations and anchoring

Typical booms used in containment and recovery operations are designed to float, meaning that fauna capable of diving, such as cetaceans, marine turtles and sea snakes can readily avoid contact with the boom. Impacts to species that inhabit the water column such as sharks, rays and fish are not expected. Additionally, some fauna, such as cetaceans, are likely to detect and avoid the spill area, and are not expected to be present in the proximity of containment and recovery operations.

During the implementation of response techniques, where water depths allow, it is possible that response vessels will be required to anchor (e.g. during shoreline surveys). The use of vessel anchoring will be minimal and likely to occur when the impacted shoreline is inaccessible via road. Anchoring in the nearshore environment of sensitive receptor locations will have the potential to impact coral reef, seagrass beds and other benthic communities in these areas. Recovery of benthic communities from anchor damage depends on the size of anchor and frequency of anchoring. Impacts would be highly localised (restricted to the footprint of the vessel anchor and chain) and temporary, with full recovery expected.

Waste generation

Implementing the selected response techniques will result in the generation of the following waste streams that will require management and disposal:

- Liquids (recovered oil/water mixture), recovered from oiled wildlife response operations
- Semi-solids/solids (oily solids), collected during oiled wildlife response operations
- Debris (e.g. seaweed, sand, woods, plastics), collected during and oiled wildlife response operations.

If not managed and disposed of correctly, wastes generated during the response have the potential for secondary contamination similar to that described above, impacts to wildlife through contact with or ingestion of waste materials and contamination risks if not disposed of correctly onshore.

Additional stress or injury caused to wildlife

Additional stress or injury to wildlife could be caused through the following phases of a response:

- Capturing wildlife
- Transporting wildlife
- Stabilisation of wildlife
- Cleaning and rinsing of oiled wildlife
- Rehabilitation (e.g. diet, cage size, housing density)
- Release of treated wildlife

Inefficient capture techniques have the potential to cause undue stress, exhaustion or injury to wildlife, additionally pre-emptive capture could cause undue stress and impacts to wildlife when there are uncertainties in the forecast trajectory of the spill. During the transportation and stabilisation phases there is the potential for additional thermoregulation stress on captured wildlife. Additionally, during the cleaning process, it is important personnel undertaking the tasks are familiar with the relevant techniques to ensure that further injury and the removal of water proofing feathers are managed and mitigated. Finally, during the release phase it's important that wildlife is not released back into a contaminated environment.

7.4 Treatment of impacts and risks from implementing response techniques

In respect of the impacts and risks assessed the following treatment measures have been adopted. It must be recognised that this environmental assessment is seeking to identify how to maintain the level of impact and risks at levels that are ALARP and of an acceptable level rather than exploring further impact and risk reduction. It is for this reason that the treatment measures identified in this assessment will be captured in Operational Plans, Tactical Response Plans, and/or First Strike Plans.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

Vessel operations and access in the nearshore environment

- If vessels are required for access, anchoring locations will be selected to minimise disturbance to benthic primary producer habitats. Where existing fixed anchoring points are not available, locations will be selected to minimise impact to nearshore benthic environments with a preference for areas of sandy seabed where they can be identified (Performance Standard (PS) 8.2).
- Where existing fixed anchoring points are not available, locations will be selected to minimise impact to nearshore benthic environments with a preference for areas of sandy seabed where they can be identified (PS 8.3).

Waste generation

- Teams will segregate liquid and solid wastes at the earliest opportunity (PS 15.1).

Additional stress or injury caused to wildlife

- Operations conducted with advice from the DBCA Oiled Wildlife Advisor and in accordance with the processes and methodologies described in the WA OWRP and the relevant regional plan (PS 13.1)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

8 ALARP CONCLUSION

An analysis of alternative, additional and improved control measures has been undertaken to determine their reasonableness and practicability. The tables in Section 6 document the considerations made in this evaluation. Where the costs of an alternative, additional, or improved control measure have been determined to be clearly disproportionate to the environmental benefit gained from its adoption it has been rejected. Where this is not considered to be the case the control measure has been adopted.

The risks from a hydrocarbon spill have been reduced to ALARP because:

- Woodside has a significant hydrocarbon spill response capability to respond to the WCCS through the control measures identified.
- New and modified impacts and risks associated with implementing response techniques have been considered and will not increase the risks associated with the activity.
- A consideration of alternative, additional, and improved control measures identified any other control measures that delivered proportionate environmental benefit compared to the cost of adoption for this activity ensuring that:
  - Known, reasonably practicable control measures have been adopted.
  - No additional, reasonably practicable alternative and/or improved control measures would provide further environmental benefit.
  - No reasonably practical additional, alternative, and/or improved control measure exists.
- A structured process for considering alternative, additional, and improved control measures was completed for each control measure.
- The evaluation was undertaken based on the outputs of the WCCS so that the capability in place is sufficient for all other scenario from this activity.
- The likelihood of the WCCS spill has been ignored in evaluating what was reasonably practicable.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

9 ACCEPTABILITY CONCLUSION

Following the ALARP evaluation process, Woodside deems the hydrocarbon spill risks and impacts have been reduced to an acceptable level by meeting all of the following criteria:

- Techniques are consistent with Woodside's processes and relevant internal requirements including policies, culture, processes, standards, structures and systems.
- Levels of risk/ impact are deemed acceptable by relevant persons/ organisations are aligned with the uniqueness of, and/or the level of protection assigned to the environment, its sensitivity to pressures introduced by the activity, and the proximity of activities to sensitive receptors, and have been aligned with Part 3 of the EPBC Act.
- Selected control measures meet requirements of legislation and conventions to which Australia is a signatory (e.g. MARPOL, the World Heritage Convention, the Ramsar Convention, and the Biodiversity Convention etc.). In addition to these, other non-legislative requirements met include:
  - Australian IUCN reserve management principles for Commonwealth marine protected areas and bioregional marine plans.
  - National Water Quality Management Strategy and supporting guidelines for marine water quality.
  - Conditions of approval set under other legislation.
  - National and international requirements for managing pollution from ships.
  - National biosecurity requirements.
- Industry standards, best practices and widely adopted standards and other published materials have been used and referenced when defining acceptable levels. Where these are inconsistent with mandatory/ legislative regulations, explanation has been provided for the proposed deviation. Any deviation produces the same or a better level of environmental performance (or outcome).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

10 REFERENCES

Allen, A. and D. Dale. 1996. Computerized Mission Planners: Useful tools for the planning and implementation of oil spill response operations. Proceedings, “Prevention is the Key: A Symposium on Oil Spill Prevention and Readiness,” Valdez, AK, Oct. 8–11, 1996, 24 pp.

Australian Maritime Safety Authority (2014) ‘Identification of Oil on Water – Aerial Observation and Identification Guide’. Available at: https://www.amsa.gov.au/sites/default/files/2014-01-mp-amsa22-identification-oil-on-water.pdf [accessed 11 May 2026]

Australian Maritime Safety Authority. The National Plan Oil Spill Control Agents List. Available from: https://www.amsa.gov.au/marine-environment/pollution-response/register-oil-spill-control-agents [Accessed 10 April 2026]

Australian Petroleum Production & Exploration Association (APPEA) [now Australian Energy Producers (AEP)], 2021. Joint Industry Operational and Scientific Monitoring Plan Framework. https://energyproducers.au/hubfs/Joint%20Industry%20OSM%20Framework%20Rev%20D%2012032021.pdf [accessed 10 April 2026]

Department of Biodiversity, Conservation and Attractions, Department of Transport and Australian Marine Oil Spill Centre, 2022a. Western Australia Oiled Wildlife Response Plan for Maritime Environmental Emergencies. Available at: https://www.dbca.wa.gov.au/media/1887/download [accessed 10 April 2026]

Department of Biodiversity, Conservation and Attractions, Department of Transport and Australian Marine Oil Spill Centre, 2022b. Western Australia Oiled Wildlife Response Manual. Available at: https://www.dbca.wa.gov.au/media/1886/download [accessed 10 April 2026]

Edwards v National Coal Board, 1949. 1 All ER 743 CA

European Maritime Safety Agency, 2012. Manual on the Applicability of Oil Spill Dispersants, Version 2, p.57.

French-McCay, D.P. (2002), Development and application of an oil toxicity and exposure model, OilToxEx. Environmental Toxicology and Chemistry, 21: 2080-2094. https://doi.org/10.1002/etc.5620211011 [accessed 10 April 2026]

French-McCay, D.P. 2003. Development and application of damage assessment modeling: Example assessment for the North Cape oil spill. Mar. Pollut. Bull. 47(9-12), 341-359.

French-McCay, D.P. 2004. Oil spill impact modeling: development and validation. Environ. Toxicol. Chem. 23(10), 2441-2456.

French, D., Reed, M., Jayko, K., Feng, S., Rines, H., Pavignano, S.1996. The CERCLA Type A Natural Resource Damage Assessment Model for Coastal and Marine Environments (NRDAM/CME), Technical Documentation, Vol. I - Model Description, Final Report. Office of Environmental Policy and Compliance, U.S. Department of the Interior. Washington, D.C.: Contract No. 14-0001-91-C-11

French, D.P., H. Rines and P. Masciangioli. 1997. Validation of an Orimulsion spill fates model using observations from field test spills. In: Proceedings of the 20th AMOP Technical Seminar, Environment and Climate Change Canada, Ottawa, ON, Canada, 20, 933-961.

French, D.P. and H. Rines. 1997. Validation and use of spill impact modeling for impact assessment. International Oil Spill Conference Proceedings, Vol. 1997, No. 1, pp. 829-834. [https://doi.org/10.7901/2169-3358-1997-1-829]

French-McCay, D.P. and J.J. Rowe. 2004. Evaluation of bird impacts in historical oil spill cases using the SIMAP oil spill model. In Proceedings of the 27th AMOP Technical Seminar, Environment and Climate Change Canada, Ottawa, ON, Canada, 27, 421-452.

French-McCay, D.P, C. Mueller, K. Jayko, B. Longval, M. Schroeder, J.R. Payne, E. Terrill, M. Carter, M. Otero, S. Y. Kim, W. Nordhausen, M. Lampinen, and C. Ohlmann, 2007. Evaluation of Field-Collected Data Measuring Fluorescein Dye Movements and Dispersion for Dispersed Oil Transport Modeling. In: Proceedings of the 30th Arctic and Marine Oil Spill Program (AMOP) Technical Seminar, Emergencies Science Division, Environment Canada, Ottawa, ON, Canada, pp.713-754.

French McCay, D.P, K. Jayko, Z. Li, M. Horn, Y. Kim, T. Isaji, D. Crowley, M. Spaulding, L. Decker, C. Turner, S. Zamorski, J. Fontenault, R. Shmookler, and J.J. Rowe. 2015. Technical Reports for Deepwater

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

Horizon Water Column Injury Assessment – WC_TR14: Modeling Oil Fate and Exposure Concentrations in the Deepwater Plume and Cone of Rising Oil Resulting from the Deepwater Horizon Oil Spill. DWH NRDA Water Column Technical Working Group Report. Prepared for National Oceanic and Atmospheric Administration by RPS ASA, South Kingstown, RI, USA. September 29, 2015. Administrative Record no. DWH-AR0285776.pdf [https://www.doi.gov/deepwaterhorizon/adminrecord]

French-McCay, D.P, Z. Li, M. Horn, D. Crowley, M. Spaulding, D. Mendelsohn, and C. Turner. 2016. Modeling oil fate and subsurface exposure concentrations from the Deepwater Horizon oil spill. In: Proceedings of the 39th AMOP Technical Seminar, Environment and Climate Change Canada, Ottawa, ON, Canada, 39, 115-150.

French-McCay D (2026) 'Considerations for Development of Entrained Oil Thresholds for Oil Spill Risk Assessments. RPS Ocean Science. Australian Energy Producers. Available at: Oil-in-Water Threshold Review_French-McCay-2026Mar18.pdf [accessed on 11 May 2026].

IPIECA, 2015, Dispersants: surface application, IOGP Report 532, p.43.

ITOPF, 2011. Fate of Marine Oil Spills, Technical Information Paper #2.

ITOPF, 2014a, Use of Dispersants to Treat Oil Spills, Technical Information Paper #4, p. 7.

ITOPF, 2014b, Aerial Observation of marine oil spills, Technical Information Paper #1, p. 5

National Oceanic and Atmospheric Administration (NOAA) (2013) Characteristics of Response Strategies: A Guide for Spill Response Planning in Marine Environments, 2013, p.19 and p24.

National Offshore Petroleum Safety and Environmental Management Authority. 2022. ALARP, Guidance Note N-04300-GN0166, Perth, WA.

National Offshore Petroleum Safety and Environmental Management Authority. 2026. Oil Pollution Risk Management, Guidance Note N-04750-GN1488 A382148, Perth, WA.

Payne, J.R., E. Terrill, M. Carter, M. Otero, W. Middleton, A. Chen, D. French-McCay, C. Mueller, K. Jayko, W. Nordhausen, R. Lewis, M. Lampinen, T. Evans, C. Ohlmann, G.L. Via, H. Ruiz-Santana, M. Maly, B. Willoughby, C. Varela, P. Lynch and P. Sanchez, (2007). Evaluation of Field-Collected Drifter and Subsurface Fluorescein Dye Concentration Data and Comparisons to High Frequency Radar Surface Current Mapping Data for Dispersed Oil Transport Modeling. In: Proceedings of the Thirtieth Arctic and Marine Oil Spill Program (AMOP) Technical Seminar, Emergencies Science Division, Environment Canada, Ottawa, ON, pp. 681-711.

Spaulding, M.S., D. Mendelsohn, D. Crowley, Z. Li, and A. Bird (2015). Draft Technical Reports for Deepwater Horizon Water Column Injury Assessment: WC_TR.13: Application of OILMAP DEEP to the Deepwater Horizon Blowout. DWH NRDA Water Column Technical Working Group Report. Prepared for National Oceanic and Atmospheric Administration by RPS ASA, South Kingstown, RI 02879. Administrative Record no. DWH-AR0285366

Spence, A, McTaggart, A (2018) Defining response capability: effectiveness, limitations and determining ALARP. Interspill Conference, London 2018.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

11 GLOSSARY AND ABBREVIATIONS

Term	Description / Definition
~	Approximately
<, ≤	Less than, less than or equal to
>, ≥	Greater then, greater than or equal to
°C	Degrees Celsius
AEP	Australian Energy Producers (formerly Australian Petroleum Production and Exploration Association [APPEA]; from 13 September 2023)
ALARP	As low as reasonably practicable; Demonstration through reasoned and supported arguments that there are no other practicable options that could reasonably be adopted to reduce risks further.
AMOP	Arctic and Marine Oil Spill Program
AMOSC	Australian Marine Oil Spill Centre
AMSA	Australian Maritime Safety Authority
APPEA	Australian Petroleum Production & Exploration Association (now Australian Energy Producers (AEP); from 13 September 2023)
Availability	The availability of a control measure is the percentage of time that it is capable of performing its function (operating time plus standby time) divided by the total period (whether in service or not). In other words, it is the probability that the control has not failed or is undergoing a maintenance or repair function when it needs to be used.
BAOAC	Bonn Agreement Oil Appearance Code
BC Act	Western Australian Biodiversity Conservation Act 2016
BIA	Biologically Important Area
BIP	Bridging Implementation Plan
BOP	Blowout Preventer
BP	Boiling point
CEM	Crisis and Emergency Management
CERCLA	United States Comprehensive Environmental Response, Compensation, and Liability Act
CIMT	Corporate Incident Management Team (Level 2 incidents)
CMT	Crisis Management Team (Level 3 incidents)
Control	The means by which risk from events is eliminated or minimised.
Control effectiveness	A measure of how well the control measures perform their required function.
Control measure (risk control measure)	The features that eliminate, prevent, reduce or mitigate the risk to environment associated with Petroleum Activity.
COP	Common Operating Picture
Credible spill scenario	A spill considered by Woodside as representative of maximum volume and characteristics of a spill that could occur as part of the Petroleum Activity.
CS	Credible scenario
cSt	Centistokes
DBCA	Western Australia Department of Biodiversity, Conservation and Attractions
DTMI	Western Australia Department of Transport and Major Infrastructure
DWH	Deepwater Horizon

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

Term	Description / Definition
EMBA	Environment that May Be Affected. The summary of quantitative modelling where the marine environment could be exposed to hydrocarbons levels exceeding hydrocarbon threshold concentrations.
EMSA	European Maritime Safety Agency
Environment Regulations	Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023
EP	Environment Plan
EPBC Act	Commonwealth Environment Protection and Biodiversity Conservation Act 1999
ESI	Environmental Sensitivity Index
FSP	First Strike Plan
ft	Feet (non-metric distance measurement)
GPGT	Geophysical and geotechnical
HSE	Health, safety and environment
HSP	Hydrocarbon Spill Preparedness
HVLP	High volume low pressure
IAP	Incident Action Plan
IC	Incident Commander
IMO	International Maritime Organization
IMS	Incident Management System
IMT	Incident Management Team (Level 1 incidents)
Incident	An event where a release of energy resulted in or had (with) the potential to cause injury, ill health, damage to the environment, damage to equipment or assets or company reputation.
IPIECA	International Petroleum Industry Environment Conservation Association
ITOPF	International Tanker Owners Pollution Federation
IUCN	International Union for Conservation of Nature
KBSF	King Bay Supply Facility
KEF	Key Ecological Feature
KGP	Karratha Gas Plant
km	Kilometre
LWI	Light Well Intervention
m	Metre
MARPOL	The International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. Also known as MARPOL 73/78.
MDO	Marine Diesel Oil
MEPC	Marine Environment Protection Committee (part of the IMO)
MGO	Marine Gas Oil
mm	Millimetre
MSA	Master Services Agreement
MSP	Monitoring Service Provider
MSRC	Marine Spill Response Corporation

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

Term	Description / Definition
NEBA	Net Environmental Benefit Analysis
NOAA	National Oceanic and Atmospheric Administration
NOPSEMA	National Offshore Petroleum Safety and Environmental Management Authority (Australia)
NR	Nature Reserve
NRDA	Natural Resource Damage Assessment
OILMAP	Oil Spill Model and Response System
OM	Operational Monitoring
OMP	Operational Monitoring Plan
OPEP	Oil Pollution Emergency Plan
OSCA	Oil Spill Control Agent
OSM	Operational and Scientific Monitoring
OSPRMA	Oil Spill Preparedness and Response Mitigation Assessment
OSRL	Oil Spill Response Limited
OSTM	Oil Spill Trajectory Modelling
OWR	Oiled Wildlife Response
OWRP	Oiled Wildlife Response Plan
Performance outcome	A statement of the overall goal or outcome to be achieved by a control measure
Performance standard	The parameters against which [risk] controls are assessed to ensure they reduce risk to ALARP. A statement of the key requirements (indicators) that the control measure has to achieve in order to perform as intended in relation to its functionality, availability, reliability, survivability and dependencies.
PPA	Priority Protection Area
ppb	Parts per billion
Preparedness	Measures taken before an incident in order to improve the effectiveness of a response
PS	Performance Standard
Reasonably practicable	... a computation ... made by the owner, in which the quantum of risk is placed on one scale and the sacrifice involved in the measures necessary for averting the risk (whether in money, time or trouble) [showing whether or not] that there is a gross disproportion between them ... made by the owner at a point of time anterior to the accident. (Judgement: Edwards v National Coal Board [1949])
Receptor areas	Geographically referenced areas such as bays, islands, coastlines and/or protected area (World Heritage Area [WHA], Commonwealth or State marine reserve or park) containing one or more receptor type.
Receptor Sensitivities	This is a classification scheme to categorise receptor sensitivity to an oil spill. The Environmental Sensitivity Index (ESI) is a numerical classification of the relative sensitivity of a particular environment (particularly different shoreline types) to an oil spill.
Receptors at risk	Physical, biological and social resources identified as at risk from hydrocarbon contact using oil spill modelling predictions.
Regulator	NOPSEMA are the Environment Regulator under the Environment Regulations.
Reliability	The probability that at any point in time a control measure will operate correctly for a further specified length of time.
Response technique	The key priorities and objectives to be achieved by the response plan Measures taken in response to an event to reduce or prevent adverse consequences.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

Term	Description / Definition
ROV	Remotely Operated Vehicle(s)
RPA	Response Protection Area
S&EM	Security and Emergency Management
SCAT	Shoreline Clean-up Assessment Techniques
SCU	Shoreline clean-up
SFRT	Subsea First Response Toolkit
SHP-MEE	State Hazard Plan – Maritime Environmental Emergencies
SIMA	Spill Impact Mitigation and Assessment
SIMAP	Integrated Oil Spill Impact Model System
SIMOPS	Simultaneous operations
SMP	Scientific Monitoring Plan
SOPEP	Shipboard Oil Pollution Emergency Plan
SSDI	Subsea Dispersant Injection
Survivability	Whether or not a control measure is able to survive a potentially damaging event is relevant for all control measures that are required to function after an incident has occurred.
Threshold	Hydrocarbon threshold concentrations applied to the risk assessment to evaluate hydrocarbon spills. These are defined as: surface hydrocarbon concentration – ≥10 g/m^2, dissolved – ≥10 ppb and entrained hydrocarbon concentrations – ≥1,000 ppb.
ToA	Testing of Arrangements
TRP	Tactical Response Plan
UAS	Unmanned Aerial System
UAV	Unmanned Aerial Vehicle
UK	United Kingdom
VOC	Volatile Organic Compound
WA	Western Australia
WAOWRP	WA Oiled Wildlife Response Plan
WCCS	Worst Case Credible Scenario
WCP	Well Control Package
WHA	World Heritage Area
Woodside	Woodside Energy Limited

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

ANNEX A: NET ENVIRONMENTAL BENEFIT ANALYSIS DETAILED OUTCOMES

A NEBA has been conducted to assess the net environmental benefit of different response techniques to selected receptors in the event of an oil spill from the Petroleum Activity for a loss of well containment scenario (Cossack light crude) and a vessel collision scenario (marine diesel oil). The complete list of potential receptor locations within the EMBA for the Petroleum Activity is included in Section 6 of the EP.

The locations utilised for the NEBA were limited to the identified sensitive receptors of the Petroleum Activity identified from modelling (see Section 3 for outline of selection). These include receptors which have potential for the following:

- Surface contact (>50 g/m^2)
- Surface contact (>10 g/m^2 for potential oiled wildlife response)
- Shoreline accumulation (>100 g/m^2)

The detailed NEBA assessment outcomes are shown below. The Okha Light Well Intervention preoperational NEBAs contain the full assessments.

Table A-1: NEBA assessment technique recommendations for Cossack Light Crude from loss of well containment (CS-01)

Receptor	Monitor and evaluate	Containment and recovery	Dispersant application: sub-sea	Dispersant application: > 20 m water depth and > 10 km from shore/reefs	Shoreline protection	Shoreline clean-up (manual)	Shoreline clean-up (mechanical)	Shoreline clean-up (chemical)	Oiled wildlife response	In situ burning	Mechanical dispersion	Source control
Open water	Yes	No	No	No	No	No	No	No	Yes	No	No	Yes

Overall assessment

Sensitive receptor (sites identified in EP)	Monitor and evaluate	Containment and recovery	Dispersant application: sub-sea	Dispersant application: > 20 m water depth and > 10 km from shore/reefs	Shoreline protection	Shoreline clean-up (manual)	Shoreline clean-up (mechanical)	Shoreline clean-up (chemical)	Oiled wildlife response	In situ burning	Mechanical dispersion	Source control
Is this response Practicable?	Yes	No	No	No	No	No	No	No	Yes	No	No	Yes
NEBA identifies response potentially of net environmental benefit?	Yes	No	No	No	No	No	No	No	Yes	No	No	Yes

Table A-2: NEBA assessment technique recommendations for MDO from a vessel collision (CS-03)

Receptor	Monitor and evaluate	Containment and recovery	Dispersant application: sub-sea	Dispersant application: > 20 m water depth and > 10 km from shore/reefs	Shoreline protection	Shoreline clean-up (manual)	Shoreline clean-up (mechanical)	Shoreline clean-up (chemical)	Oiled wildlife response	In situ burning	Mechanical dispersion	Source control
Open ocean Commonwealth waters	Yes	No	N/A	No	No	No	No	No	Yes	No	No	Yes

Overall assessment

Sensitive receptor (sites identified in EP)	Monitor and evaluate	Containment and recovery	Dispersant application: sub-sea	Dispersant application: > 20 m water depth and > 10 km from shore/reefs	Shoreline protection	Shoreline clean-up (manual)	Shoreline clean-up (mechanical)	Shoreline clean-up (chemical)	Oiled wildlife response	In situ burning	Mechanical dispersion	Source control
Is this response Practicable?	Yes	No	N/A	No	No	No	No	No	Yes	No	No	Yes
NEBA identifies response potentially of net environmental benefit?	Yes	No	N/A	No	No	No	No	No	Yes	No	No	Yes

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

NEBA Impact Ranking Classification Guidance

To reduce variability between assessments, the following ranking descriptions have been devised to guide the workshop process:

			Degree of impact[6]	Potential duration of impact	Equivalent Woodside Corporate Risk Matrix Consequence Level
Positive	**3P**	**Major**	Likely to prevent: • behavioural impact to biological receptors • behavioural impact to socio-economic receptors e.g. changes to day-today business operations, public opinion/behaviours (e.g. avoidance of amenities such as beaches) or regulatory designations.	Decrease in duration of impact by > 5 years	N/A
	2P	**Moderate**	Likely to prevent: • significant impact to a single phase of reproductive cycle of biological receptors • detectable financial impact, either directly (e.g. loss of income) or indirectly (e.g. via public perception), for socio-economic receptors.	Decrease in duration of impact by 1–5 years	N/A
	1P	**Minor**	Likely to prevent impacts on: • significant proportion of population or breeding stages of biological receptors • socio-economic receptors such as: – significant impact to the sensitivity of protective designation; or – significant and long-term impact to business/industry.	Decrease in duration of impact by several seasons (< 1 year)	N/A
	0	**Non-mitigated spill impact**	**No detectable difference to unmitigated spill scenario.**		
Negative	**1N**	**Minor**	Likely to result in: • behavioural impact to biological receptors • behavioural impact to socio-economic receptors e.g. changes to day-to-day business operations, public opinion/behaviours (e.g. avoidance of amenities such as beaches), or regulatory designations.	Increase in duration of impact by several seasons (< 1 year)	Increase in risk by one sub-category, without changing category (e.g. Minor (E) to Minor (D))
	2N	**Moderate**	Likely to result in: • significant impact to a single phase of reproductive cycle for biological receptors; or • detectable financial impact, either directly (e.g. loss of income) or indirectly (e.g. via public perception), for socio-economic receptors. This level of negative impact is recoverable and unlikely to result in closure of business/industry in the region.	Increase in duration of impact by 1–5 years	Increase in risk by one category (e.g. Minor (D) to Moderate (C or B))
	3N	**Major**	Likely to result in impacts on: • significant proportion of population or breeding stages of biological receptors • socio-economic receptors resulting in either: – significant impact to the sensitivity of protective designation; or – significant and long-term impact to business/industry.	Increase in duration of impact by > 5 years or unrecoverable	Increase in risk by two categories (e.g. Minor (E) to Major (A))

.

[6] NOTE: the maximum likely impact should be considered; for example, if a spill were to directly impact the behaviour that results in an impact to reproduction and/or the breeding population (such as fish failing to aggregate to spawn), then the score should be a 2 or 3 rather than a 1. Similarly, if a change in behaviour resulted in an increased risk of mortality of a population, then it should be scored as a 2 or 3

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

ANNEX B: MONITOR AND EVALUATE ACTIVATION AND TERMINATION CRITERIA

Table B-1: Monitor and evaluate objectives, triggers and termination criteria

Operational Monitoring Operational Plan	Objectives	Activation triggers	Termination criteria
Predictive Modelling of Hydrocarbons to Assess Resources at Risk	Predictive modelling focuses on the conditions that have prevailed since a spill commenced, as well as those that are forecasted in the short term (1–3 days ahead) and longer term. Predictive modelling utilises computer-based forecasting methods to predict hydrocarbon spill movement and guide the management and execution of spill response operations to maximise the protection of environmental resources at risk. The objectives of predictive modelling are to: • Provide forecasting of the movement and weathering of spilled hydrocarbons • Identify resources that are potentially at risk of contamination • Provide simulations showing the outcome of alternative response options (booming patterns etc.) to inform on-going Net Environmental Benefit Analysis (NEBA) and continually assess the efficacy of available response options in order to reduce risks to ALARP	Predictive modelling will be triggered immediately following a level 2/3 hydrocarbon spill.	The criteria for the termination of predictive modelling are: • The hydrocarbon discharge has ceased and no further surface oil is visible • Response activities have ceased • Hydrocarbon spill modelling (as verified by surveillance observations) predicts no additional natural resources will be impacted
Surveillance and reconnaissance to detect hydrocarbons and resources at risk	Surveillance and reconnaissance aims to provide regular, on-going hydrocarbon spill surveillance throughout a broad region, in the event of a spill. The objectives of surveillance and reconnaissance are: • Verify spill modelling results and recalibrate spill trajectory models. • Understand the behaviour, weathering and fate of surface hydrocarbons. • Identify environmental receptors and locations at risk or contaminated by hydrocarbons. • Inform ongoing Net Environmental Benefit Analysis (NEBA) and continually assess the efficacy of available response options in order to reduce risks to ALARP. • To aid in the subsequent assessment of the short- to long-term impacts and/or recovery of natural resources (assessed in SMPs) by ensuring that the visible cause and effect relationships between the hydrocarbon spill and its impacts to natural resources have been observed and recorded during the operational phase.	Surveillance and reconnaissance will be triggered immediately following a level 2/3 hydrocarbon spill.	The termination triggers for the Surveillance and reconnaissance are: • 72 hours has elapsed since the last confirmed observation of surface hydrocarbons. • Latest hydrocarbon spill modelling results do not predict surface exposures at visible levels.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

Operational Monitoring Operational Plan	Objectives	Activation triggers	Termination criteria
Pre-emptive assessment of sensitive receptors at risk	Pre-emptive shorelines assessment aims to undertake a rapid assessment of the presence, extent and current status of shoreline sensitive receptors prior to contact from the hydrocarbon spill, by providing categorical or semi-quantitative information on the characteristics of resources at risk. The primary objective of pre-emptive shorelines assessment is to confirm understanding of the status and characteristics of environmental resources, predicted by predictive modelling and surveillance, to be at risk, to further assist in making decisions on the selection of appropriate response actions and prioritisation of resources. Indirectly, qualitative/semi-quantitative pre-contact information collected by pre-emptive shorelines assessment on the status of environmental resources may also aid in the verification of environmental baseline data and provide context for the assessment of environmental impacts, as determined through subsequent SMPs. Pre-emptive shorelines assessment would be undertaken in liaison with WA DTMI as the control agency once the oil is in State Waters (if a Level 2/3 incident).	Triggers for commencing pre-emptive shorelines assessment include: • Contact of a sensitive habitat or shoreline is predicted by predictive modelling and surveillance. • The pre-emptive assessment methods can be implemented before contact from hydrocarbons (once a receptor has been contacted by hydrocarbons it will be assessed via SCAT.	The criteria for the termination of pre-emptive shorelines assessment at any given location are: • Locations predicted to be contacted by hydrocarbons have been contacted. • The location has not been contacted by hydrocarbons and is no longer predicted to be contacted by hydrocarbons (resources should be reallocated as appropriate).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

ANNEX C: PETROLEUM ACTIVITY OSM ACTIVITY SPECIFIC REQUIREMENT AND VERIFICATION OF OSM-BIP ADEQUACY

The Woodside OSM-BIP comprehensively presents important information for OSM assessment and implementation, including the process for assessing OSM requirements for each activity. This Annex provides the activity-specific information required for the Okha Light Well Intervention (hereafter referred to as the Petroleum Activity) OSM Assessment, including:

- OSM Planning Area;
- Monitoring priorities;
- Mobilisation and implementation timeframes; and
- Resourcing requirements and capability assessment.

C.1 Determine if the activity OSM Planning Area fits within the Combined OSM Planning Area

The OSM Planning Area for the Petroleum Activity credible spill scenarios (as shown in Figure C - 1) fits within the Combined OSM Planning Area (Figure 2-1 in the OSM-BIP).

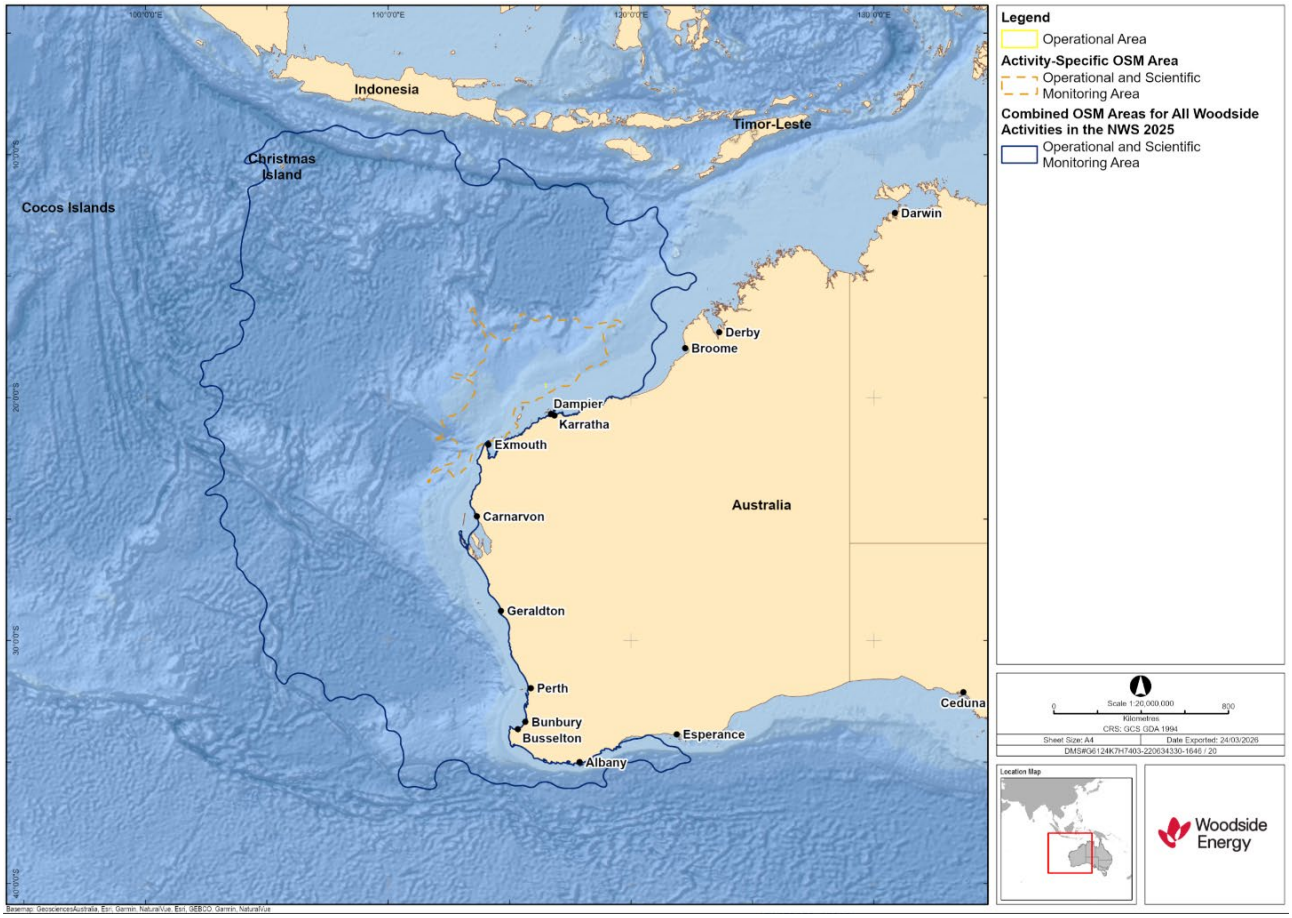


Figure C - 1: Petroleum Activity OSM Planning Area based on the area potentially contacted by the low (below ecological impact) hydrocarbon thresholds in the event of the worst-case credible spill scenarios (CS-01 and CS-03)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

C.2 Determine activity-specific monitoring priorities

Assess spill exposure risk using trajectory modelling

Woodside has reviewed the stochastic oil spill modelling results for the worst-case credible spill scenarios listed in Table 2-1 and as outlined in Section 2.2 of the OSM-BIP, identified receptors contacted at a higher probability of rapid contact. Table C - 1 presents the receptors contacted within 14 days at a probability >10% at the low, medium and high exposure values for dissolved and entrained hydrocarbons. , Contact by floating and shoreline hydrocarbons at the low, medium and high exposure values are included in Table 2-5. The inclusion of entrained hydrocarbons at concentrations greater than 10 ppb is used to denote exposure to hydrocarbons, but does not necessarily imply toxicity. For entrained whole-oil droplets, the toxic fraction is small, as many hydrocarbon constituents remain sequestered and not bioavailable (French-McCay 2026).

Evaluate availability of adequate baseline data

The availability of baseline data may influence monitoring priorities. Section 4 of the OSM-BIP outlines Woodside's baseline review and evaluation process. Using the Marine Environment Baseline Database, Woodside has reviewed baseline data for all of the receptors predicted of being rapidly contacted at a higher probability from Petroleum Activity activities (Table C - 1) to help determine which receptors and key features have insufficient or no baseline data available and should be given a higher monitoring priority.

It is anticipated that some receptors and locations may be impacted before monitoring teams can begin the assessments. Given this constraint, and the limited baseline data at many priority monitoring locations and receptors, scientific monitoring will likely need to use a combination of approaches including gradient analysis, impact versus control comparisons, and lines of evidence methodologies. During a spill, it may be necessary to identify additional unaffected control sites for comparative monitoring where possible. As such, control sites have been factored into capability planning in Section C.4.

Consideration of Key Ecological Features, Biologically Important Areas and transient receptors

A number of broadscale ecological features are located within the OSM Planning Area and have been considered in monitoring prioritisation and OSM capability planning for the Petroleum Activity activities. The following Key Ecological Features (KEFs) (and their distances to the Operational Area) are noted in Table 4-11 of the EP:

- Ancient Coastline at 125 m Depth Contour (overlaps LH-3 Operational Area only)
- Glomar Shoals (7 km east of the Operational Area)
- Continental Slope Demersal Fish Communities (105 km east of the Operational Area)
- Canyons Linking the Cuvier Abyssal Plain and the Cape Range Peninsula (286 km southwest of the Operational Area)
- Commonwealth Waters Adjacent to Ningaloo Reef (344 km southwest of the Operational Area)
- Exmouth Plateau (225 km west of the Operational Area)
- Mermaid Reef and Commonwealth waters surrounding Rowley Shoals (315 km northeast of the Operational Area)

The Ancient Coastline at 125 m Depth Contour KEF overlaps the Petroleum Activity Operational Area, so is at a higher risk of contact with hydrocarbons. All KEFs within the OSM Planning Area are described in detail in Section 4.7 of the EP and are further described in the Woodside's Master Existing Environment (refer to Section 2.2.3 of the EP). This KEF includes subsea receptors therefore, OSM planning and resourcing for this activity includes relevant monitoring requirements, such as water quality, sediment quality, benthic habitats and fish for these features (refer to Table C - 3 and Table C - 8).

The OSM Area also overlaps a number of Biologically Important Areas (BIAs) with protected species potentially occurring in the area, as described in Section 4.6 of the EP and listed in Table C - 3. A number of the BIAs and protected species are located within the geographical extents of other receptors, such as marine turtles within the Montebello Australian Marine Park (AMP), so these BIAs and protected species would automatically be included in the relevant SMPs for that receptor (refer to Table C - 6). Where BIAs, protected species and KEFs are situated away from the monitoring priorities, they will be captured in the Offshore Environs monitoring unit described in Table C - 6.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

Initial Monitoring Priorities

Monitoring prioritisation during the initial stages of a spill should focus on sensitive receptors with the highest risk of adverse consequences and where oil spill modelling predicts high probability of rapid contact. During the initial monitoring response, emphasis will be placed on receptors contacted by floating, shoreline, and dissolved hydrocarbon phases. If a receptor is only contacted by low concentrations of entrained hydrocarbons and not by any other hydrocarbon phase, it will be considered a lower priority during the initial monitoring response.

To further guide monitoring prioritisation in the event of a spill, Woodside has also compared the availability of baseline data against the WA State-based protection prioritisation evaluation rankings. The WA DTMI protection priority rankings were established through the Western Australian Marine Oil Pollution Risk Assessment process. These rankings evaluate each receptor's vulnerability to marine oil spills, considering impacts from both floating and dissolved oil, as shown in Table C - 4. This information is then used to determine the resultant initial monitoring priorities for the activity.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

Table C - 1: Petroleum Activity credible spill scenarios stochastic modelling results for receptors with a probability of contact ≥10% and <14 days

Receptor	Probability (%) entrained oil at ≥10 ppb	Min. arrival time entrained oil ≥10 ppb (days)	Probability (%) entrained oil at ≥1,000 ppb	Min. arrival time entrained oil ≥1,000 ppb (days)	Probability (%) dissolved oil at >10 ppb	Min. arrival time dissolved oil ≥10 ppb (days)	Probability (%) dissolved oil at >50 ppb	Min. arrival time dissolved oil ≥50 ppb (days)	Probability (%) dissolved oil at >300 ppb	Min. arrival time dissolved oil ≥300 ppb (days)
CS-01: 12-hour subsurface release of 550 m^3 of Cossack Light Crude										
Montebello AMP*	18.5	3.04	< 0.5	NC	2	4.38	0.5	4.50	< 0.5	NC
Wilcox Shoal*	17	2.71	< 0.5	NC	1	4.00	0.5	4.08	< 0.5	NC
No Name Shoal*	17.5	3.08	< 0.5	NC	1	3.50	< 0.5	NC	< 0.5	NC
CS-03: 6-hour surface release of 250 m^3 of marine diesel oil										
Montebello AMP	13.5	3.46	<0.5	NC	<0.5	NC	<0.5	NC	NA	NA

NA = not applicable;
NC = no contact

Table C - 2: Baseline data assessment versus SMPs for receptors predicted at being contacted >10% probability and <14 days

Receptor	SM1: Water quality impact	SM2: Sediment quality impact	SM3: Intertidal and coastal habitat	SM4: Seabirds and shorebirds	SM5: Marine megafauna – reptiles[7]	SM5: Marine megafauna – whale sharks, dugong and cetacean	SM6: Benthic habitat	SM7: Marine fish and elasmobranch assemblages	SM8: Fisheries impact	SM9 and 10: Heritage and social impact
Montebello AMP			N/A		Green & hawksbill turtle	Whale sharks & pygmy blue whales				
					Sea snakes	Other species				
Reefs, shoals and banks			NA							
Key										
	Comprehensive baseline data or ongoing monitoring collected within the last 5 years. Data align with Joint Industry SMP parameters and methods, cover required species/communities and span the necessary spatial extent.									
	Historical data (>5 years old) that remains of value, or some current but not extensive baseline data. Caveat: Additional relevant data may exist but be unknown and therefore not included in the assessment.									
	No baseline data available, or existing data are inadequate in quality, scope, or relevance. Caveat: Additional relevant data may exist but be unknown and therefore not included in the assessment.									
*	Submerged receptor									
NA	Not applicable as the receptor is submerged.									

[7] For sea turtles, nesting-beach monitoring remains the primary basis for assessing population trends, whereas adult males and non-nesting life-stages (hatchlings at sea, juveniles/sub-adults on foraging grounds) are monitored far less systematically.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

Table C - 3: Receptors contacted within 14 days at a probability >10% versus relevant OMPs and SMPs

Receptor	OM1: Hydrocarbon Characterisation	OM2: Hydrocarbon in Water	OM3: Hydrocarbon in Sediment	OM6: Shoreline Clean-up Assessment	OM5: Rapid Marine Fauna Surveillance	SM1: Water quality impact assessment	SM2: Sediment quality impact assessment	SM3: Intertidal and coastal habitat assessment	SM4: Seabirds and shorebirds	SM5: Marine megafauna assessment- reptiles	SM5: Marine megafauna assessment- whale sharks, dugong and cetacean	SM6: Benthic habitat assessment	SM7: Marine fish and elasmobranch assemblages assessment	SM8: Fisheries impact assessment	SM9 & 10: Heritage and social impact assessment
AMPs															
Montebello AMP	✓	✓	✓	-	✓	✓	✓	-	^	^	^	✓	✓	✓	✓
Reefs, Shoals and Banks	✓	✓	✓	-	✓	✓	✓	-	^	^	^	✓	✓	✓	^
KEFs															
Ancient Coastline at 125 m Depth Contour	-	✓	✓	-	✓	✓	✓	-	^	^	^	✓	-	-	-
BIAs															
Whale shark BIA	-	✓	-	-	✓	✓	-	-	-	-	✓	-	-	-	✓
Wedge-tailed shearwater BIA	-	✓	-	-	✓	✓	✓	-	✓	-	-	-	-	-	-

Key	
✓	It is highly likely that the initiation criteria would be met for the relevant OMP/SMP
^	It is possible that the initiation criteria may or may not be met for the relevant OMP/SMP
-	Not applicable

Table C - 4: Initial monitoring priorities

Receptor	Key sensitivities / values	Relevant key periods	Baseline Priority	DTMI Ranking (Floating oil)	DTMI Ranking (Dissolved oil)	Initial Monitoring Priority
Montebello AMP	**Coral and other subsea benthic primary producers** A prominent seafloor feature in the Marine Park is Tryal Rocks consisting of two close coral reefs. The reefs are emergent at low tide.	Coral spawning: Mar & Oct	High	3	4	High
	Turtles Biologically important internesting, foraging, mating, and nesting habitat for turtles.	Nesting green and flatback turtles: Oct to Mar (hawksbill can nest all year)	High	3	3	Medium
	Birds Biologically important breeding habitat for seabirds.	Species dependant	High	3	2	Medium
	Whale shark Biologically important habitat for whale shark (foraging)	Peak foraging: Mar to Aug Can be present year-round.	High	3	3	Medium
Reefs, shoals and banks	**Coral and other subsea benthic primary producers**	Coral spawning: Mar & Oct	High	3	4	High
	Marine mammals Humpback whale (*Megaptera novaeangliae*) migration area.	Humpback whale migration: Jun to Oct	High	3	2	Medium

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

C.3 Mobilisation and timing of OMP and SMP implementation

Table C - 5 provides a list of OMPs and SMPs relevant to Petroleum Activity activities, as well as indicative timeframes for mobilisation of each OMP and SMP for key receptors. It should be noted that contact beyond day 7 is not included in this table due to modelling predicting no contact beyond that timeframe (). In addition, monitor and evaluate activities will capture initial observations of fauna, habitat, and other sensitive receptors. Water samples will be collected during vessel surveillance for OM1: Hydrocarbon Characterisation, when safe to do so. Rapid Marine Fauna Surveillance teams will begin mobilisation within 48-72 hours of notification to document fauna observation. This information will be provided to the IMT to aid early decision making per the process outlined in Section 18.1 of the OSM-BIP.

Table C - 5: Indicative OMP and SMP implementation schedule for OSM activities if initiation criteria are met

Proximity to spill source	Monitoring type	0–48 hours from OSM activation	Within 72 hours of OSM activation	~5–7 days from OSM activation	Weeks 1–2 from OSM activation	Ongoing
Spill site and surrounding waters	OM	• Activation of OMP Team Leads. • Finalise OMPs. • Aerial surveillance – which will also document fauna observations. • Commence activation and mobilisation of OM personnel.	• OM1: Hydrocarbon Characterisation, where resources are available (e.g. Supply Vessel with onboard sampling equipment). • OM2: Hydrocarbons in Water Assessment • OM3: Hydrocarbons in Sediment Assessment • OM5: Rapid Marine Fauna Surveillance • Continue to finalise OMPs. • Continue to activate and mobilise OM personnel.	Continued (as per ongoing arrangements)	Continued (as per ongoing arrangements)	As results from implemented OMPs are available, data are provided to relevant personnel in IMT (e.g. Situation Unit) and used in the Incident Action Planning process for the next operational period. OMP is redesigned or reallocated according to the specifics of the actual spill.
	SM	• Commence activation and mobilisation process. • Activation of SMP Team Leads.	• Continue to activate and mobilise personnel. • Work on finalising SMPs.	• SM1: Water Quality Impact Assessment • SM2: Sediment Quality Impact Assessment • SM6: Benthic Habitat Assessment • SM7: Marine fish and elasmobranch assemblages assessment	Continued	Continue SMP monitoring until termination criteria are met
Sensitive receptors predicted to be contacted within 7 days	OM	• Activation of OMP Team Leads. • Finalise OMPs. • Aerial surveillance – which will also document fauna observations. • Commence activation and mobilisation of OM personnel.	• OM1: Hydrocarbon Characterisation • OM2: Hydrocarbons in Water Assessment • OM3: Hydrocarbons in Sediment Assessment • OM5: Rapid Marine Fauna Surveillance • Continue to finalise OMPs. • Continue to activate and mobilise OM personnel.	Continued (as per on-going arrangements)	Continued (as per on-going arrangements)	As results from implemented OMPs are available, data are provided to relevant personnel in IMT (Situation Unit Lead) and used in the Incident Action Planning process for the next operational period. OMP is redesigned or reallocated according to the specifics of the actual spill until termination criteria are met
	SM	• Activation of SMP Team Leads and finalisation of SMPs.	• Continue to activate and mobilise personnel. • Work on finalising SMPs.	• SM1: Water Quality Impact Assessment • SM2: Sediment Quality Impact Assessment • SM4: Seabirds and Shorebirds • SM5: Marine Mega-fauna Assessment – Reptiles • SM5: Marine Mega-fauna Assessment – Cetaceans, Whale Sharks, Dugong • SM6: Benthic Habitat Assessment • SM7: Marine Fish and Elasmobranch Assemblages assessment • SM8: Fisheries impact assessment • SM9: Heritage Features Assessment • SM10: Social Impact Assessment	Continued	Continue SMP implementation until termination criteria are met.
Sensitive receptors (including shorelines, reefs, banks and shoals)	OM	–	–	• Additional Activation of OMP Team Leads. • Commence activation and mobilisation of additional OM personnel.	• Continue to finalise OMPs. • Continue to activate and mobilise OM personnel. • OM1: Hydrocarbon Characterisation	As results from implemented OMPs are available, data are provided to relevant personnel in IMT (Situation Unit Leader) and used in the Incident Action Planning process for the next operational period.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

Proximity to spill source	Monitoring type	0–48 hours from OSM activation	Within 72 hours of OSM activation	~5–7 days from OSM activation	Weeks 1–2 from OSM activation	Ongoing
predicted to be contacted week 1–2					• OM2: Hydrocarbons in Water Assessment • OM3: Hydrocarbons in Sediment Assessment • OM5: Rapid Marine Fauna Surveillance •	OMP is redesigned or reallocated according to the specifics of the actual spill until termination criteria are met
	SM	–	–	• Additional Activation of SMP Team Leads. • Commence activation and mobilisation of additional SM personnel.	• SM1: Water Quality Impact Assessment • SM2: Sediment Quality Impact Assessment • SM4: Seabirds and Shorebirds • SM5: Marine Mega-fauna Assessment – Reptiles • SM5: Marine Mega-fauna Assessment – Cetaceans, Whale Sharks, Dugong • SM6: Benthic Habitat Assessment • SM7: Marine Fish and Elasmobranch Assemblages assessment • SM8: Fisheries impact assessment • SM9: Heritage Features Assessment • SM10: Social Impact Assessment	Continue SMP monitoring until termination criteria are met

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

C.4 Determine the OSM resourcing requirements and assess capability for the activity

To guide the resourcing requirements assessment for the Petroleum Activity, the spill scenario (see Table 2-1) most likely to require the greatest initial capability was selected for further assessment. Selection was based on stochastic modelling results, focussing on the scenario predicted to contact the greatest number of receptors at the low hydrocarbon thresholds for floating, shoreline or dissolved contact within 14 days and at the highest contact probabilities. If a receptor is only contacted by low concentrations of entrained hydrocarbons and not by any other hydrocarbon phase, it will be considered a lower priority during the initial monitoring response as outlined in Section 2.2 of the OSM-BIP. The subsurface release of 550 m^3 of Cossack light crude over 12-hours (CS-01) was identified as the worst-case scenario, affecting the most locations within 14 days and determined to require the greatest OSM capability. However, modelling does not predict contact with sensitive receptors by floating hydrocarbons above the response threshold of 50 g/m^2, the ecological impact threshold of 10 g/m^2 or sociocultural impact threshold of 1 g/m^2 at probabilities of 1% or greater for either scenario.

The first 14 days of the response has been selected as the focus area for the OSM resourcing assessment as it is the period during which resources are likely to be overwhelmed, before additional resources (including appropriately qualified personnel, suitable vessels and additional monitoring equipment) can be scaled in locally and from interstate and international resources. Other factors influencing the selection of the scenario with the highest capability requirements were location of the spill, proximity to receptors, and hydrocarbon properties. The OSM Services Provider Contract includes provision of scale-up resources, which would be considered and mobilised as soon as practicable following the spill.

Monitoring Units

Using the stochastic modelling results, Woodside has grouped the monitoring priorities for the Petroleum Activity into monitoring 'units' (Table C - 6). These units incorporate all of the possible receptors that may be contacted by the Petroleum Activity scenarios shown in Table C - 1 at a probability >10%. Receptors only contacted by entrained hydrocarbons and no other phase of hydrocarbon were not included. These unit groupings are based on consultation with experienced monitoring personnel and planners, who often group these receptors together for time-bound monitoring projects. The grouping of units is based on factors such as access and distance to ports, SIMOPS of multiple vessels and teams working in a close area, travel time between individual locations/receptors and time taken to collect samples for each SMP.

The monitoring units presented in Table C - 6 also include KEFs, BIAs and transient species. Additional information on the seasonality of the receptors can be found in Appendix B of the OSM-BIP and in Section 4.7 of the EP. Each monitoring unit will require 1-2 teams during the initial response (first 14 days). The number of teams allocated to each unit will depend on the extent of the spill, the outcome of the monitoring prioritisation finalised at the time of the spill (Section 13 of the OSM-BIP), the ALARP assessment, and SIMOPs.

It should be noted that not all monitoring units will be contacted by a single spill and that the list below has been generated from stochastic modelling results.

Table C - 6: Monitoring units for Petroleum Activity relevant to stochastic modelling results

Receptors within each Unit	Type
Montebello	
Montebello AMP*	AMP
Humpback whale (migration)	BIA
Marine turtles	BIA
Pygmy blue whale (distribution)	BIA
Seabird and shorebird	BIA
Montebello Islands (Including Hermite)	Islands
Montebello Islands MP*	Marine Parks
Montebello Shoals*	Reef, Shoals and Banks
Tryal Rocks*	Reef, Shoals and Banks

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

Receptors within each Unit	Type
Ancient Coastline at 125 m depth contour	KEF
Continental Slope Demersal Fish Communities	KEF
Offshore Environs	
Marine turtle	BIA
Pygmy blue whale (migration)	BIA
Seabird and shorebird	BIA
Whale shark (foraging)	BIA
Ancient Coastline at 125 m depth contour	KEF
Continental Slope Demersal Fish Communities	KEF
Glomar Shoals*	KEF
Rankin Bank*	Reef, Shoals and Banks
Control	
Control sites	All

**Submerged receptor that has no features above the sea surface.*

Stochastic modelling

OSM resourcing requirements were determined using stochastic modelling. Deterministic modelling was not undertaken, as the existing response capability arrangements (refer to Sections 9 and 10 of the OSM-BIP) provide sufficient capacity to meet or exceed the resourcing requirements for all receptors forecast to be contacted by floating, shoreline and/or dissolved hydrocarbons (at >10% probability) by stochastic modelling within the initial two weeks of the Petroleum Activity.

The resources required to commence operational and scientific monitoring components during weeks 1–2 are presented in Table C - 7 and Table C - 8 respectively, which are based on the locations requiring a baseline review in Table C - 2, the implementation schedule outlined in Table C - 5, and the worst-case stochastic spill results outlined in Table C - 1, including the resources required for monitoring unaffected control sites.

Woodside's OSM capability arrangements are detailed in Sections 9 and 10 of the OSM-BIP. These sections demonstrate that Woodside has established arrangements to mobilise up to 5-6 teams for most OMPs and SMPs, confirming that despite the use of stochastic modelling (which means an overconservative estimate of capability has been used for this activity) the OSM capability requirements for the Petroleum Activity (Table C - 7 and Table C - 8) are fully satisfied by the existing capability arrangements in the OSM-BIP.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

Table C - 7: Resources required for initially implementing operational monitoring plans for the Petroleum Activity spill scenarios

OMP	Week 1 (total)	Week 2 (total)	Arrangement
OM1: Hydrocarbon characterisation*^	1 team Montebello Unit 1 team offshore environs and surrounds# **Total 2 teams**	1 team Montebello Unit 1 team offshore environs and surrounds# **Total 2 teams**	OSRL OSM Supplementary Service Agreement Woodside Contracted Vessel Providers Laboratory arrangements
OM2: Hydrocarbon in water assessment*	Refer to OMP: Hydrocarbon properties and weathering behaviour at sea resourcing* (all sites)		OSRL OSM Supplementary Service Agreement Woodside Contracted Vessel Providers
OM3: Hydrocarbon in sediment assessment*	Refer to OMP: Hydrocarbon properties and weathering behaviour at sea resourcing* (all sites)		OSRL OSM Supplementary Service Agreement Woodside Contracted Vessel Providers
OM5: Rapid marine fauna surveillance	1 team to conduct aerial surveys for offshore environs and surrounds, Montebello Unit (2 observers per aircraft) **Total 1 teams** Note: Fauna related SMPs are likely to be initiated simultaneously or following aerial assessment with vessel and ground based fauna surveys carried out as part of the relevant fauna SMP.		OSRL OSM Supplementary Service Agreement Woodside Contracted Vessel Providers Aviation contractors
OM7: Air quality modelling (responder health and safety)	1 model	N/A	3rd party modelling provider / OSRO
Total number of teams	**3 teams**	**3 teams**	

 # Specific monitoring units are mentioned for planning and guidance purposes based on a worst-case planning approach. In the event of an actual spill, other locations and/or receptors may be contacted and the ability to access these locations (i.e. with consideration of safety and simultaneous operations (SIMOPS)) would be assessed. This would be identified and managed as part of implementation as per the guidance in Section 13 of the BIP.
** Initial co-mobilisation between OMP: Hydrocarbon properties and weathering behaviour at sea, OMP: Water quality assessment, and OMP: Sediment quality assessment*
^ These resources may not be required if relevant scientific monitoring components' initiation criteria have been triggered.

Table C - 8: Resources required for initially implementing scientific monitoring plans for Petroleum Activity spills

SMP	Week 1 (total)	Week 2 (total)	Arrangement
SM1: Water quality impact assessment *^	1 team Montebello Unit 1 team offshore environs and surrounds# 1 team control site(s) **Total 3 teams**	1 team Montebello Unit 1 team offshore environs and surrounds# 1 team control site(s) **Total 3 teams**	OSRL OSM Supplementary Service Agreement Woodside Contracted Vessel Providers Laboratory arrangement
SM2: Sediment quality impact assessment *	Refer to SMP: Water quality impact assessment* (all sites)		OSRL OSM Supplementary Service Agreement Woodside Contracted Vessel Providers Laboratory arrangement
SM3: Intertidal and coastal habitat assessment	No shoreline contact predicted meeting criteria (>10% probability and within 7 days) **Total 0 ground-based teams**	No shoreline contact predicted meeting criteria (>10% probability and within 14 days) **Total 0 ground-based teams**	N/A
SM4: Seabirds and shorebirds^	1 team to conduct aerial surveys for offshore environs and surrounds, and Montebello Unit **Total 1 aerial team** 1 team Montebello Unit 1 team to conduct vessel-based surveys for offshore environs and surrounds 1 team control site(s) (surveys would include all fauna [birds, reptiles, cetaceans, dugong and whale shark]) **Total 3 vessel-based teams** No shoreline contact predicted meeting criteria (>10% probability and within 7 days) **Total 0 ground-based teams**	1 team to conduct aerial surveys for offshore environs and surrounds, and Montebello Unit **Total 1 aerial team** 1 team Montebello Unit 1 team to conduct vessel-based surveys for offshore environs and surrounds 1 team control site(s) (surveys would include all fauna [birds, reptiles, cetaceans, dugong and whale shark]) **Total 3 vessel-based teams** No shoreline contact predicted meeting criteria (>10% probability and within 14 days) **Total 0 ground-based teams**	OSRL OSM Supplementary Service Agreement Woodside Contracted Vessel Providers Laboratory arrangement
SM5: Marine mega-fauna assessment – whale shark, dugong and cetaceans^	• Aerial surveys refer to SMP: Seabirds and shorebirds • Vessel surveys refer to SMP: Seabird and shorebirds	• Aerial surveys refer to SMP: Seabirds and shorebirds • Vessel surveys refer to SMP: Seabird and shorebirds	OSRL OSM Supplementary Service Agreement Woodside Contracted Vessel Providers Laboratory arrangement
SM5: Marine mega-fauna assessment – reptiles^	• Aerial surveys refer to SMP: Seabirds and shorebirds • Vessel surveys refer to SMP: Seabird and shorebirds Ground based survey refer to SMP: Seabird and shorebirds (including 1 member experienced with ground turtle surveys)	• Aerial surveys refer to SMP: Seabirds and shorebirds • Vessel surveys refer to SMP: Seabird and shorebirds Ground based survey refer to SMP: Seabird and shorebirds (including 1 member experienced with ground turtle surveys)	OSRL OSM Supplementary Service Agreement Woodside Contracted Vessel Providers Laboratory arrangement
SM6: Benthic habitat assessment	1 team Montebello Unit 1 team offshore environs and surrounds 1 team control site(s) **Total 3 teams**	1 team Montebello Unit 1 team offshore environs and surrounds 1 team control site(s) **Total 3 teams**	OSRL OSM Supplementary Service Agreement Woodside Contracted Vessel Providers Laboratory arrangement

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

SMP	Week 1 (total)	Week 2 (total)	Arrangement
SM7: Marine fish and elasmobranch assemblages assessment	1 team Montebello Unit 1 team offshore environs and surrounds 1 team control site(s) **Total 3 teams**	1 team Montebello Unit 1 team offshore environs and surrounds 1 team control site(s) **Total 3 teams**	OSRL OSM Supplementary Service Agreement Woodside Contracted Vessel Providers Laboratory arrangement
SM8: Fisheries impact assessment	**Total 2 teams** to cover all relevant Commonwealth and State fisheries – initial locations determined in consultation with key stakeholders to reflect current fishing zones/effort		OSRL OSM Supplementary Service Agreement Woodside Contracted Vessel Providers Laboratory arrangement
SM9: Heritage features assessment	**1 team**	**1 team**	OSRL OSM Supplementary Service Agreement Woodside Contracted Vessel Providers Laboratory arrangement
SM10: Social impact assessment	**1 team**	**1 team**	OSRL OSM Supplementary Service Agreement
Total number of teams	**17 teams**	**17 teams**	

[#] Specific monitoring units are mentioned for planning and guidance purposes based on a worst case planning approach. In the event of an actual spill, other locations and/or receptors may be contacted and the ability to access these locations (i.e. with consideration of safety and SIMOPS) would be assessed. This would be identified and managed as part of implementation as per the guidance in Section 13 of the BIP.

** Initial co-mobilisation between SMP: Water quality impact assessment and SMP: Sediment quality impact assessment.*

^ Can initially be performed by the same team as the relevant OMP. This SMP may replace the relevant OMP, if the relevant OMP's termination criteria are triggered.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

ANNEX D: TACTICAL RESPONSE PLANS

TACTICAL RESPONSE PLANS
Exmouth
Mangrove Bay
Turquoise Bay
Yardie Creek
Muiron Islands
Jurabi to Lighthouse Beaches Exmouth
Ningaloo Reef – Refer to Mangrove/ Turquoise Bay and Yardie Creek
Exmouth Gulf
Shark Bay Area 1: Carnarvon to Wooramel
Shark Bay Area 2: Wooramel to Petite Point
Shark Bay Area 3: Petite Point to Dubaut Point
Shark Bay Area 4: Dubaut Point to Herald Bight
Shark Bay Area 5: Herald Bight to Eagle Bluff
Shark Bay Area 6: Eagle Bluff to Useless Loop
Shark Bay Area 7: Useless Loop to Cape Bellefin
Shark Bay Area 8: Cape Bellefin to Steep Point
Shark Bay Area 9: Western Shores of Edel Land
Shark Bay Area 10: Dirk Hartog Island
Shark Bay Area 11: Bernier and Dorre Islands
Abrolhos Islands: Pelseart Group
Abrolhos Islands: Wallabi Group
Abrolhos Islands: Easter Group
Dampier
Rankin Bank & Glomar Shoals
Barrow and Lowendal Islands
Pilbara Islands – Southern Island Group
Montebello Island – Stephenson Channel Nth TRP
Montebello Island – Champagne Bay and Chippendale channel TRP
Montebello Island – Claret Bay TRP
Montebello Island – Hermite/Delta Island Channel TRP
Montebello Island – Hock Bay TRP
Montebello Island – North and Kelvin Channel TRP
Montebello Island – Sherry Lagoon Entrance TRP
Withnell Bay
Holden Bay
King Bay
No Name Bay / No Name Beach
Enderby Island – Dampier

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

Rosemary Island – Dampier
Legendre Island – Dampier
Karratha Gas Plant
KGP to Withnell Creek
KGP to Northern Shore
KGP Fire Pond & Estuary
KGP to No Name Creek
Broome
Sahul Shelf Submerged Banks and Shoals
Clerke Reef (Rowley Shoals)
Imperieuse Island (Rowley Shoals)
Mermaid Reef (Rowley Shoals)
Scott Reef
Oiled Wildlife Response
Exmouth
Dampier region
Shark Bay

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved. Document to be read in conjunction with Okha Light Well Intervention Environment Plan.

APPENDIX H OIL POLLUTION FIRST STRIKE PLAN

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Woodside Energy

Okha Light Well Intervention – Oil Pollution First Strike Plan

Corporate HSE

Hydrocarbon Spill Preparedness

October 2026

Revision 0

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

CONTENTS

CONTROL AGENCIES AND INCIDENT CONTROLLERS....5
SPILLS IN STATE WATERS....5
RESPONSE PROCESS OVERVIEW....6
1. NOTIFICATIONS....7
2. RESPONSE TECHNIQUES....9
3. RESPONSE PROTECTION AREAS....11
4. DISPERSANT APPLICATION....13
5. GLOSSARY AND ABBREVIATIONS....14
APPENDIX A – CREDIBLE SPILL SCENARIOS AND HYDROCARBON INFORMATION....16
APPENDIX B – NOTIFICATION FORMS....18
APPENDIX C – SPILL ASSESSMENT QUESTIONS....20
APPENDIX D – COORDINATION STRUCTURE FOR A CONCURRENT HYDROCARBON SPILL IN BOTH COMMONWEALTH AND STATE WATERS/ SHORELINES....21
APPENDIX E – WOODSIDE INCIDENT MANAGEMENT STRUCTURE....22
APPENDIX F – WOODSIDE LIAISON OFFICER RESOURCES TO DTMI....23
APPENDIX G – DTMI LIAISON OFFICER RESOURCES TO WOODSIDE....26

TABLES

Table 1-1: Notifications.... 7
Table 2-1: Response techniques.... 9
Table 3-1: Location of wells.... 11
Table 3-2: Assets in the vicinity of the Okha Light Well Intervention Operational Areas.... 11

FIGURES

Figure 3-1: Operational area.... 12

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

CONTROL AGENCIES AND INCIDENT CONTROLLERS

Source	Location	Level	Jurisdictional Authority/ Hazard Management Agency	Control Agency	Incident Controller
Spill from facility including subsea infrastructure Note: pipe laying and accommodation vessels are considered a "facility" under Australian regulations	Commonwealth waters	1	NOPSEMA	Woodside	Person In Charge (PIC) with support from Onshore Team Leader (OTL)
		2/3		Woodside	Corporate Incident Management Team Incident Commander (CIMT IC)
	State waters	1/2/3	Western Australian Department of Transport and Major Infrastructure (DTMI)	DTMI	DTMI Incident Controller
	Within port limits	1	DTMI	Port Authority	Port Harbour Master
		2/3		Port Authority/ DTMI	Port Harbour Master/ DTMI Incident Controller
Spill from vessel Note: SOPEP should be implemented in conjunction with this document	Commonwealth waters	1	Australian Marine Safety Authority (AMSA)	AMSA	Vessel Master
		2/3		AMSA	AMSA (with response assistance from Woodside)
	State waters	1/2/3	DTMI	DTMI	DTMI Incident Controller
	Within port limits	1	DTMI	Port Authority	Port Harbour Master
		2/3		Port Authority/ DTMI	Port Harbour Master/ DTMI Incident Controller

SPILLS IN STATE WATERS

In the event of a hydrocarbon spill (hereafter 'spill') where Woodside Energy Ltd ('Woodside') is the responsible party and the spill may impact State waters and shorelines, Woodside (or the Vessel Master) will commence the initial response actions and notify the Western Australian Department of Transport and Major Infrastructure (DTMI).

Initially Woodside will be required to make available an appropriate number of suitably qualified persons to work in the DTMI IMT (APPENDIX F – Woodside Liaison Officer resources to DTMI). DTMI's role as the Controlling Agency in State waters/ within port limits does not negate the requirement for Woodside to have appropriate plans and resources in place to adequately respond to a marine hydrocarbon spill incident in State Waters/ within port limits or to commence the initial response actions to a spill prior to DTMI establishing incident control in line with DTMI *Offshore Petroleum Industry Guidance Note – Marine Oil Pollution: Response and Consultation Arrangements* (July 2020). Cost recovery arrangements for offshore marine pollution incidents (MOP) are in accordance with Section 9 of the Guidance Note:

https://www.transport.wa.gov.au/mediaFiles/marine/MAC_P_Westplan_MOP_OffshorePetroleumIndGuidance.pdf

Woodside's Incident Management Structure for a hydrocarbon spill, including Woodside Liaison Officer's command structure within DTMI can be seen at APPENDIX E – Woodside Incident Management Structure.

The coordination structure for a concurrent hydrocarbon spill in both Commonwealth and State waters/ shorelines is shown in APPENDIX D – Coordination structure for a concurrent hydrocarbon spill in both Commonwealth and State waters/ shorelines.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

RESPONSE PROCESS OVERVIEW

<table>
<tr><th colspan="3">For guidance on credible scenarios and hydrocarbon characteristics, refer to APPENDIX A</th></tr>
<tr><td rowspan="2">ALL INCIDENTS</td><td colspan="2">Notify the Woodside Communication Centre (WCC) on:
[1]</td></tr>
<tr><td colspan="2">If further support required, Incident Commander or delegate to implement this Oil Pollution First Strike Plan per relevant actions detailed in Table 1-1 and Table 2-1.</td></tr>
<tr><td rowspan="3">LEVEL 1</td><td>FACILITY INCIDENT</td><td>VESSEL INCIDENT</td></tr>
<tr><td>Coordinate pre-identified tactics in Table 2-1 of this Oil Pollution First Strike Plan.
Remember to download each Operational Plan.</td><td>Notify AMSA and coordinate pre-identified tactics in Table 2-1 of this Oil Pollution First Strike Plan
Remember to download each Operational Plan.</td></tr>
<tr><td colspan="2">If the spill escalates such that the site cannot manage the incident, inform the WCC on:
[1] and escalate to a level 2/3 incident.</td></tr>
<tr><td rowspan="4">LEVEL 2/3</td><td>FACILITY INCIDENT</td><td>VESSEL INCIDENT</td></tr>
<tr><td>Handover control to CIMT and notify DTMI.</td><td>Handover control to AMSA and stand up CIMT to assist.</td></tr>
<tr><td>Commence quick revalidation of the recommended strategies in Table 2-1 taking into consideration seasonal sensitivities and current situational awareness.
Commence validated strategies.</td><td>If requested by AMSA/Port Authority:
Commence quick revalidation of the recommended strategies in Table 2-1 taking into consideration seasonal sensitivities and current situational awareness.
Commence validated strategies.</td></tr>
<tr><td>Create an Incident Action Plan (IAP) for all ongoing operational periods.
The content of the IAP should reflect the selected response strategies based on current situational awareness.
For the full detailed pre-operational Net Environmental Benefit Analysis (NEBA) see the Oil Spill Preparedness and Response Mitigation Assessment (OSPRMA) Appendix A</td><td>If requested by AMSA:
Create an IAP for all ongoing operational periods.
The content of the IAP should reflect the selected response strategies based on current situational awareness.
For the full detailed pre-operational NEBA see the OSPRMA Appendix A</td></tr>
</table>

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

1. NOTIFICATIONS

The Incident Controller or delegate must ensure the below notifications (Table 1-1) are completed within the designated timeframes.

For spills from a vessel, relevant notifications must be undertaken by a Woodside representative.

Table 1-1: Notifications

In the event of an incident between campaign vessels, also activate relevant vessel Emergency Response Plans and/or Bridging Documents

In the event of an incident impacting live well infrastructure, also activate Okha Floating Production Storage and Offloading Facility Operations Oil Pollution First Strike Plan

Timing	By	To	Name	Contact	Instruction	Form	Complete? (✓)
NOTIFICATIONS FOR ALL LEVELS OF SPILL							
Immediately	Offshore Installation Manager (OIM) or Vessel Master	Woodside Communication Centre (WCC)	Corporate Incident Management Team Incident Commander (CIMT IC)	[1]	Verbally notify WCC of event and estimated volume and hydrocarbon type. If further support required, implement this Oil Pollution First Strike Plan per relevant actions detailed in Table 1-1 and Table 2-1.	Verbal	
Within 2 hours	Woodside Site Rep (WSR), CIMT IC or Delegate	National Offshore Petroleum Safety Environmental Management Authority (NOPSEMA[1])	Incident notification office	[2]	Verbally notify NOPSEMA for spills >80 litres[2]. Record notification using Initial Verbal Notification Form or equivalent and send to NOPSEMA as soon as practicable (cc to NOPTA and DMPE).	Link	
Within 3 days	WSR, CIMT IC or Delegate				Provide a written NOPSEMA Incident Report Form as soon as practicable (no later than 3 days after notification) (cc to NOPTA and DMPE) NOPSEMA [2] NOPTA [3] DMPE [4]	[2]	
As soon as practicable	CIMT IC or Delegate	Woodside	Environment Unit Leader	As per roster	Verbally notify Environment Unit Leader of event and seek advice on relevant performance standards from EP	Verbal	
Within 2 hours of becoming aware of a marine pollution incident (MOP) that occurs in or may impact state waters	CIMT IC or Delegate	WA Department of Transport and Major Infrastructure (DTMI)	DTMI Maritime Environmental Emergency Response Unit (MEER) Duty Officer	[5]	Verbally notify DTMI MEER Duty Officer that a spill has occurred and, if required, request use of equipment stored in Karratha. Follow up with a written Marine Pollution Report (POLREP) as soon as practicable following verbal notification. Additionally, DTMI to be notified if spill is likely to extend into WA State waters. Request DTMI to provide Liaison to Woodside IMT.	[5]	
Within 24 hours of Woodside reporting the incident to the appropriate authority	CIMT IC or Delegate	Department of Primary Industries and Regional Development (DPIRD)			Notification to DPIRD via email within 24 hours of Woodside reporting the incident to the appropriate authority: [6]	Email	
Within 24 hours of Woodside reporting the incident to the appropriate authority	CIMT IC or Delegate	WA Fishing Industry Council (WAFIC)	Industry Liaison Officer	[7]	Notification to WAFIC via email within 24 hours of Woodside reporting the incident to the appropriate authority: [7]	Verbal/ email	
As soon as practicable	CIMT IC or Delegate	Department of Climate Change, Energy, the Environment and Water (DCCEEW) Director of National Parks	Marine Park Compliance Duty Officer	[8]	The DNP should be made aware of oil/ gas pollution incidences which occur within a marine park or are likely to impact a marine park as soon as possible. Notification should be provided to the 24-hour Marine Compliance Duty Officer. This notification should include: • titleholder details • time and location of the incident (including name of marine park potentially affected) • proposed response arrangements as per the Oil Pollution Emergency Plan (OPEP) • confirmation of access to relevant monitoring and evaluation reports when available • contact details for the response coordinator. Note that the DNP may request daily or weekly Situation Reports, depending on the scale and severity of the pollution incident.	Verbal	

[1] Notification to NOPSEMA must be from a Woodside Representative.
[2] An uncontrolled release of petroleum liquids exceeding 80 litres is required to be reported as a dangerous occurrence related to safety at a facility, under clause 82 of Schedule 3 of the OPGGS Act and Part 4 of the Safety Regulations.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Timing	By	To	Name	Contact	Instruction	Form	Complete? (✓)
NOTIFICATIONS FOR ALL LEVELS OF SPILL							
As soon as practicable if there is potential for oiled wildlife or the spill is expected to contact land or waters managed by WA Department of Biodiversity, Conservation and Attractions	CIMT IC or Delegate	WA Department of Biodiversity, Conservation and Attractions (DBCA)	Duty Officer	[9]	Phone call notification	Verbal	
As soon as practicable	Public Information	Relevant persons/ organisations	To be determined	To be determined	Should it be identified that additional persons such as, but not limited to, commercial fishers or tourism operators may be affected, Woodside would, at the relevant time, engage with these parties as appropriate and in alignment with the Oil Spill Preparedness and Response Mitigation Assessment (OSPRMA) for Okha Light Well Intervention. Relevant persons/ organisations will be re-assessed throughout the response period.	Verbal initially	
As soon as practicable	Public Information	Relevant cultural authorities	To be determined	To be determined	Should it be identified that relevant cultural authorities may be affected, Woodside would, at the relevant time, engage with these parties as appropriate and in alignment with the Oil Spill Preparedness and Response Mitigation Assessment (OSPRMA) for Okha Light Well Intervention. Relevant cultural authorities will be re-assessed throughout the response period.	Verbal initially	
ADDITIONAL NOTIFICATIONS TO BE MADE ONLY IF SPILL IS FROM A VESSEL							
"Without delay" as per *Protection of the Sea (Prevention of Pollution from Ships) Act 1983* (Cth) s 11(1)	Vessel Master	Australian Maritime Safety Authority (AMSA)	Joint Rescue Coordination Centre (JRCC)	[10]	Verbally notify AMSA JRCC of the hydrocarbon spill. Follow up with a written Harmful Substances Report (POLREP) as soon as practicable following verbal notification.	[10]	
ADDITIONAL LEVEL 2/3 NOTIFICATIONS							
As soon as practicable	CIMT IC or Delegate	AMOSC	AMOSC Duty Manager	[11]	Notify AMOSC that a spill has occurred and follow-up with an email from the CIMT IC/ CIMT Deputy IC/ CMT Leader to formally activate AMOSC. Determine what resources are required consistent with the AMOSPlan and detail in a Service Contract that will be sent to Woodside from AMOSC upon activation.	[11]	
As soon as practicable	CIMT IC or Delegate	Oil Spill Response Limited (OSRL)	OSRL Duty Manager	[12]	Notification for all services: Contact OSRL duty manager and request assistance from technical advisor. Send the completed notification form to OSRL as soon as practicable.	[12]	
					Mobilisation of response personnel/ equipment: For mobilisation of response personnel/ resources, send the Mobilisation Form to OSRL as soon as practicable. The mobilisation form must be signed by a nominated callout authority from Woodside i.e. CIMT IC/ CIMT Deputy IC/ CMT Leader. OSRL can advise the names on the call out authority list, if required.	[12]	
					Mobilisation of Operational and Scientific Monitoring service: For mobilisation of Operational and Scientific Monitoring (OSM) service, send the OSM Mobilisation Form to OSRL as soon as practicable. The mobilisation form must be signed by a nominated callout authority from Woodside i.e. CIMT IC/ CIMT Deputy IC/ CMT Leader. OSRL can advise the names on the call out authority list, if required.	[12]	
As soon as practicable if extra personnel are required for incident support	CIMT IC or Delegate	Marine Spill Response Corporation (MSRC)	MSRC Response Manager	[13]	Activate the contract with MSRC (in full) for the provision of up to 14 personnel depending on what skills are required. Please note that provision of these personnel from MSRC are on a best endeavours basis and are not guaranteed.	Verbal	

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

2. RESPONSE TECHNIQUES

Table 2-1: Response techniques

Technique	Spill type		Level	Pre- Identified Tactics	Responsible	ALARP Commitment Summary	Link to Operational Plans for notification numbers and actions
	MDO	Crude					
Monitor and evaluate – tracking buoy	Yes	Yes	ALL	Deploy the oil spill tracking buoy within 2 hours in the event of release of hydrocarbons to the marine environment. If no oil spill tracking buoy is available, mobilise unit from the King Bay Supply Facility (KBSF) stockpile.	Operations	WITHIN 2 HOURS: Tracking buoy deployed within 2 hours.	Surveillance and Reconnaissance to Detect Hydrocarbons and Resources at Risk in Operational Monitoring Operational Plan. Deploy tracking buoy in accordance with Link.
Monitor and evaluate – predictive modelling	Yes	Yes	ALL	Undertake initial modelling using OceansMap and weathering fate analysis using Automated Data Inquiry for Oil Spills (ADIOS) or refer to the hydrocarbon information in Appendix A.	Environment	WITHIN 24 HOURS: Initial modelling within 6 hours using the OceansMap tool.	Predictive Modelling of Hydrocarbons to Assess Resources at Risk in Operational Monitoring Operational Plan. *Planning Section to download immediately and follow steps*
	Yes	Yes	ALL	Send Oil Spill Trajectory Modelling (OSTM) form (Appendix B, Form 7) to RPS Response ([14]). Outputs will be uploaded to OceansMap by RPS.	Environment	WITHIN 24 HOURS: Detailed modelling within 4 hours of RPS Response receiving information from Woodside.	
Monitor and evaluate – aerial surveillance	Yes	Yes	ALL	Aviation Unit Leader to commence aerial observations in daylight hours. Aerial surveillance observer to complete log in Appendix B Form 8.	Logistics – Aviation	WITHIN 24 HOURS: 2 trained aerial observers. 1 aircraft available. Report made available to the IMT within 2 hours of landing after each sortie.	Surveillance and Reconnaissance to Detect Hydrocarbons and Resources at Risk in Operational Monitoring Operational Plan. *Planning Section to download immediately and follow steps*
Monitor and evaluate – satellite tracking	Yes	Yes	ALL	Environment Unit Leader to action satellite imagery services. This may be obtained via: • AMOSC Duty Manager: [11] • OSRL Duty Manager: [12] • KSAT: [15] • Others identified by CIMT	Environment	WITHIN 24 HOURS: Service provider will confirm availability of an initial acquisition within 2 hours. Data received to be uploaded into Woodside Common Operating Picture.	
Revalidate pre-operational NEBA	Yes	Yes	ALL	Environment Unit Leader to revalidate pre-operational NEBA against current situational awareness from monitor and evaluate techniques.	Environment	WITHIN 24 HOURS: Revalidate pre-operational NEBA and incorporate into IAP	Pre-operational NEBAs
Monitor and evaluate – pre-emptive assessment of receptors at risk	Potentially	Potentially	ALL	Consider the need to mobilise resources to undertake pre-emptive assessment of sensitive receptors at risk.	Planning or Environment	In agreement with WA DTMI, deployment of 2 specialists for each of the Response Protection Areas (RPA) with predicted impacts.	Pre-emptive Assessment of Sensitive Receptors in Operational Monitoring Operational Plan.
Operational and Scientific Monitoring	Yes	Yes	ALL	Consider the need to mobilise OSM resources via third party service provider.	Environment	WITHIN 4 HOURS: Notify service provider of spill event. OSM: OMPs and SMPs will be activated in accordance with the initiation criteria provided in Tables 9-1 and 9-2 of the Joint Industry OSM Framework (APPEA [now AEP], 2021)	Mobilise OSM service via OSRL: [12] Refer to OSM Bridging Implementation Plan – Part B for additional implementation information: Link Refer to Joint Industry Operational And Scientific Monitoring Plan Framework for activation criteria and additional supporting information.
Surface dispersant	No	No	N/A	This response strategy is not recommended.			
Containment and recovery	No	No	N/A	This response strategy is not recommended.			
Mechanical dispersion	No	No	N/A	This response strategy is not recommended.			
In-situ burning	No	No	N/A	This response strategy is not recommended.			
Shoreline protection and deflection	No	No	N/A	This response strategy is not recommended – no shoreline contact predicted.			
Shoreline clean-up	No	No	N/A	This response strategy is not recommended – no shoreline contact predicted.			
Oiled wildlife response	Yes	Yes	ALL	If oiled wildlife is a potential impact, request AMOSC to mobilise containerised oiled wildlife first strike kits and relevant personnel. Refer to relevant Tactical Response Plan for potential wildlife at risk. Mobilise AMOSC Oiled Wildlife Containers.	Logistics and Planning		Oiled Wildlife Response Operational Plan

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Technique	Spill type		Level	Pre- Identified Tactics	Responsible	ALARP Commitment Summary	Link to Operational Plans for notification numbers and actions
	MDO	Crude					
				Consider whether additional equipment is required from local suppliers.			
SOURCE CONTROL TECHNIQUES							
Source control via Remotely operated vehicle (ROV) override of well control package (WCP)	N/A	Yes	L2/3	Light Well Intervention (LWI) vessel ROV to conduct WCP ROV overrides. If LWI vessel is unavailable, SFRT blowout preventer (BOP) intervention skid can be used on third party vessel to execute independent contingency closure of WCP.	Vessel Master/ Source Control	WITHIN 12 HOURS: LWI vessel ROV deployed to manually close valves.	Wells Global Source Control Emergency Response Plan LWIV Emergency Response Plan Engineering Assessment
Subsea Dispersant	N/A	No	N/A	This response strategy is not suitable given the nature of the subsea LOWC release.			
Capping Stack	N/A	No	N/A	This response strategy is not suitable given the nature of the subsea LOWC release.			
Relief Well	N/A	No	N/A	This response strategy is not suitable given the nature of the subsea LOWC release.			

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

3. RESPONSE PROTECTION AREAS

Action: Provide relevant Control Agency with applicable Tactical Response Plans for any Response Protection Areas (RPAs) identified during operational monitoring.

Based on hydrocarbon spill risk modelling results, there are no priority protection areas that have the potential to be contacted by hydrocarbon at or above impact threshold levels within or beyond 48 hours of the modelled spill scenarios.

If required, Tactical Response plans for relevant locations can be accessed via the link here and include the details of potential forward operating bases and staging areas.

Oil Spill Trajectory Modelling specific to the spill event will be required to determine the regional sensitive receptors to be contacted within and beyond 48 hours of a spill.

Figure 3-1 illustrates the location of the Okha Light Well Intervention Operational Area.

Consideration should be given to other stakeholders (including mariners) in the vicinity of the spill location. Table 3-2 indicates the assets within the vicinity of the Operational Areas (OA) for the Okha Light Well Intervention Petroleum Activity which comprises Cossack-4H (CK-4), Lambert-3 (LH-3), Wanaea-7ST1 (WA-7), Wanaea-8 (WA-8) wells. The locations of these wells are detailed in Table 3-1:

Table 3-1: Location of wells

Well	Latitude	Longitude
Cossack-4H (CK-4)	19° 33′ 22.909″ S	116° 29′ 35.754″ E
Lambert-3 (LH-3)	19° 26′ 58.469″ S	116° 29′ 16.227″ E
Wanaea-7ST1 (WA-7)	19° 35′ 31.586″ S	116° 26′ 6.622″ E
Wanaea-8 (WA-8)	19° 34′ 40.796″ S	116° 26′ 59.438″ E

Table 3-2: Assets in the vicinity of the Okha Light Well Intervention Operational Areas

Asset	Distance and direction from Operational Area	Operator
Okha Floating Production and Offloading Storage (FPSO)[3]	Overlapping WA-7 and WA-8 OAs 5.1 km south west of CK-4 OA 15.1 km south-south-west of LH-3 OA	Woodside
Angel Facility	11.7 km north east of CK-4 OA 11.8 km south-east of LH-3 OA 16.8 km north east of WA-8 OA 19.0 km north east of WA-7 OA	Woodside
North Rankin Complex	30.2 km west of WA-7 OA 31.8 km west of WA-8 OA 36.5 km west of CK-4 OA 38.7 km south-west of LH-3 OA	Woodside
Reindeer Platform	48.6 km south-south-west of WA-7 OA 50.3 km south-south-west of WA-8 OA 54.2 km south-south-west of CK-4 OA 65.1 km south-south-west of LH-3 OA	Santos
Goodwyn Alpha Platform	52.5 km west of WA-7 OA 54.2 km west of WA-8 OA 59.0 km west-south-west of CK-4 OA 61.8 km west-south-west of LH-3 OA	Woodside

[3] Infrastructure associated with the ongoing production from the CK-4 and LH-3 wells through the Okha FPSO are within the CK-4 and LH-3 Well Intervention Operational Area, including manifolds, umbilicals and flowlines

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

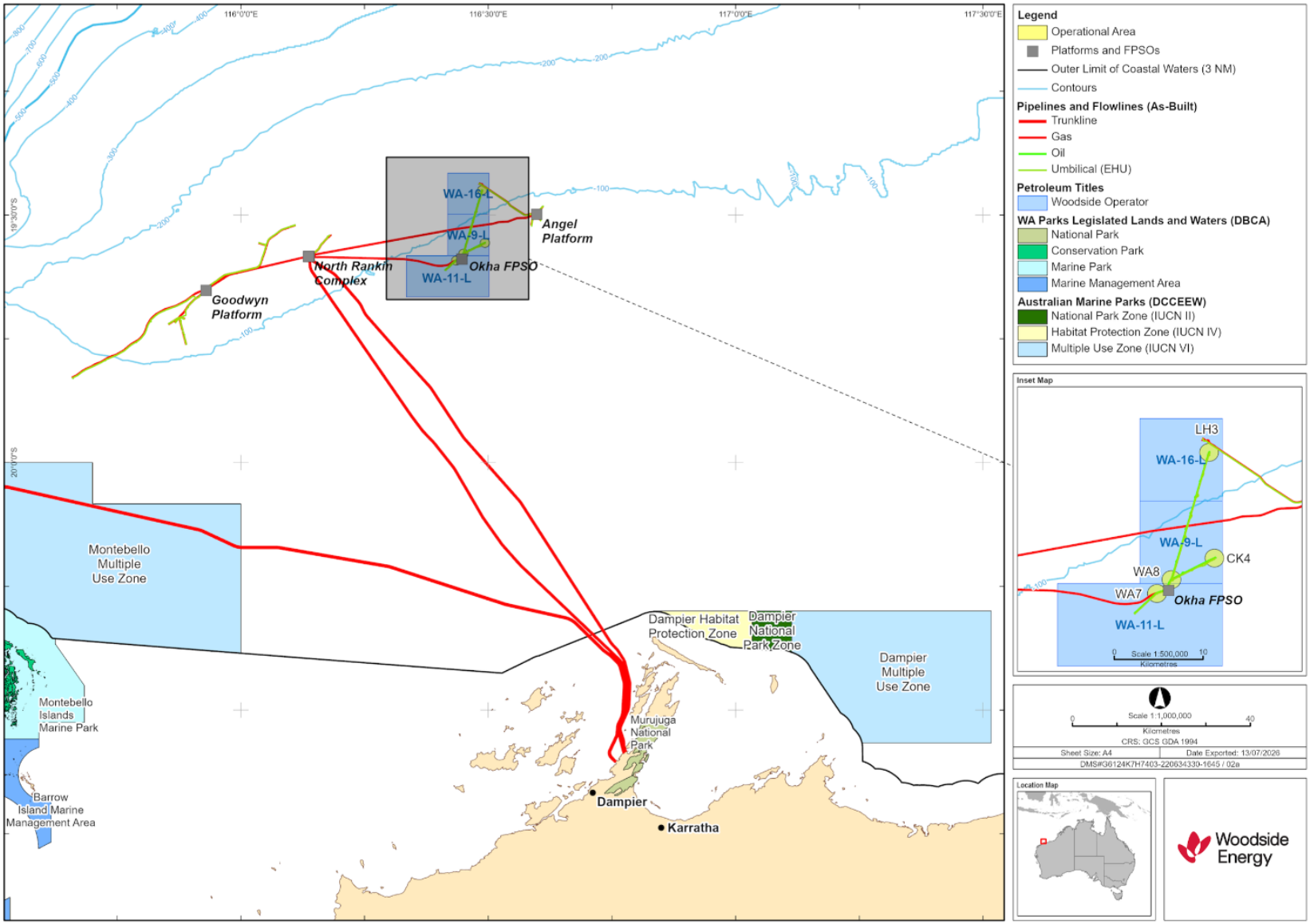


Figure 3-1: Operational area

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

4. DISPERSANT APPLICATION

Dispersant is not considered an appropriate response strategy for this activity as described in the Okha Light Well Intervention Environment Plan Appendix F (Woodside's Oil Spill Preparedness and Response Mitigation Assessment).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

5. GLOSSARY AND ABBREVIATIONS

Term	Definition
ADIOS	Automated Data Inquiry for Oil Spills
AEP	Australian Energy Producers
ALARP	As low as reasonably practicable. Demonstration through reasoned and supported arguments that there are no other practicable options that could reasonably be adopted to reduce risks further.
AMOSC	Australian Marine Oil Spill Centre
AMSA	Australian Maritime Safety Authority
APPEA	Australian Petroleum Production & Exploration Association (became AEP in 2023)
BOP	Blowout Preventer
BP	Boiling point
CIMT	Corporate Incident Management Team
CS	Credible Scenario
DBCA	Western Australian Department of Biodiversity, Conservation and Attractions
DCCEEW	Commonwealth Department of Climate Change, Energy, the Environment and Water
DMPE	Western Australian Department of Mining, Petroleum and Exploration
DPIRD	Western Australian Department of Primary Industries and Regional Development
DTMI	Western Australian Department of Transport and Major Infrastructure
EOC	Emergency Operations Centre
EP	Environment Plan
FOB	Forward Operating Base
FPSO	Floating Production Storage and Offloading
HMA	Hazard Management Agency
HSE	Health, safety and environment
IAP	Incident Action Plan
IC	Incident Commander
ICC	Incident Control Centre
IMT	Incident Management Team
JRCC	Joint Rescue Coordination Centre
KBSB	King Bay Supply Base
LWI	Light Well Intervention
MDO	Marine Diesel Oil
MEECC	Maritime Environmental Emergency Coordination Centre
MEER	Maritime Environmental Emergency Response
MGO	Marine gas oil
MOP	Marine oil pollution
MSRC	Marine Spill Response Corporation
N/A	Not applicable / available
NEBA	Net Environmental Benefit Analysis
NOPSEMA	National Offshore Petroleum Safety and Environmental Management Authority (Australia)
OIM	Offshore Installation Manager

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Term	Definition
OPEP	Oil Pollution Emergency Plan
OSM	Operational and Scientific Monitoring
OSPRMA	Oil Spill Preparedness and Response Mitigation Assessment
OSRL	Oil Spill Response Limited
OSTM	Oil Spill Trajectory Modelling
OTL	Onshore Team Leader
PIC	Person In Charge
POLREP	Pollution Report
ROV	Remotely Operated Vehicles
RPA	Response Protection Area
SCAT	Shoreline Clean-up Assessment Technique
SFRT	Subsea First Response Toolkit
SMPC	State Marine Pollution Coordinator
SOPEP	Shipboard Oil Pollution Emergency Plan
TRP	Tactical Response Plan
WA	Western Australia
WAFIC	WA Fishing Industry Council
WCC	Woodside Communications Centre
WCCS	Worst Case Credible Scenario
WCP	Well Control Package
WSR	Woodside representative

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

APPENDIX A – CREDIBLE SPILL SCENARIOS AND HYDROCARBON INFORMATION

Table A - 1: Credible spill scenarios and hydrocarbon information

Scenario	Product	API gravity	Volume	Residue	Weathering rate		Suggested ADIOS2 Analogue[4]
CS-01 (WCCS) *12-hour subsea hydrocarbon release caused by loss of well containment during well intervention at CK-4 well.*	Cossack Light Crude	48.1°	550 m^3	15.2% (83.6 m^3)	12 hours (BP < 180 °C)	52.2%	Cossack light crude API 48.1
					24 hours (180 °C < BP < 265 °C)	20.5%	
					Several days (265 °C < BP < 380 °C)	11.9%	
CS-02 *Subsea hydrocarbon release caused by loss of well containment during well intervention at LH-3 well*	Cossack Light Crude	48.1°	117 m^3	15.2% (17.8 m^3)	12 hours (BP < 180 °C)	52.2%	Cossack light crude API 48.1
					24 hours (180 °C < BP < 265 °C)	20.5%	
					Several days (265 °C < BP < 380 °C)	11.9%	
CS-03 *Surface hydrocarbon release caused by vessel tank rupture due to vessel collision near the CK-4 well*	Marine Diesel Oil	37.2°	250 m^3	5% (12.5 m^3)	12 hours (BP < 180 °C)	6%	Diesel Fuel Oil - Southern ISA 1 (API 37.2)
					24 hours (180 °C < BP < 265 °C)	34.6%	
					Several days (265 °C < BP < 380 °C)	54.4%	
CS-04 *Surface hydrocarbon release caused by rupture of the 8-inch production flowline due to a dropped object near the Lambert Hermes manifold (LHM).*	Cossack Light Crude	48.1°	414 m^3	15.2% (62.9 m^3)	12 hours (BP < 180 °C)	52.2%	Cossack light crude API 48.1
					24 hours (180 °C < BP < 265 °C)	20.5%	
					Several days (265 °C < BP < 380 °C)	11.9%	
CS-05 *Surface hydrocarbon release caused by failure of a fuel transfer hose or fittings curing marine diesel bunkering operations for the LWIV.*	Marine Diesel Oil	37.2°	24 m^3	5% (1.2 m^3)	12 hours (BP < 180 °C)	6%	Diesel Fuel Oil - Southern ISA 1 (API 37.2)
					24 hours (180 °C < BP < 265 °C)	34.6%	
					Several days (265 °C < BP < 380 °C)	54.4%	
CS-06		48.1°	42 m^3	15.2%	12 hours (BP < 180 °C)	52.2%	

[4] Initial screening of possible ADIOS2 analogues considered hydrocarbons with similar APIs. Suggested selection is based on the closest distillation cut to the Woodside hydrocarbon. Only hydrocarbons with >380°C distillation cuts were included in selection process.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Scenario	Product	API gravity	Volume	Residue	Weathering rate		Suggested ADIOS2 Analogue[4]
Subsea hydrocarbon release caused by loss of containment from the CK4 SCSSV control line leak path during XT changeout, resulting in release of well fluids and crude oil inventory.	Cossack Light Crude			(6.4 m^3)	24 hours (180 °C < BP < 265 °C)	20.5%	Cossack light crude API 48.1
					Several days (265 °C < BP < 380 °C)	11.9%	

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

APPENDIX B – NOTIFICATION FORMS

Table B - 1: Notification forms

No.	Form Name	Link
1	Record of initial verbal notification to NOPSEMA template	Link
2	NOPSEMA Incident Report Form	[2]
3	Harmful Substances Report (POLREP – AMSA)	[10]
4	Marine Pollution Report (POLREP – DTMI)	[5]
5	AMOSC Service Contract	[11]
6a	OSRL Initial Notification Form	[12]
6b	OSRL Mobilisation Activation Form	[12]
6c	OSRL Operational and Scientific Monitoring Service Mobilisation Form	[12]
7	RPS Response Oil Spill Trajectory Modelling Request	[14]
8	Aerial Surveillance Observer Log	Link
9	Tracking buoy deployment instructions	Link

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

FORM 1 – RECORD OF INITIAL VERBAL NOTIFICATION TO NOPSEMA

NOPSEMA phone: [2]		
Date of call		
Time of call		
Call made by		
Call made to		
Information to be provided to NOPSEMA:		
Date and time of incident/ time caller became aware of incident		
Details of incident	1. Location	
	2. Title	
	3. Source	□ Platform
		□ Pipeline
		□ FPSO
		□ Exploration drilling
		□ Well
		□ Other (please specify)
	4. Hydrocarbon type	
	5. Estimated volume	
	6. Has the discharge ceased?	
	7. Fire, explosion or collision?	
	8. Environment Plan(s)	
	9. Other Details	
Actions taken to avoid or mitigate environmental impacts		
Corrective actions taken or proposed to stop, control or remedy the incident		
After the initial call is made to NOPSEMA, please send this record as soon as practicable to:		
NOPSEMA	[2]	
NOPTA	[3]	
DMPE	[4]	

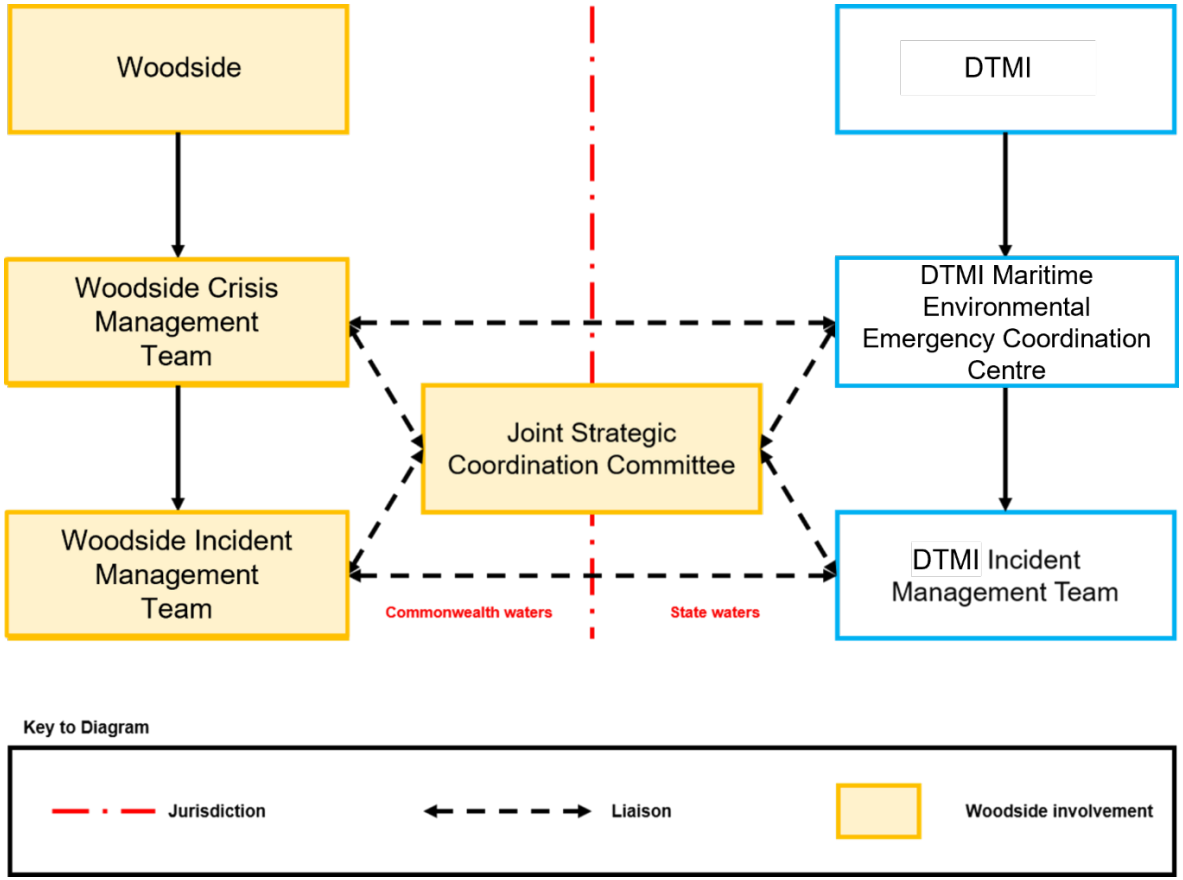
This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

APPENDIX C – SPILL ASSESSMENT QUESTIONS

What has happened?		
Date/time		
Spill source		
Spill cause		
Safety situation		
What is it?		
Oil type and name		
Oil properties	Specific gravity	
	Viscosity	
	Pour point	
	Asphaltenes	
	Wax content	
	Boiling point	
Where is it?		
Latitude and longitude		
Distance and bearing		
Affected area	☐ Offshore	
	☐ Subsea	
	☐ Shoreline	
	☐ Estuary	
	☐ Port	
	☐ Harbour	
	☐ Inland	
	☐ River	
	☐ Other (please detail):	
Water depth		
How big is it?		
Area		
Release type	☐ Instantaneous	Estimated volume:
	☐ Continuous release	Estimated release rate:
Where is it going?		
Metocean conditions		
Currents and tides		
What is in the way?		
Resources at risk		
Time until resource contact		
What's happening to it?		
Weathering processes		
Response actions underway		

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

APPENDIX D – COORDINATION STRUCTURE FOR A CONCURRENT HYDROCARBON SPILL IN BOTH COMMONWEALTH AND STATE WATERS/ SHORELINES[5]



The Control Agency for a hydrocarbon spill in Commonwealth waters resulting from an offshore petroleum activity is Woodside (the Petroleum Titleholder).

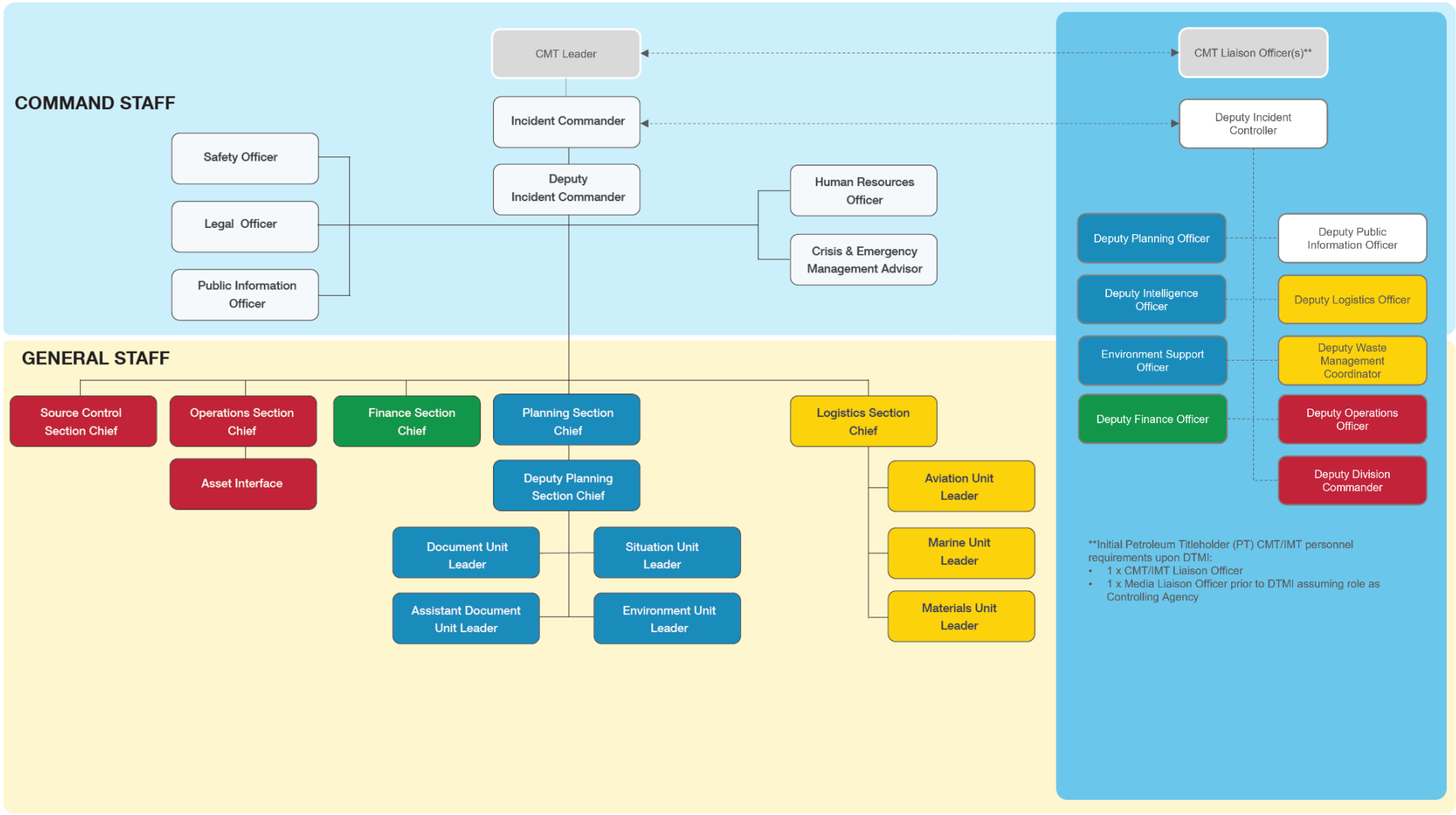
The Control Agency/ Hazard Management Agency (HMA) for a hydrocarbon spill in State waters/shorelines resulting from an offshore petroleum activity is DTMI. DTMI will appoint an Incident Controller and form a separate IMT to only manage the spill within State waters/shorelines.

[5] Adapted from DTMI Offshore Petroleum Industry Guidance Note, Marine Oil Pollution: Response and Consultation Arrangements July 2020. Note: For full structure up to Commonwealth Cabinet/Minister refer to Marine Oil Pollution: Response and Consultation Arrangements Section 6.5, Figure 4.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

APPENDIX E – WOODSIDE INCIDENT MANAGEMENT STRUCTURE

Woodside Incident Management Structure for Hydrocarbon Spill (including Woodside Liaison Officers Command Structure within DTMI IMT if required) is shown below. Woodside's CIMT would operate from the Emergency Operations Centre (EOC) at the Woodside headquarters in Perth.



This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

APPENDIX F – WOODSIDE LIAISON OFFICER RESOURCES TO DTMI

In the event that DTMI is required to establish an IMT, Woodside will make available an appropriate number of appropriately qualified persons to work within the DTMI IMT.

It is an expectation that Woodside's nominated CMT Liaison Officer and the Deputy Incident Controller attend the DTMI Fremantle Incident Control Centre (ICC) as soon as possible after the formal request has been made by the State Marine Pollution Coordinator (SMPC), and that the remaining initial cohort will attend no later than 8 am on the day following the request being formally made to Woodside by the SMPC. For Woodside personnel designated to serve in DTMI's Forward Operating Base (FOB), it is expected that they arrive at the FOB no later than 24 hours from the formal request being made by the SMPC.

Area	Role	Woodside personnel[6]	Key Duties	#
DTMI Maritime Environmental Emergency Coordination Centre (MEECC)	CMT Liaison Officer	CIMT Liaison	• Provide a direct liaison between the CMT and the MEECC. • Facilitate effective communications and coordination between the CIMT Leader and SMPC. • Offer advice to SMPC on matters pertaining to PT crisis management policies and procedures.	1
DTMI IMT Incident Control	Deputy Incident Controller	Deputy Incident Commander (Deputy IC)	• Provide a direct liaison between the PT IMT and DTMI IMT. • Facilitate effective communications and coordination between the PT IC and the DTMI IC. • Offer advice to the DTMI IC on matters pertaining to PT incident response policies and procedures. • Offer advice to the Safety Coordinator on matters pertaining to PT safety policies and procedures, particularly as they relate to PT employees or contractors operating under the control of the DTMI IMT.	1
DTMI IMT Intelligence	Deputy Intelligence Officer	Situation Unit Leader (Intelligence)	• As part of the Intelligence Team, assist the Intelligence Officer in the performance of their duties in relation to situation and awareness. • Facilitate the provision of relevant modelling and predications from the PT IMT. • Assist in the interpretation of modelling and predictions originating from the PT IMT. • Facilitate the provision of relevant situation and awareness information originating from the DTMI IMT to the PT IMT. • Facilitate the provision of relevant mapping from the PT IMT. • Assist in the interpretation of mapping originating from the PT IMT. • Facilitate the provision of relevant mapping originating from the DTMI IMT to the PT IMT.	1
DTMI IMT Intelligence – Environment	Environment Support Officer	Deputy Environment Unit Leader	• As part of the Intelligence Team, assist the Environment Coordinator in the performance of their duties in relation to the provision of environmental support into the planning process. • Assist in the interpretation of the PT OPEP and relevant TRP plans. • Facilitate in requesting, obtaining and interpreting environmental monitoring data originating from the PT IMT.	1

[6] *These positions would be mobilised, in consultation with DTMI, to align to the actual spill scenario. The selected roles and/or individual personnel would be subject to continued evaluation to ensure continued 'best fit'. For CIMT roster arrangements, contact the WCC. During a prolonged response, additional personnel may be sourced through internal resourcing and mutual Aid agreements such as the AMOSC Core Group via* AMOSC Service Contract

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Area	Role	Woodside personnel[6]	Key Duties	#
			• Facilitate the provision of relevant environmental information and advice originating from the DTMI IMT to the PT IMT.	
DTMI IMT Planning-Plans/ Resources	Deputy Planning Officer	Deputy Planning Section Chief	• As part of the Planning Team, assist the Planning Officer in the performance of their duties in relation to the interpretation of existing response plans and the development of incident action plans and related sub plans. • Facilitate the provision of relevant IAP and sub plans from the PT IMT. • Assist in the interpretation of the PT OPEP from the PT. • Assist in the interpretation of the PT IAP and sub plans from the PT IMT. • Facilitate the provision of relevant IAP and sub plans originating from the DTMI IMT to the PT IMT. • Assist in the interpretation of the PT existing resource plans. • Facilitate the provision of relevant components of the resource sub plan originating from the DTMI IMT to the PT IMT. **(Note this individual must have intimate knowledge of the relevant PT OPEP and planning processes)**	1
DTMI IMT Public Information-Media/ Community Engagement	Deputy Public Information Officer	Deputy Public Information Officer	• As part of the Public Information Team, provide a direct liaison between the PT Media team and DTMI IMT Media team. • Facilitate effective communications and coordination between the PT and DTMI media teams. • Assist in the release of joint media statements and conduct of joint media briefings. • Assist in the release of joint information and warnings through the DTMI Information and Warnings team. • Offer advice to the DTMI Media Coordinator on matters pertaining to PT media policies and procedures. • Facilitate effective communications and coordination between the PT and DTMI Community Liaison teams. • Assist in the conduct of joint community briefings and events. • Offer advice to the DTMI Community Liaison Coordinator on matters pertaining to the PT community liaison policies and procedures. • Facilitate the effective transfer of relevant information obtained from through the Contact Centre to the PT IMT.	1
DTMI IMT Logistics	Deputy Logistic Officer	Deputy Logistics Section Chief	• As part of the Logistics Team, assist the Logistics Officer in the performance of their duties in relation to the provision of supplies to sustain the response effort. • Facilitate the acquisition of appropriate supplies through the PTs existing OSRL, AMOSC and private contract arrangements. • Collects Request Forms from DTMI to action via PT IMT. **(Note this individual must have intimate knowledge of the relevant PT logistics processes and contracts)**	1

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Area	Role	Woodside personnel[6]	Key Duties	#
DTMI IMT Finance-Accounts/ Financial Monitoring	Deputy Finance Officer	Deputy Finance Section Chief	• As part of the Finance Team, assist the Finance Officer in the performance of their duties in relation to the setting up and payment of accounts for those services acquired through the PTs existing OSRL, AMOSC and private contract arrangements. • Facilitate the communication of financial monitoring information to the PT to allow them to track the overall cost of the response. • Assist the Finance Officer in the tracking of financial commitments through the response, including the supply contracts commissioned directly by DTMI and to be charged back to the PT.	1
DTMI IMT Operations	Deputy Operations Officer	Deputy Operations Section Chief	• As part of the Operations Team, assist the Operations Officer in the performance of their duties in relation to the implementation and management of operational activities undertaken to resolve an incident. • Facilitate effective communications and coordination between the PT Operations Section and the DTMI Operations Section. • Offer advice to the DTMI Operations Officer on matters pertaining to PT incident response procedures and requirements. • Identify efficiencies and assist to resolve potential conflicts around resource allocation and simultaneous operations of PT and DTMI response efforts.	1
DTMI IMT Operations – Waste Management	Deputy Waste Management Coordinator	Deputy Waste Coordinator (Materials)	• As part of the Operations Team, assist the Waste Management Coordinator in the performance of their duties in relation to the provision of the management and disposal of waste collected in State waters. • Facilitate the disposal of waste through the PT's existing private contract arrangements related to waste management and in line with legislative and regulatory requirements. • Collects Request Forms from DTMI to action via PT IMT.	1
DTMI FOB Operations Command	Deputy Division Commander	FOB Deputy Incident Commander	• As part of the Field Operations Team, assist the Division Commander in the performance of their duties in relation to the oversight and coordination of field operational activities undertaken in line with the IMT Operations Section's direction. • Provide a direct liaison between the PT FOB and DTMI FOB. • Facilitate effective communications and coordination between the PT Division Commander and the DTMI Division Commander. • Offer advice to the DTMI Division Commander on matters pertaining to PT incident response policies and procedures. • Assist the Safety Coordinator deployed in the FOB in the performance of their duties, particularly as they relate to PT employees or contractors. • Offer advice to the Safety Coordinator deployed in the FOB on matters pertaining to PT safety policies and procedures.	1
			Total	11

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

APPENDIX G – DTMI LIAISON OFFICER RESOURCES TO WOODSIDE

Once DTMI activates a State waters/ shorelines IMT, DTMI will make available the following roles to Woodside.

Area	DTMI Liaison Role	Personnel Sourced from:	Key Duties	#
Woodside CIMT	DTMI Liaison Officer (prior to DTMI assuming Controlling Agency)/ Deputy Incident Controller – State waters (after DTMI assumes Controlling Agency)	DTMI	• Facilitate effective communications between DTMI's SMPC/ Incident Controller and the Petroleum Titleholder's appointed CMT Leader / Incident Controller. • Provide enhanced situational awareness to DTMI of the incident and the potential impact on State waters. • Assist in the provision of support from DTMI to the Petroleum Titleholder. • Facilitate the provision technical advice from DTMI to the Petroleum Titleholder Incident Controller as required.	1
Woodside CIMT Public Information – Media	DTMI Media Liaison Officer	DTMI	• Provide a direct liaison between the PT Media team and DTMI IMT Media team. • Facilitate effective communications and coordination between the PT and DTMI media teams. • Assist in the release of joint media statements and conduct of joint media briefings. • Assist in the release of joint information and warnings through the DTMI Information & Warnings team. • Offer advice to the PT Media Coordinator on matters pertaining to DTMI and wider Government media policies and procedures.	1
			Total DTMI Personnel Initial Requirement to Woodside	2

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

APPENDIX I MASTER EXISTING ENVIRONMENT

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Description of the Existing Environment

August 2026

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

This page has been intentionally left blank

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table of contents

1. Introduction 11
1.1 Purpose 11
1.2 Scope 11
1.3 Methodology 12
1.4 Review and revision 13
2. Physical environment 15
2.1 Regional context 15
2.2 Marine systems of the North-west Marine Region (NWMR) 15
2.3 Meteorology and oceanography 17
2.3.1 Browse 28
2.3.2 North West Shelf/Scarborough 28
2.3.3 North West Cape 29
2.4 Physical environment of the NWMR 29
2.5 Air quality 30
3. Matters of national environmental significance 34
3.1 Summary of matters of national environmental significance 34
3.2 Part 13 statutory instruments for Environment Protection and Biodiversity Conservation Act listed threatened and migratory species in the NWMR, South-west Marine Region (SWMR) and North Marine Region (NMR) 37
4. Biological communities 41
4.1 Regional context 41
4.2 Biological productivity of the NWMR 41
4.3 Planktonic communities in the NWMR 42
4.3.1 Browse 43
4.3.2 North West Shelf/Scarborough 43
4.3.3 North West Cape 43
5. Benthic communities and habitats 44
5.1 Regional context 44
5.2 Key benthic communities and habitats of the NWMR 53
5.2.1 Browse 53
5.2.2 North West Shelf 56
5.2.3 North West Cape 60
5.2.4 Shark Bay 61
6. Fishes, sharks and rays 63
6.1 Regional context 63
6.2 Fish, shark and rays in the NWMR 64
6.2.1 Fish 67
6.2.2 Sharks and sawfishes 67
6.2.3 Rays 72
6.3 Fish, shark and sawfish biologically important areas in the NWMR 72
7. Marine reptiles 76
7.1 Regional context 76
7.2 Marine reptiles in the NWMR 76
7.2.1 Marine turtles 79

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

7.2.2 Sea snakes 106
7.2.3 Crocodiles 107
7.2.4 Water monitors 107
8. Marine mammals 109
8.1 Regional context 109
8.2 Marine mammals in the NWMR 109
8.2.1 Cetaceans 113
8.2.2 Dugongs 121
8.2.3 Pinnipeds 121
8.2.4 Habitat critical to survival for marine mammals 122
8.2.5 Marine mammal biologically important areas 124
9. Seabirds and migratory shorebirds of the NWMR 138
9.1 Regional context 138
9.2 Seabirds in the NWMR 147
9.2.1 High-occurrence key seabird species 147
9.2.2 Moderate-occurrence key seabird species 154
9.2.3 Biologically important areas for seabirds 155
9.3 Shorebirds in the NWMR 170
9.4 Other marine birds in the NWMR 184
10. Threatened and migratory species' seasonal presence 185
11. Key ecological features 190
12. Protected areas 198
12.1 Regional context 198
12.2 World Heritage properties 198
12.2.1 Murujuga Cultural Landscape World Heritage property 198
12.3 National and Commonwealth Heritage places 200
12.4 Wetlands of international importance (listed under the Ramsar Convention) 203
12.5 Australian Marine Parks 203
12.5.1 North-west Marine Parks Network 203
12.5.2 Commonwealth Marine Parks within Indian Ocean territory 220
12.6 Threatened ecological communities 222
12.7 Australian Whale Sanctuary 222
12.8 State marine parks and reserves 222
12.9 Summary of protected areas within the NWMR 223
13. Socioeconomic and cultural environment 241
13.1 Cultural values and heritage 241
13.1.1 Native title 241
13.1.2 Coastal Indigenous groups 242
13.1.3 Sea Country 246
13.1.4 Marine parks 247
13.1.5 Indigenous Protected Areas 247
13.1.6 Indigenous cultural heritage 254
13.1.7 Historic sites of significance 258
13.1.8 Historic underwater heritage 258
13.2 Socioeconomic values 260
13.2.1 Commercial fisheries – Commonwealth and State 260

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

13.2.2 Fish habitat protection areas 296
13.2.3 Aquaculture 297
13.3 Fisheries – traditional 298
13.4 Tourism and recreation 300
13.4.1 Kimberley region 300
13.4.2 Pilbara region 300
13.4.3 Ningaloo-Leeuwin region 300
13.5 Shipping 301
13.6 Petroleum basins 301
13.7 Defence 304
14. References 306
15. List of terms and acronyms 346
Appendix A Protected matters search reports for the NWMR, SWMR and NMR 349
Appendix B Supporting figures for Section 2.3 meteorology and oceanography 350
Browse 350
North West Shelf/Scarborough 355
Scarborough 358
North West Shelf 360
Scarborough 362
North West Cape 364
Appendix C Summary of seabird presence updates for 2026 review 369

Table of figures

Figure 1-1: Marine bioregions – NWMR, SWMR, NMR and South-east (as defined under the Environment Protection and Biodiversity Conservation Act (EPBC Act)), including adjacent coastal waters and shoreline habitats 14
Figure 2-1: The marine systems of the NWMR 16
Figure 2-2: Average daily maximum air temperature for land surface adjacent to NWMR – northern wet season 20
Figure 2-3: Average daily maximum air temperature for land surface adjacent to NWMR – northern dry season 21
Figure 2-4: Average monthly surface wind direction and velocity for NWMR – February, northern wet season 22
Figure 2-5: Average monthly surface wind direction and velocity for the NWMR – July, northern dry season 23
Figure 2-6: Tropical cyclone annual occurrence and cyclone tracks for the NWMR 24
Figure 2-7: Ocean surface temperature for the NWMR – February, northern wet season 25
Figure 2-8: Ocean surface temperature for the NWMR – July, northern dry season 26
Figure 2-9: Ocean surface and sub-surface currents of the NWMR and wider region 27
Figure 2-10: The eight provincial bioregions of the NWMR 31
Figure 2-11: Bathymetry of the NWMR 32
Figure 2-12: Overview of the seabed sediments of the NWMR 33
Figure 5-1: The position of Scott Reef, Ashmore Reef and the Rowley Shoals off north-western Australia and location of permanent long-term monitoring sites 54
Figure 5-2: Habitat maps of Rankin Bank and Glomar Shoal 59
Figure 6-1: Whale shark biologically important areas (BIAs) for the NWMR and tagged whale shark satellite tracks 74
Figure 6-2: Sawfish BIAs for the NWMR 75
Figure 7-1: Generalised life cycle of marine turtles 79
Figure 7-2: Flatback turtle habitat critical to survival (nesting beaches and internesting buffers) for the NWMR 90

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Figure 7-3: Green turtle habitat critical to survival (nesting beaches and internesting buffers) for the NWMR 91
Figure 7-4: Hawksbill turtle habitat critical to survival (nesting beaches and internesting buffers) for the NWMR 92
Figure 7-5: Loggerhead turtle habitat critical to survival (nesting beaches and internesting buffers) for the NWMR 93
Figure 7-6: Olive ridley turtle habitat critical to survival (nesting beaches and internesting buffers) for the NWMR 94
Figure 7-7: Green turtle BIAs within the NWMR 101
Figure 7-8: Hawksbill turtle BIAs within the NWMR 102
Figure 7-9: Flatback turtle BIAs within the NWMR 103
Figure 7-10: Loggerhead turtle BIAs within the NWMR 104
Figure 7-11: Olive ridley turtle BIAs within the NWMR 105
Figure 8-1: Habitat critical to the survival for the southern right whale in the NWMR 123
Figure 8-2: Humpback whale BIAs for the NWMR 129
Figure 8-3: Humpback whale tagged tracks for northbound and southbound migrations 130
Figure 8-4: Pygmy blue whale BIAs for the NWMR and tagged whale tracks for northbound migration 131
Figure 8-5: Southern right whale BIAs for the NWMR; migration and reproduction BIAs along the coast extend to 3 nm 132
Figure 8-6: Australian snubfin dolphin BIAs for the NWMR 133
Figure 8-7: Indo-Pacific humpback dolphin BIAs for the NWMR 134
Figure 8-8: Indo-Pacific/Indian Ocean spotted bottlenose dolphin BIAs for the NWMR 135
Figure 8-9: Dugong BIAs for the NWMR 136
Figure 8-10: Australian sea lion BIAs in the northern extent of the SWMR closest to the NWMR 137
Figure 9-1: Australian fairy tern BIAs for the NWMR 158
Figure 9-2: Brown booby BIAs for the NWMR 159
Figure 9-3: Greater frigatebird BIAs for the NWMR 160
Figure 9-4: Lesser frigatebird BIAs for the NWMR 161
Figure 9-5: Lesser crested tern BIAs for the NWMR 162
Figure 9-6: Little shearwater BIAs for the NWMR 163
Figure 9-7: Little tern BIAs for the NWMR 164
Figure 9-8: Red-footed booby BIAs for the NWMR 165
Figure 9-9: Roseate tern BIAs for the NWMR 166
Figure 9-10: Sooty tern BIAs for the NWMR 167
Figure 9-11: Wedge-tailed shearwater BIAs for the NWMR 168
Figure 9-12: White-tailed tropicbird BIAs for the NWMR 169
Figure 11-1: Key ecological features within the NWMR 197
Figure 12-1: World Heritage properties and National and Commonwealth Heritage listed places in the NWMR 202
Figure 12-2: Commonwealth and State Marine Protected Areas for the NWMR 240
Figure 13-1: Coastal native title determination outcomes in the NWMR 243
Figure 13-2: Coastal native title claims and determinations and Indigenous Land Use Agreements in the NMR 244
Figure 13-3: Coastal native title claims and determinations and Indigenous Land Use Agreements in the SWMR 245
Figure 13-4: Indigenous Protected Areas in Australia 253
Figure 13-5: Indicative bathymetry of the ancient submerged landscape 257
Figure 13-6: Shipwrecks in the NWMR 259
Figure 13-7: Pilbara Fish Trawl (Interim) Managed Fishery five-year average 291
Figure 13-8: Pilbara Line Managed Fishery five-year average 292
Figure 13-9: Pilbara Trap Managed Fishery five-year average 293
Figure 13-10: North West Slope Trawl Fishery five-year average 294
Figure 13-11: Western Deepwater Trawl Fishery five-year average 295
Figure 13-12: Memorandum of Understanding 74 Box – operations of Indonesian traditional fishermen in areas of the Australian Fishing Zone and Continental Shelf, 1974 299
Figure 13-13: Petroleum basins within the NWMR 303
Figure 13-14: Defence areas within the NWMR 305

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table of tables

Table 1-1: Description of the marine bioregions, marine systems and associated Woodside activity area and key environmental sensitivities 11
Table 2-1: Key physical characteristics of the NWMR, SWMR and NMR 15
Table 2-2: Key characteristics of the marine systems of the NWMR 17
Table 2-3: NWMR climate and oceanography summary 17
Table 2-4: Summary meteorology and oceanography for Browse 28
Table 2-5: Summary meteorology and oceanography for the North West Shelf and Scarborough 28
Table 2-6: Summary meteorology and oceanography for the North West Cape 29
Table 3-1: Summary of matters of national environmental significance (MNES) identified by the EPBC Act Protected Matters Search Tool (PMST) within and potentially occurring within the NWMR 35
Table 3-2: Summary of MNES identified by the EPBC Act PMST within and potentially occurring within the SWMR 35
Table 3-3: Summary of MNES identified by the EPBC Act PMST within and potentially occurring within the NMR 36
Table 3-4: Summary of EPBC Act threatened and migratory species to be considered for evaluating impacts or risks for Woodside activities 37
Table 5-1: Benthic communities and habitats within the NWMR 45
Table 5-2: Benthic communities and habitats within the SWMR 48
Table 5-3: Benthic communities and habitats within the NMR 50
Table 6-1: Description of the fish assemblages of the marine bioregions 63
Table 6-2: Threatened and migratory fish, shark and ray species identified by the EPBC Act PMST that may, likely or are known to occur within the NWMR 65
Table 6-3: Information about the EPBC Act listed threatened fish species that may, likely or are known to occur within the NWMR 67
Table 6-4: Information about the EPBC Act listed threatened shark and sawfish species that may, likely or are known to occur within the NWMR 67
Table 6-5: Information about migratory ray species within the NWMR 72
Table 6-6: Fish, whale shark and sawfish BIAs within the NWMR (Source: Geoscience Australia, 2026) 73
Table 7-1: Threatened and migratory marine reptile species identified by the EPBC Act PMST that may, likely or are known to occur within the NWMR 77
Table 7-2: Marine turtle key information within the NWMR 80
Table 7-3: Genetic stock, habitat critical to survival and key life cycle stage seasonality of marine turtles within the NWMR 87
Table 7-4: Marine turtle BIAs within the NWMR 95
Table 7-5: Information about threatened sea snake species within the NWMR 107
Table 7-6: Water monitors identified within the NWMR 108
Table 8-1: Threatened and migratory marine mammal species identified by the EPBC Act PMST that may, likely or are known to occur within the NWMR 110
Table 8-2: Information about the threatened/migratory cetacean species within the NWMR 113
Table 8-3: Marine mammal BIAs within the NWMR 125
Table 9-1: High and moderate occurrence seabird and migratory shorebird species (threatened/migratory/marine) identified by the EPBC Act PMST and NWMR Seabird and Shorebird Existing Knowledge and Threats report as potentially occurring within the NWMR 139
Table 9-2: Species summary for moderate occurrence pelagic and nearshore seabird species within the NWMR 155
Table 9-3: Seabird BIAs within the NWMR 156
Table 9-4: Species summary for high and selected moderate occurrence key shorebird species 172
Table 9-5: Species summary for moderate occurrence key shorebird species 183
Table 9-6: Species summary for high occurrence key other marine bird species 184
Table 10-1: Seasonal sensitivity of key threatened and migratory species in the NWMR 185
Table 11-1: Key ecological features within the NWMR 191
Table 12-1: Summary of Australian Marine Parks in the North-west Marine Park Network 204
Table 12-2: Summary of Australian Marine Parks within Indian Ocean territories 220
Table 12-3: Summary of threatened ecological communities within the NWMR 222
Table 12-4: Protected areas within the NWMR 223
Table 13-1: Commonly identified Sea Country species and habitats 246
Table 13-2: Indigenous Protected Areas within the NWMR 247
Table 13-3: Intangible heritage values associated with Sea Country 254

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 13-4: Commonwealth managed fisheries 261
Table 13-5: State managed fisheries 265
Table 15-1: List of terms and acronyms 346

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

1. INTRODUCTION

1.1 Purpose

This document applies, where indicated in the relevant Environment Plan (EP), to Woodside Energy Ltd. and Woodside Energy Group (Woodside) activities and operations.

1.2 Scope

Woodside is the titleholder of multiple petroleum titles for exploration, development, production and decommissioning activities in the marine waters of north-western Western Australia (WA). This document includes details of the relevant values and sensitivities of the environment as required by the Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023 (Commonwealth) (OPGGS (E) Regulations), to inform the impact and risk evaluation of Woodside's activities. Additional information, appropriate to the nature and scale of the impacts and risks of activities that may interact with the environment outside of the scope of this document, will be used to further inform impact and risk assessments and be included in the Description of the Existing Environment of individual EPs.

This Master Existing Environment document identifies and describes the values and sensitivities of the existing environment within the broadly defined Woodside activity areas located in Commonwealth and coastal waters off north-western WA, with a focus on the North-west Marine Region (NWMR), including adjacent coastal waters and shoreline habitats. This document also summarises the regional key values of the South-west Marine Region (SWMR) (extending the WA/South Australia (SA) border) and the North Marine Region (NMR), including adjacent coastal waters and shoreline habitats, as they are relevant to the environment that may be affected (EMBA)[1].

The marine bioregions are described Table 1-1 and shown in Figure 1-1. The NWMR is divided into three large-scale ecological marine systems based on the influence of major ocean currents, seafloor features and eco-physical processes, including Kimberley, Pilbara and Ningaloo-Leeuwin. For the NWMR, Table 1-1 outlines the associated marine systems and relevant Woodside activity areas.

Table 1-1: Description of the marine bioregions, marine systems and associated Woodside activity area and key environmental sensitivities

Marine bioregion*	Marine system	Relevant key environmental sensitivities	Woodside activity area
North-west (Department of Sustainability, Environment, Water, Population and Communities (DSEWPaC) 2012a) The NWMR includes all Commonwealth waters (from three nautical miles (NM) from the Territorial Sea Baseline to the 200 nm Exclusive Economic Zone (EEZ) boundary) extending from the WA/Northern Territory (NT) border to Kalbarri, south of Shark Bay in WA, covering an area of about 1.07 million km², and includes extensive areas of shallower waters on the continental shelf, as well as deep areas of abyssal plain where water is 5,000 m or deeper.	**Kimberley** The northern boundary is the limit of the NWMR; the southern boundary extends west of Broome to the northern edge of the Exmouth Plateau.	• Scott Reef • Rowley Shoals	Browse Basin
	Pilbara The northern boundary extends west of Broome to the northern edge of Exmouth plateau; the southern boundary follows a line west of North West Cape along the southern boundary of Exmouth Plateau.	• Dampier Archipelago • Rankin Bank • Glomar Shoal	North West Shelf (NWS), inclusive of Scarborough gas fields
	Ningaloo-Leeuwin The northern boundary extends from shore at North West Cape directly out along Cape Range escarpment; the southern boundary is the limit of the NWMR.	• Ningaloo • Muiron Islands • Exmouth Gulf	North West Cape

[1] The EMBA encompasses the environmental and social values and sensitivities that might be contacted by surface or subsurface hydrocarbons in the unlikely event of any worst-case spill from Woodside's activities. The values and sensitivities include the physical environments and biological communities present, in addition to protected species and areas, and socioeconomic and cultural values.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Marine bioregion*	Marine system	Relevant key environmental sensitivities	Woodside activity area
South-west (DSEWPaC 2012b)** The SWMR comprises Commonwealth waters from the eastern end of Kangaroo Island in SA to Shark Bay in WA. The region spans about 1.3 million km² of temperate and subtropical waters and abuts the coastal waters of SA and WA.	Not applicable.	Key environmental values at a regional level considered relevant in the context of the EMBA	No applicable Woodside activity area
North (DSEWPaC 2012c) The NMR comprises Commonwealth waters from West Cape York Peninsula to the NT/WA border). The region covers about 625,689 km² of tropical waters in the Gulf of Carpentaria and Arafura and Timor seas, and abuts the coastal waters of Queensland and the NT.			

**The EMBA for the marine bioregions used in this document has been extended to include adjacent coastal waters and shoreline habitats.*

***The extent of the SWMR for this document has been adjusted to only include marine and coastal waters extending from Shark Bay in WA to the WA/SA border. The boundary of the SWMR as described by DSEWPaC (2012b) extends to the eastern end Kangaroo Island in SA. However, this boundary lies outside the scope of this document.*

1.3 Methodology

This document is informed by resources that include:

- a search of the Department of Climate Change, Energy, the Environment and Water (DCCEEW) Protected Matters Search Tool (PMST) for the marine bioregions (NWMR, SWMR and NMR) and adjacent coastal waters and shoreline habitats (Appendix A)
- State (WA)/Commonwealth marine park management plans
- the *Environment Protection and Biodiversity Conservation* (EPBC) *Act 1999* (Commonwealth) (EPBC Act) Species Profile and Threats Database (SPRAT)
- EPBC Act Part 13 statutory instruments: recovery plans, conservation advice and wildlife conservation plans for listed threatened and migratory species
- peer-reviewed scientific publications, as well as Woodside and joint venture-funded studies and other titleholder-funded study findings available in the public domain.

The PMST uses a conservative, grid-based search methodology rather than precise coordinates to determine the potential presence of matters of national environmental significance (MNES). For marine areas located more than 30 km offshore, this involves using 32 km × 32 km grid cells to identify spatial overlap with listed MNES. As a result, the PMST report (Appendix A) may identify MNES that do not directly intersect with the EMBA, including environmental and socioeconomic receptors that do not overlap with the marine environment or have coastal interface. The Australian Marine Spatial Information System was used to determine the exact location of a feature to determine whether it overlaps or is adjacent to the EMBA. Accordingly, MNES identified in the PMST that are not within the EMBA or associated with marine or coastal environments, and species that do not rely on marine or shoreline habitats (for example, species with no marine foraging or life-cycle processes), have not been assessed within this document.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

1.4 Review and revision

The information presented in this document is reviewed and updated least every five years. Key updates are captured in a ‘change register’. Material risk may trigger updates within the five-year review period, as per the OPGGS (E) Regulations. Key updates may include the status of EPBC Act listed species, Part 13 instruments, policies and guidelines, key advice from external stakeholders, and recently published scientific literature.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

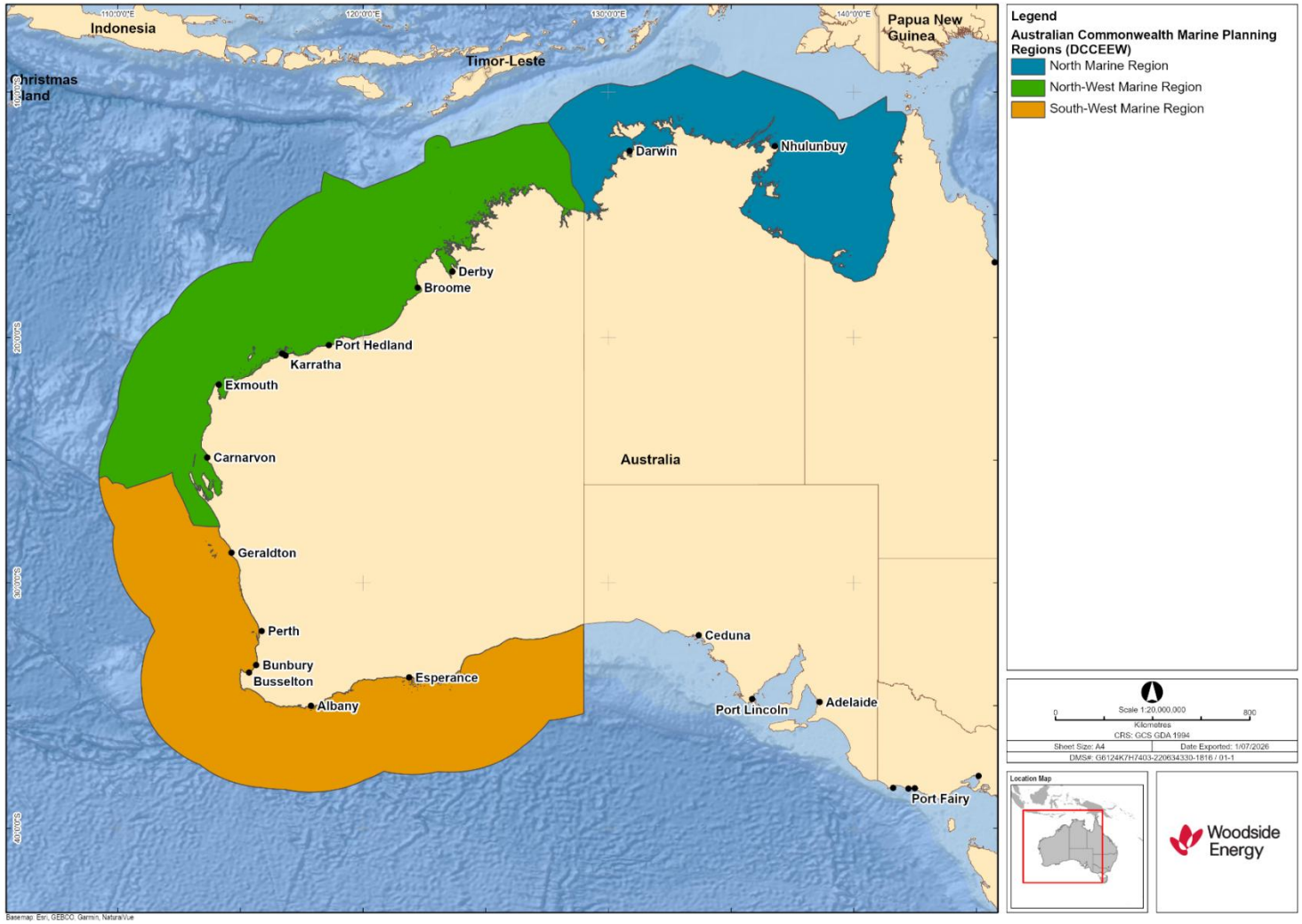


Figure 1-1: Marine bioregions – NWMR, SWMR, NMR and South-east (as defined under the Environment Protection and Biodiversity Conservation Act (EPBC Act)), including adjacent coastal waters and shoreline habitats

Refer to DCCEEW (2021b)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

2. PHYSICAL ENVIRONMENT

2.1 Regional context

Table 2-1 presents the key physical characteristics of the NWMR, SWMR and NMR. The remainder of this section then focuses entirely on the NWMR.

Table 2-1: Key physical characteristics of the NWMR, SWMR and NMR

Bioregion	Key characteristics
NWMR (DSEWPaC 2012a)	The NWMR experiences a tropical monsoonal climate towards the northern extent of the region, transitioning to tropical arid and subtropical arid within the central and southern areas of the region. The NWMR is part of the Indo-Australian Basin, the ocean region between the north-west coast of Australia and the Indonesian islands of Java and Sumatra. Dominant currents in the region include: the South Equatorial Current, the Indonesian Throughflow, the Eastern Gyral Current, and the Leeuwin Current (Department of Environment, Heritage, Water and the Arts (DEWHA) 2007a). The seafloor of the NWMR consists of four general feature types – continental shelf, continental slope, continental rise and abyssal plain – and is distinguished by a range of topographic features, including canyons, plateaus, terraces, ridges, reefs, banks and shoals.
SWMR (DSEWPaC 2012b)	The SWMR contains both subtropical and temperate climates, with overall light climatic cycles. The SWMR experiences complex and unusual oceanographic patterns, driven largely by the Leeuwin Current and its associated currents, which have a significant influence on biodiversity distribution and abundance. The major seafloor features of the SWMR include a narrow continental shelf on the west coast to the waters off south-west WA, and a wide continental shelf dominated by sandy carbonate sediments of marine origin in the Great Australian Bight. The region also contains a steep, muddy continental slope, many canyons and large tracts of abyssal plains.
NMR (DSEWPaC 2012c)	The NMR experiences a tropical monsoonal climate with complex weather cycles, including high temperatures and heavy seasonal yet variable rainfall and cyclones, which can be both destructive (loss of seagrass and mangroves) and constructive (mobilisation of sediment into coastal habitats). The NMR comprises Commonwealth waters from West Cape York Peninsula to the NT/WA border, covering tropical waters in the Gulf of Carpentaria and Arafura and Timor seas. Currents in the NMR are driven largely by strong winds and tides, with only minor influences from oceanographic currents such as the Indonesian Throughflow and the South Equatorial Current. The seafloor of the NMR consists mainly of a wide continental shelf, as well as other geomorphological features such as shoals, banks, terraces, valleys, shallow canyons and limestone pinnacles.

2.2 Marine systems of the North-west Marine Region (NWMR)

The NWMR is divided into three large-scale ecological marine systems – the Kimberley, the Pilbara and Ningaloo-Leeuwin – based on the influence of major ocean currents, seafloor features and eco-physical processes (such as climate, tides, freshwater inflow) upon the region (DSEWPaC 2012a).

The three large-scale marine systems approximate the Woodside activity areas, which include Browse Basin, the NWS/Scarborough, and North West Cape (see Section 1.2 for Woodside activity areas) within the NWMR (Figure 2-1). Table 2-2 outlines the key characteristics of each marine system.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

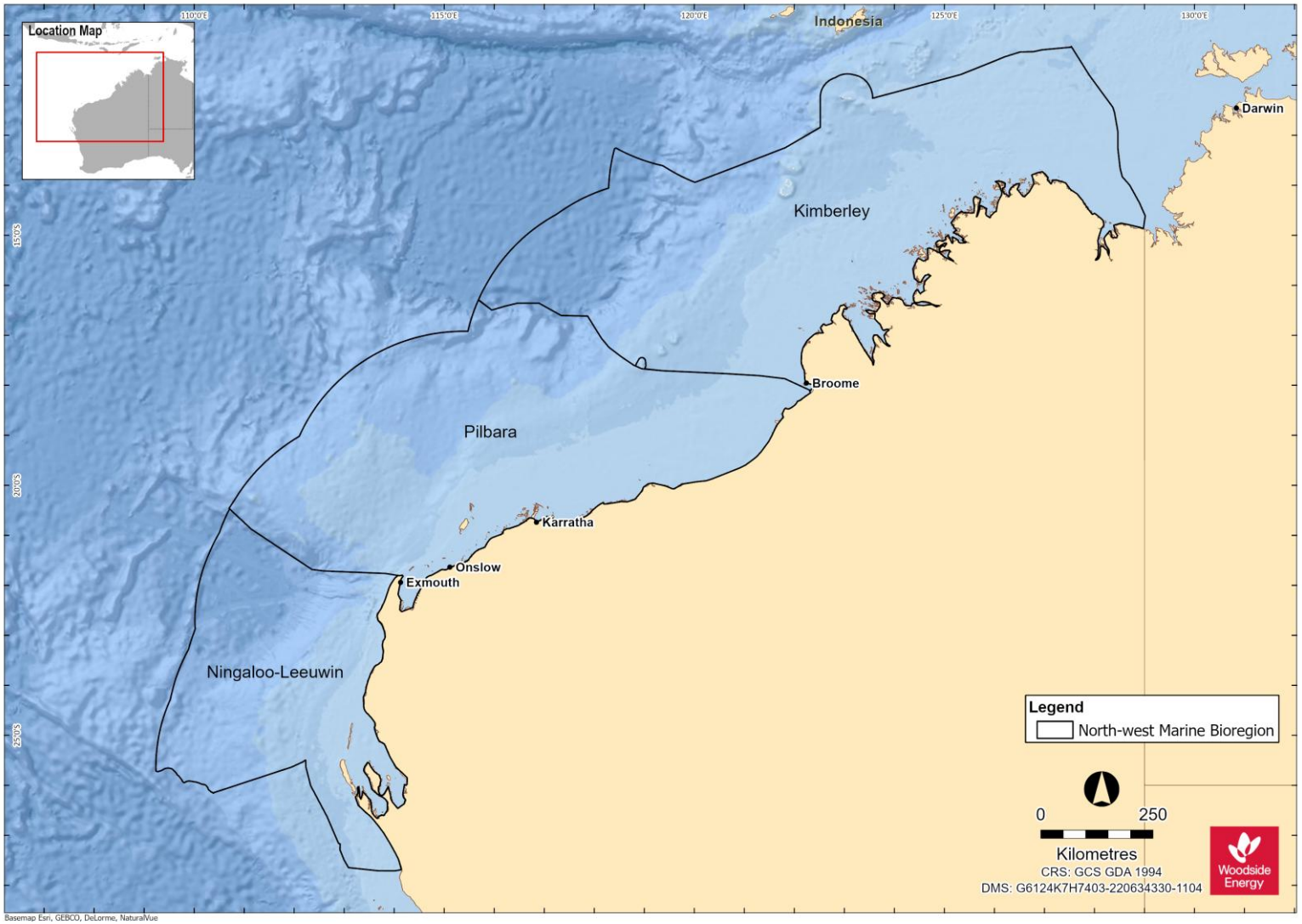


Figure 2-1: The marine systems of the NWMR

Source: DEWHA (2007a)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 2-2: Key characteristics of the marine systems of the NWMR

Marine system	Key characteristics
Kimberley	• Tropical monsoonal climate • Strong influence from Indonesian Throughflow • Predominantly tropical Indo-Pacific species • Subject to episodic offshore cyclonic activity, rarely crossing the coast • Large tidal regimes • Freshwater input from terrestrial monsoonal runoff • Turbid coastal waters (as in, light-limited systems) • Dominated by shelf environments • Predominantly hard substrates in inner to mid-shelf environments • Includes shelf-edge atolls: Scott Reef, Rowley Shoals
Pilbara	• Tropical arid climate • Transition between Indonesian Throughflow and Leeuwin Current dominated areas • Predominantly tropical species • High cyclone activity with frequent crossing of the coast • Transitional tidal zone • Internal tide activity • Large areas of shelf and slope • Dry coast with ephemeral freshwater inputs
Ningaloo-Leeuwin	• Subtropical arid climate Leeuwin Current consolidates • Transitional tropical/temperate faunal area • Higher water clarity in nearshore and offshore environments • Narrow shelf and slope • Marginal tidal range • Seasonal wind forcing more dominant influence on marine environment

Source: DEWHA (2007a)

2.3 Meteorology and oceanography

This section describes the general meteorological conditions and oceanography for the NWMR and provides further detail for the three Woodside activity areas (Table 2-3). The NWMR is influenced by a complex system of ocean currents that change between seasons and between years, which generally result in its surface waters being warm and nutrient-poor, and of low salinity (DEWHA 2007a). The mix of bathymetric features, complex topography and oceanography across the whole north-west marine environment has created and supports a globally important marine biodiversity hotspot (Wilson 2013). Table 2-3 provides high-level physical characteristics of the marine environment within and across the NWMR. This subsection does not describe warming trends or discuss forecast trajectories for the NWMR.

Table 2-3: NWMR climate and oceanography summary

Receptor	Description
Meteorology	
Seasonal patterns	Seasonal changes in wind direction and rainfall are important factors for driving the ecological processes in the NWMR (DSEWPaC 2012a). The broader NWMR experiences variations of a tropical or monsoon climate, with the northern areas featuring two distinct seasons: the dry season from May to September, and the wet season from October through to April. The wet season is Australia's peak period for tropical cyclones, rainfall and severe thunderstorms (Bureau of Meteorology (BOM) 2026a). The peak of the cyclone season usually occurs between December and March (DSEWPaC 2012a). The Kimberley region features a tropical monsoonal climate, the Pilbara region features a tropical arid climate, and the Ningaloo-Leeuwin region experiences a subtropical arid climate (DEWHA 2007a).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Receptor	Description
Air temperature and rainfall	Temperatures and rainfall vary seasonally in the NWMR region. Higher temperatures usually occur during the wet season, with average daily maximum temperatures ranging between 27ºC and 39ºC, and average daily minimum temperatures ranging between 12ºC and 27ºC. Cooler temperatures occur in the dry season; the average daily maximum temperatures range from 21ºC to 36ºC and average daily minimum temperatures range between 9ºC and 21ºC (Figure 2-2 and Figure 2-3 (BOM 2024)). Higher rainfall in the region typically occurs during the northern wet season, with the average rainfall between 100 mm and 2,400 mm, with highest falls observed late in the season. Comparatively, the average rainfall in the dry season is between 100 mm and 300 mm (BOM 2024). These seasonal occurrences are often associated with the passage of tropical low-pressure systems and cyclones (DSEWPaC 2012a).
Wind	Wind patterns in north-west WA are dictated by the seasonal movement of atmospheric pressure systems. During the northern wet season, high-pressure cells produce prevailing winds from the north-west and south-west, which vary between 10 and 13 m/s. During the dry season, high-pressure cells over central Australia produce north-easterly to south-easterly winds with average speeds of between 6 and 8 m/s (BOM 2022b). Refer to Figure 2-4.
Tropical cyclones	Tropical cyclone activity occurs during the wet season, with cyclone activity typically occurring between November and April, although few cyclones tend to occur during November. About five to six tropical cyclones occur in WA during each cyclone season, with about half of these becoming severe (BOM 2026b). See Figure 2-6.
Oceanography	
Ocean temperature	Waters in the NWMR are tropical year-round, with sea surface temperatures in open shelf waters typically reaching about 26°C in summer and dropping to about 22°C in winter. Nearshore temperatures (as recorded for the NWS area) fluctuate more annually, from about less than 23°C in winter to about 31°C in summer (Hallenberger *et al.* 2022), indicative of present-day sea surface temperatures, acquired from the Commonwealth Scientific and Industrial Research Organisation (CSIRO) Oceans and Atmosphere database. Warmer sea surface temperatures are also driven by the decadal variation of Niño/Niña strength in the NWMR. The Atlantic warm sea surface temperature anomalies from the Niño/Niña events drive a series of climate mean-state changes in the Indo-Pacific region, including sea surface temperature warming in the tropical eastern Indian Ocean (Xue *et al.* 2025). See Figure 2-7 and Figure 2-8, for the seasonal variation across and within the NWMR.
Currents	The major surface currents influencing north-west WA flow towards the poles and include the Indonesian Throughflow, the Leeuwin Current, the South Equatorial Current and the Eastern Gyral Current. The Ningaloo Current, the Holloway Current, the Shark Bay Outflow and the Capes Current are seasonal surface currents in the region. Below these surface currents are several subsurface currents, the most important of which are the Leeuwin Undercurrent and the West Australian Current. These subsurface currents flow towards the equator in the opposite direction to surface currents (DEWHA 2007a). The Indonesian Throughflow and Leeuwin Current weaken during the dry season (April to September), and more so during El Niño years (DSEWPaC 2012a). See Figure 2-9. The offshore waters of the NWMR are characterised by surface and subsurface boundary currents that flow along the continental shelf/slope and are enhanced through inflows from the ocean basins. They are an important conduit for the poleward heat and mass transport along the west coast (Wijeratne *et al.* 2018). Local physical oceanography is strongly influenced by the large-scale water movements of the Indonesian Throughflow (Liu *et al.* 2015; Sutton *et al.* 2019). Typically, a warm and well-mixed oligotrophic surface layer, and a cooler and more nutrient-rich deeper water layer (Menezes *et al.* 2013).
Waves	Sea surface waves within the NWMR generally reflect the direction of the synoptic winds and flow predominantly from the south-west in the summer and east in winter (Pearce *et al.* 2003). The NWS within the NWMR is a known area of internal wave generation. Both internal tides and internal waves are thought to be more prevalent during summer months due to the increased stratification of the water column (DEWHA 2007a). Along the continental slope of the NWMR, strong internal waves and interaction between semi-diurnal tidal currents and seabed topographic features facilitate upwelling events and localised productivity events (Holloway 2001).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Receptor	Description
Tides	Tides on the NWS increase as the water moves from deep towards the shallower coast. The highest offshore tides are experienced at the border of the Browse and Canning basins. The smallest tides are experienced at the Exmouth Plateau, near the coast. Tides of the NWS are predominantly semi-diurnal (two highs and two lows each day), but with increasing importance of the diurnal (once per day) inequality at the southern and northern extremities of the NWS. The tide range – represented by the mean spring range – increases northwards along the coast from 1.4 m at North West Cape (Point Murat) to 7.7 m at Broome, before decreasing again (apart from local amplification in King Sound and Collier Bay) to about 5 m off Cape Londonderry. The mean spring range then increases again through Joseph Bonaparte Gulf and on up 5.5 m at Darwin (RPS 2016).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

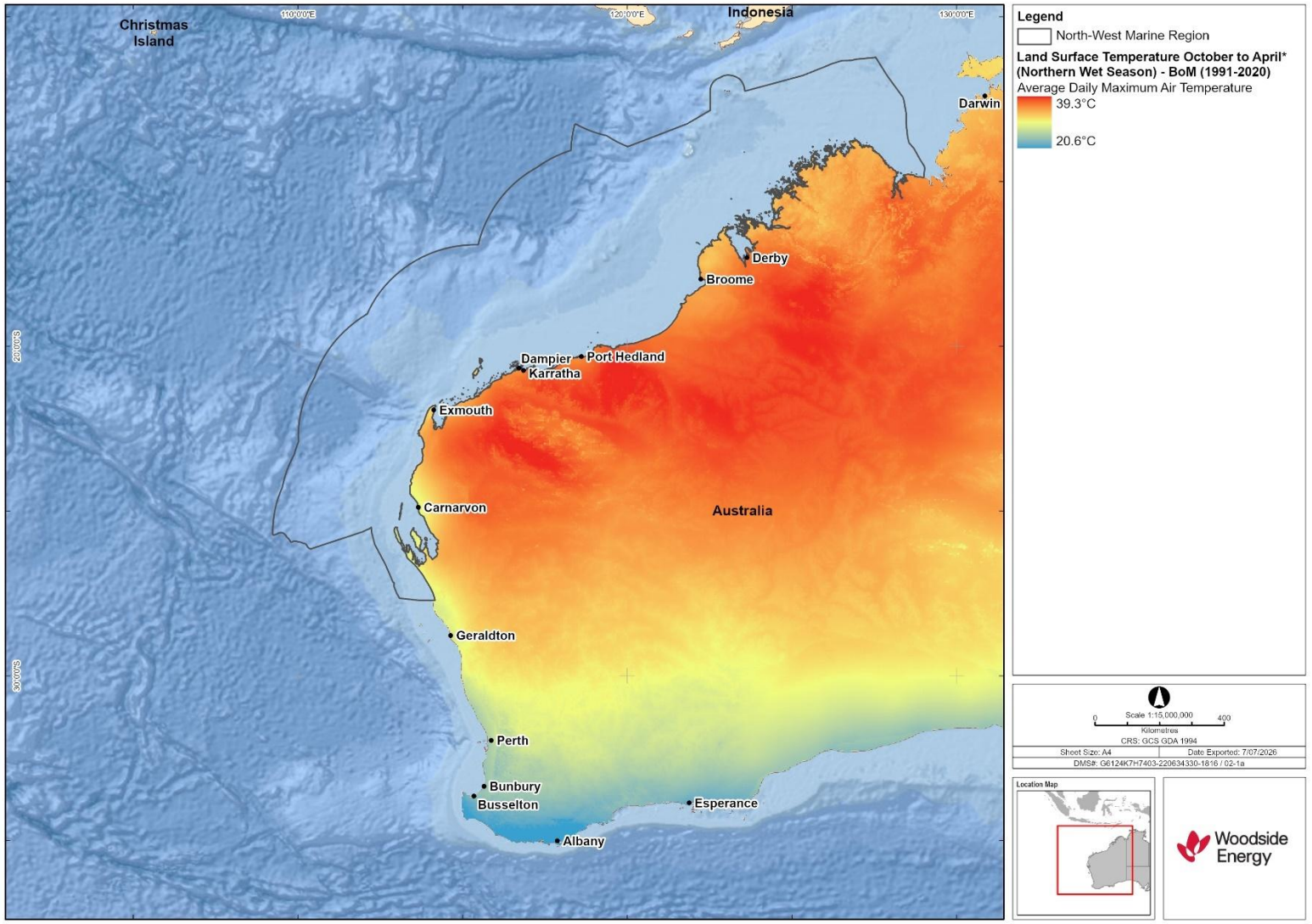


Figure 2-2: Average daily maximum air temperature for land surface adjacent to NWMR – northern wet season

Source: BOM (2022a)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

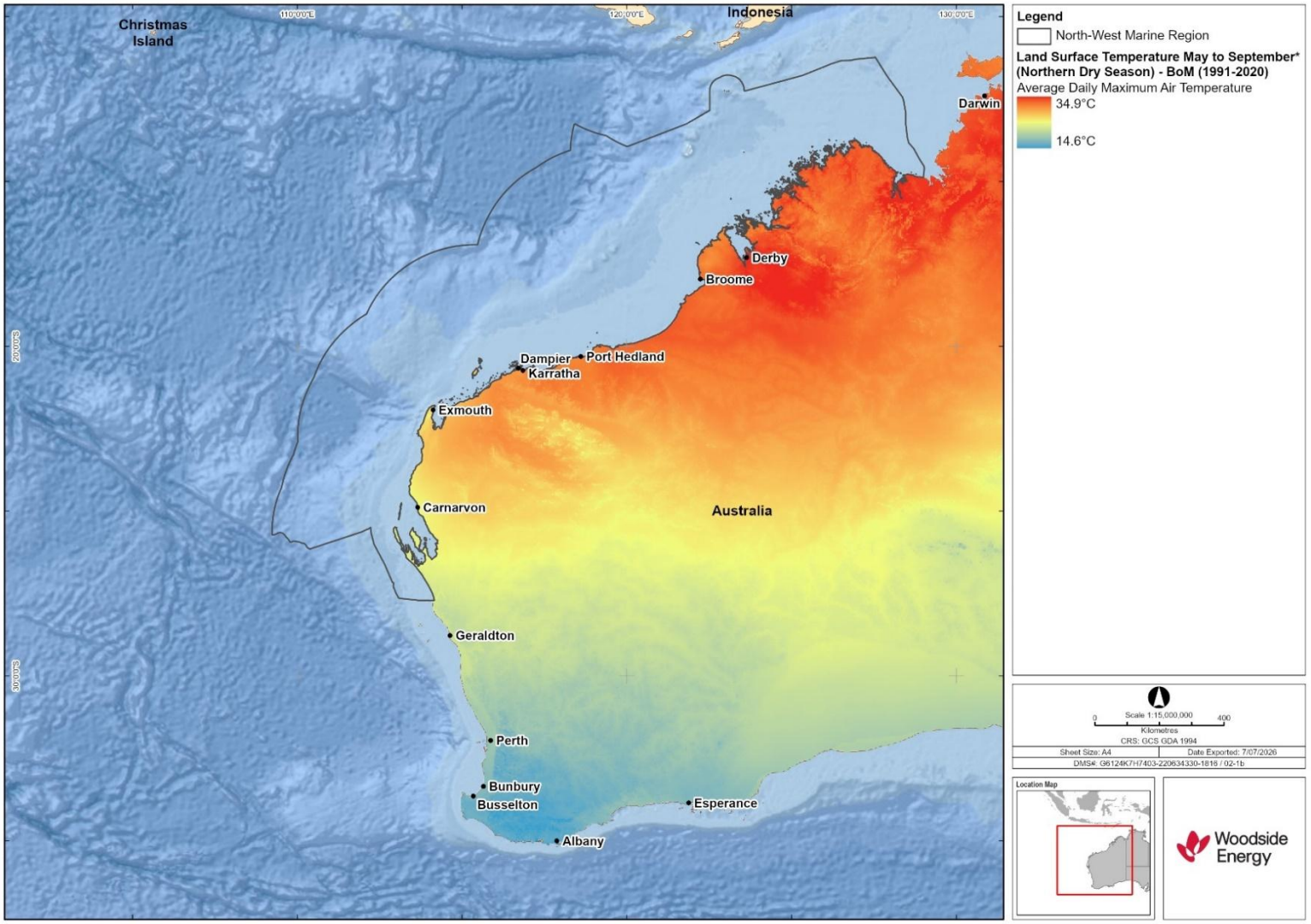


Figure 2-3: Average daily maximum air temperature for land surface adjacent to NWMR – northern dry season

Source: BOM (2022a)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

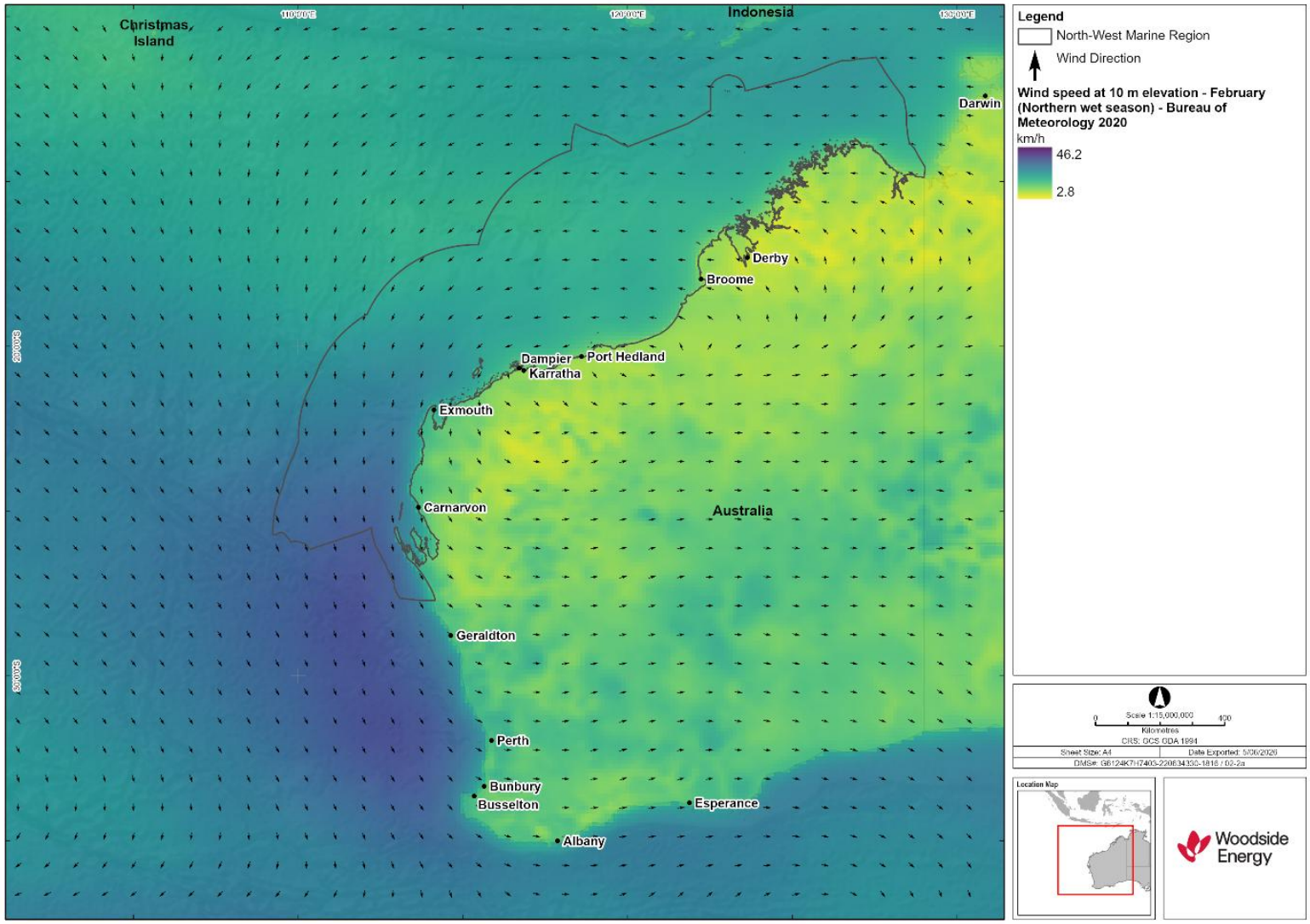


Figure 2-4: Average monthly surface wind direction and velocity for NWMR – February, northern wet season

Source: BOM (2020a)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

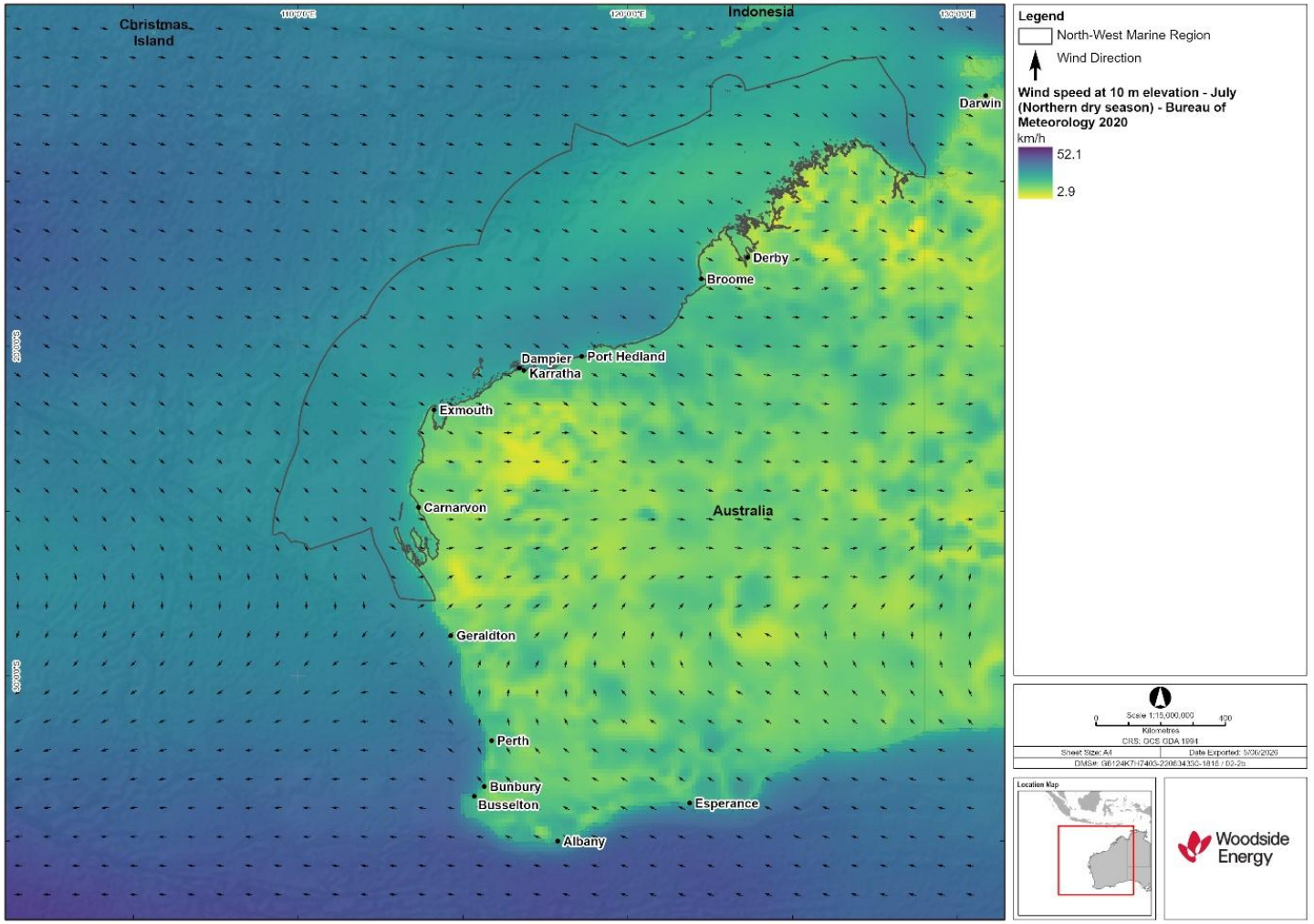


Figure 2-5: Average monthly surface wind direction and velocity for the NWMR – July, northern dry season

Source: BOM (2020a)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

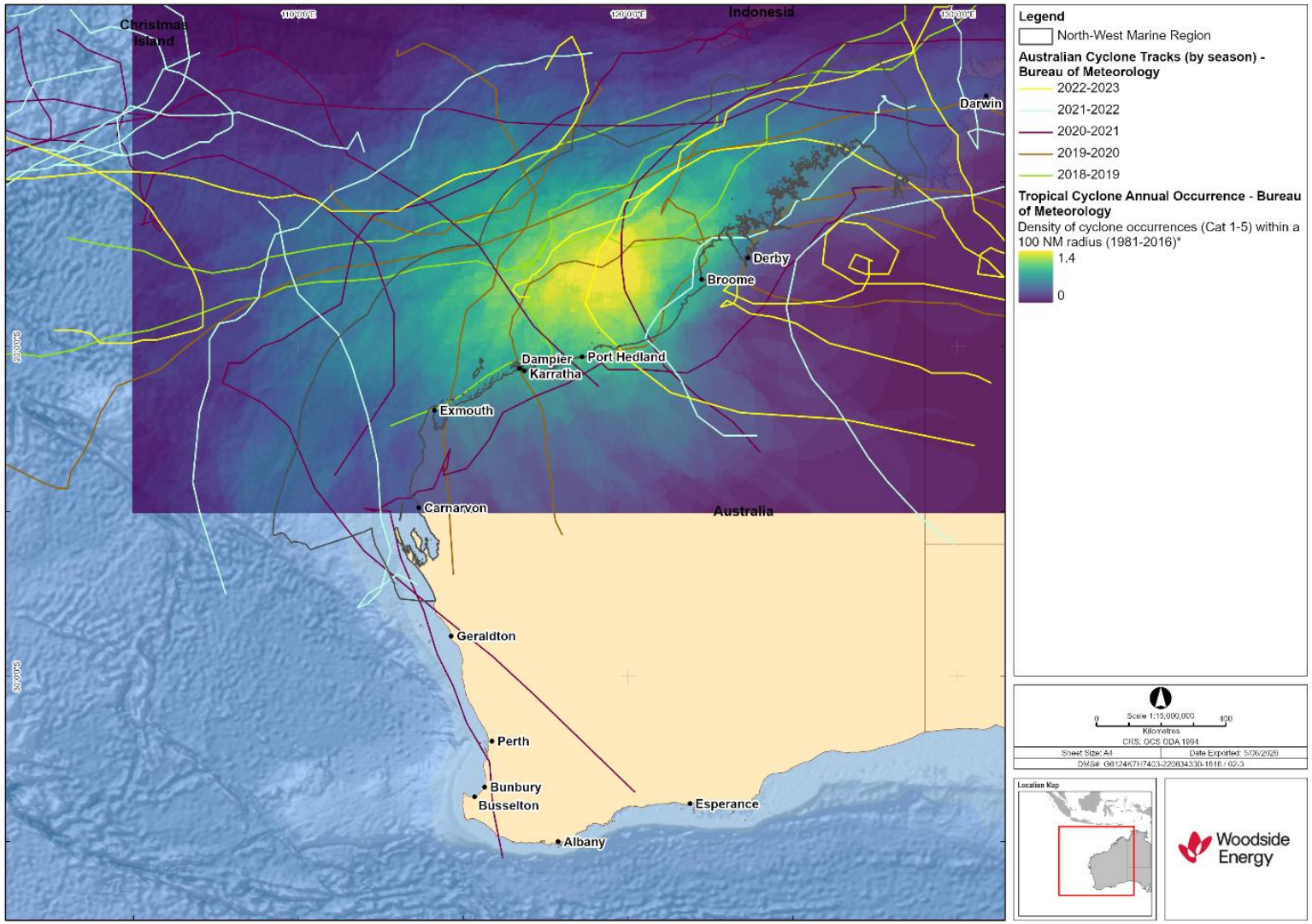


Figure 2-6: Tropical cyclone annual occurrence and cyclone tracks for the NWMR

Source: BOM (2022a)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

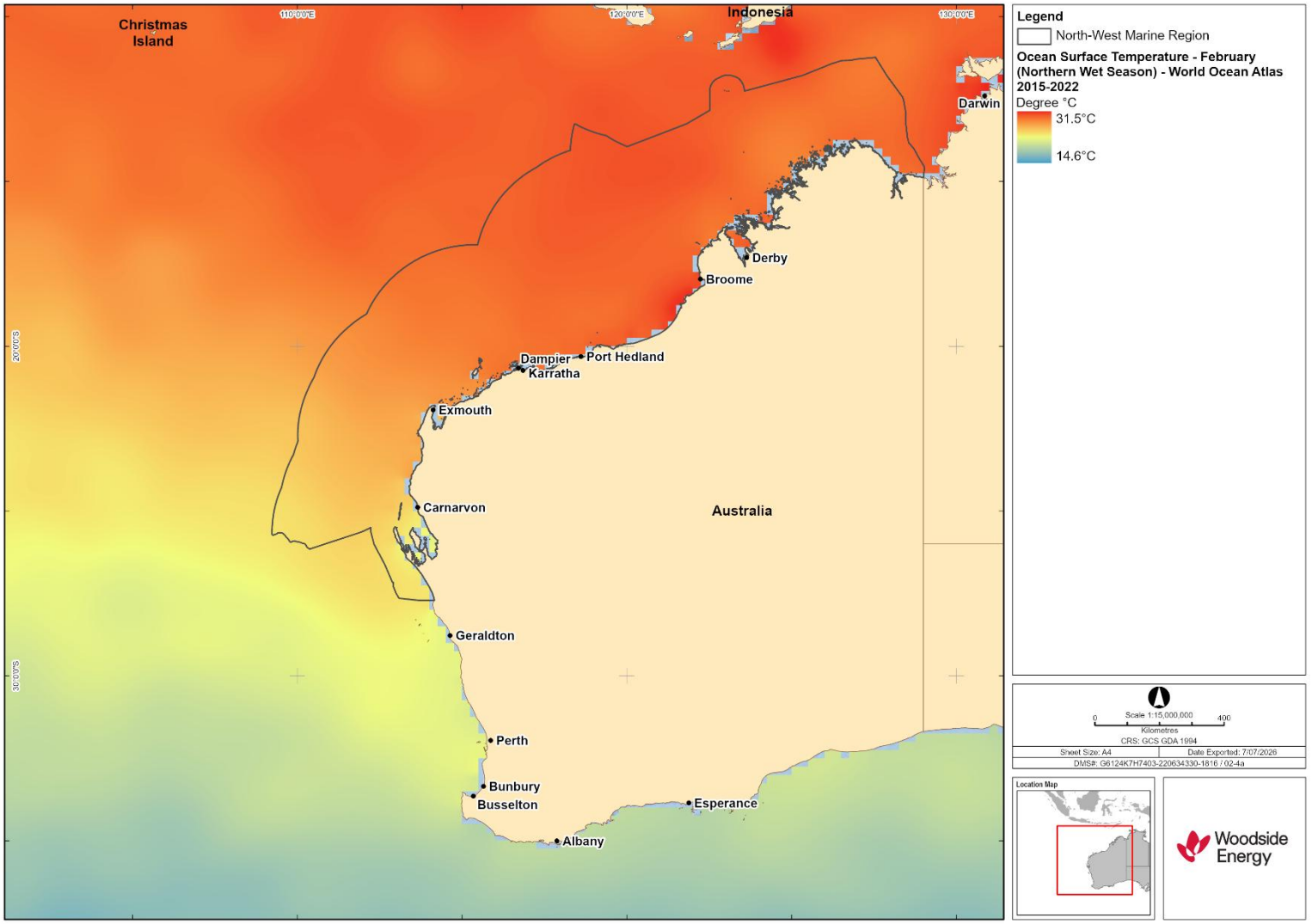


Figure 2-7: Ocean surface temperature for the NWMR – February, northern wet season

Source: Locarnini et al. *(2018), in World Ocean Atlas (2018)*

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

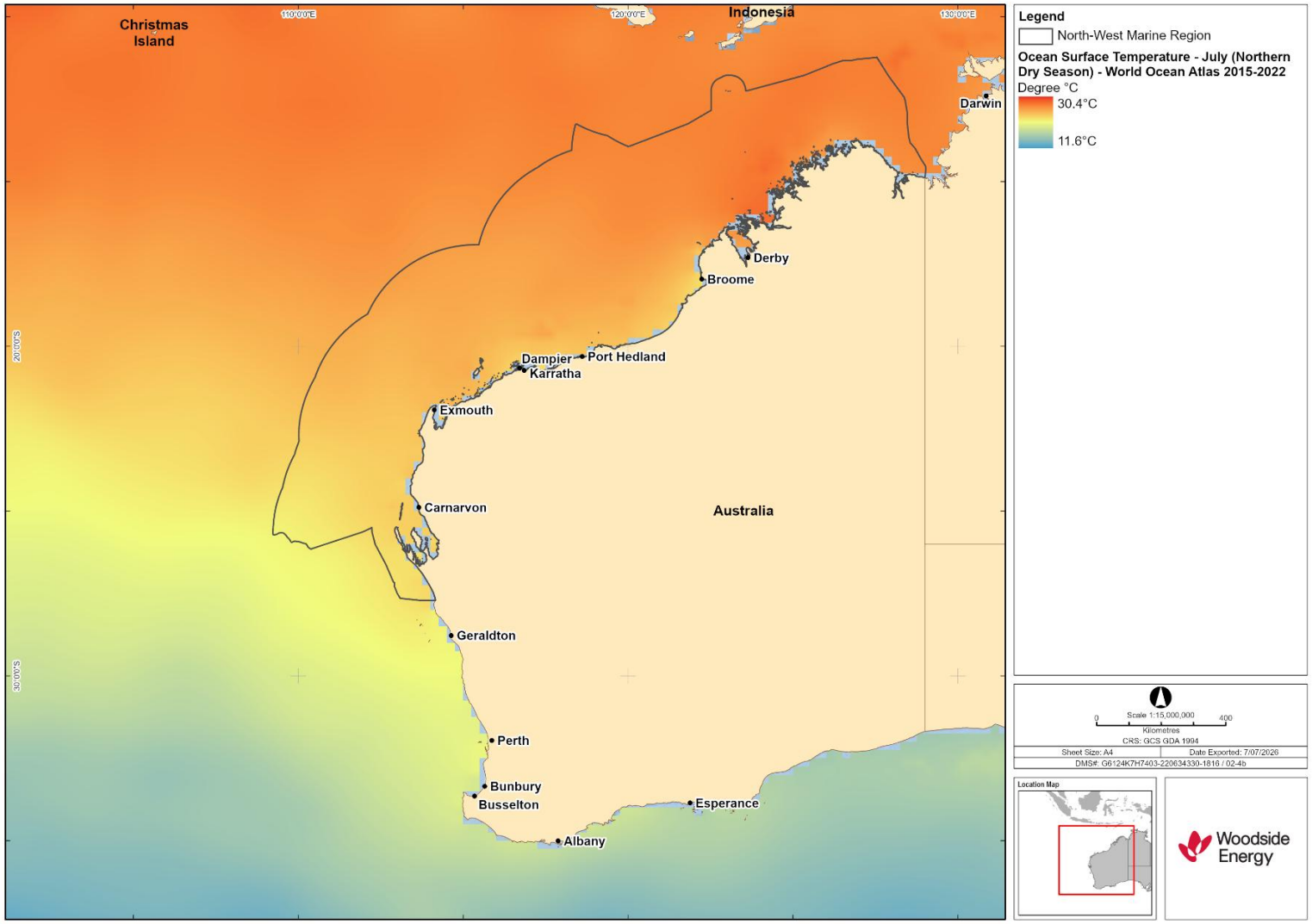


Figure 2-8: Ocean surface temperature for the NWMR – July, northern dry season

Source: Locarnini et al. *(2018), in World Ocean Atlas (2018)*

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

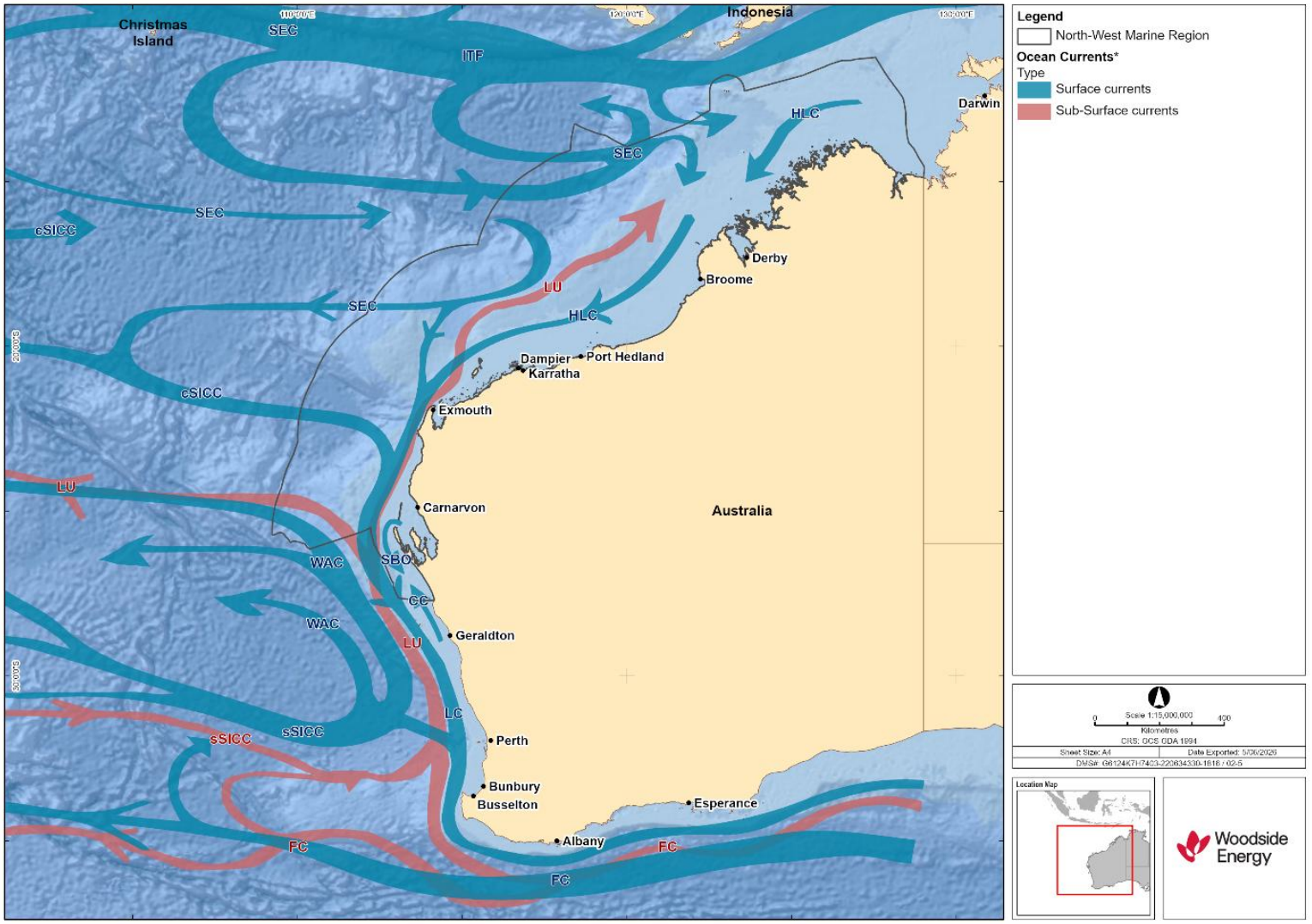


Figure 2-9: Ocean surface and sub-surface currents of the NWMR and wider region

Source: adopted from Wijeratne et al. *(2018)*

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

2.3.1 Browse

Table 2-4 summarises the meteorological and oceanographic conditions for the Browse Basin, with supporting metocean data and figures provided in Appendix A.

Table 2-4: Summary meteorology and oceanography for Browse

Receptor	Description
Meteorology	
Seasonal patterns	The Browse area, overlapping the Kimberley marine system, experiences a tropical monsoon climate with moderate offshore cyclone activity (DEWHA 2007a). The region experiences two distinct seasons: the dry season from May to September and the northern wet season from October through to April. The wet season is Australia's peak time for tropical cyclones, rainfall and severe thunderstorms (BOM 2026c).
Air temperature	The mean annual air temperature recorded at Troughton Island between 1991 and 2020 ranged from 22.5ºC in July to 33.4ºC in November (BOM 2026c).
Rainfall	Mean rainfall recorded from Troughton Island in the Browse Basin between 1991 and 2020 ranged from a barely detectable (0.3 mm) mean monthly level in September to 274.8 mm in January (BOM 2026c).
Wind	The dry season experiences high-pressure systems that bring east to south-easterly winds with average wind speeds during the season of around 16.6 km/h and maximum wind gusts of 65 km/h. In contrast, the wet season brings predominantly westerly winds with average wind speeds about 17 km/h and maximum gusts exceeding 100 km/h (generally associated with tropical cyclones (MetOcean Engineers 2005).
Oceanography	
Currents	Surface currents exhibit seasonal directionality, with flow to the south-west during March to June and more variable outside this period (Woodside, 2019). This is consistent with the stronger Leeuwin Current flow during winter months, with more variable currents driven by local wind stress during periods of weaker Leeuwin Current flow.

2.3.2 North West Shelf/Scarborough

Table 2-5 summarises the meteorological and oceanographic conditions for the NWS/Scarborough, with supporting metocean data and figures provided in Appendix B.

Table 2-5: Summary meteorology and oceanography for the North West Shelf and Scarborough

Receptor	Description
Meteorology	
Seasonal patterns	The NWS and Scarborough activity areas, overlapping the Pilbara marine system, experience a tropical arid climate with high cyclone activity. The monsoonal climate of the wider NWMR has a distinct wet and dry seasonal regime and transition periods between seasons (DEWHA 2007a).
Air temperature	Air temperatures as measured at the North Rankin A platform on the NWS ranged from a maximum average of 39.8°C in summer to a minimum average temperature of 15.2°C in winter (Woodside 2015).
Rainfall	Rainfall patterns annually reveal the wet season with highest rainfalls during the late summer, often associated with the passage of tropical low-pressure systems and cyclones. Rainfall in the dry season is typically extremely low (Pearce *et al.* 2003 and Appendix B).
Wind	Winds are typically from the southwest during the wet season (summer) and tending from the south-east during the dry season (winter). The summer south-westerly winds are driven by high pressure cells that pass from west to east over the Australian continent. During the winter period, the relative position of the high-pressure cells shifts further north, leading to prevailing south-easterly winds from the mainland (Pearce *et al.* 2003 and Appendix B).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Receptor	Description
Oceanography	
Currents	The large-scale ocean currents of the NWMR, primarily the Indonesian Throughflow and Leeuwin Current (and Holloway Current), are the primary influence on the NWS and Scarborough activity areas. The Indonesian Throughflow and Leeuwin Current are strongest during the late summer and winter and flow reversals to the north-east, typically short-lived and weak when there are strong south-westerly winds, can generate localised upwelling on the shelf edge (Holloway and Nye 1985; James *et al.* 2004; Condie *et al.* 2006).

2.3.3 North West Cape

Table 2-6 summarises the meteorological and oceanographic conditions for the North West Cape, with supporting metocean data and figures in Appendix B.

Table 2-6: Summary meteorology and oceanography for the North West Cape

Receptor	Description
Meteorology	
Seasonal patterns	The North West Cape activity area, overlapping the Ningaloo-Leeuwin marine system, experiences a subtropical arid climate featuring a hot summer season and a mild winter season. There are often distinct transition periods between the summer and winter regimes, characterised by periods of relatively low winds, with seasonal winds being the more dominant influence on the marine environment in the region (DEWHA 2007a).
Air temperature	The mean annual air temperature recorded at Learmonth Airport between 1991 and 2020 ranged from a maximum temperature of 38°C in January to a mean minimum temperature of 11.5°C in July (BOM 2026d).
Rainfall	Rainfall typically occurs during the summer, with highest rainfall during later summer and autumn, The mean highest rainfall recorded from Learmonth Airport between 1991 and 2020 was 46.5 mm in June, and the lowest mean rainfall of 0.2 mm in October. These seasonal changes in rainfall are often associated with the passage of tropical low-pressure systems and cyclones (BOM 2026d).
Wind	Winds vary seasonally, generally from the south-west quadrant during summer months and the south-southeast quadrant during the autumn and winter months. The summer south-westerly winds are driven by high-pressure cells that pass from west to east over the Australian continent. Winds typically weaken and are more variable during the transitional period between the summer and winter seasons, generally between April to August.
Oceanography	
Currents	Surface currents exhibit seasonal directionality, with flow to the south-west during March to June and more variable outside this period (Woodside 2022). This is consistent with the stronger Leeuwin Current flow during winter months, with more variable currents driven by local wind stress during periods of weaker Leeuwin Current flow.

2.4 Physical environment of the NWMR

Based on the Integrated Marine and Coastal Regionalisation of Australia Version 4.0, eight provincial bioregions occur within the NWMR, which are based on patterns of demersal fish diversity, benthic habitat and oceanographic data (Commonwealth of Australia 2006a) (Figure 2-10). Of the eight provincial bioregions that occur within the NWMR, these include four offshore (about 65% of total NWMR area) and four shelf (about 35% of total NWMR area) bioregions (Baker *et al.* 2008).

The NWMR is a tropical carbonate margin that comprises an extensive area of shelf, slope and abyssal plain/deep ocean floor, as well as complex areas of bathymetry such as plateau, terraces and major canyons (Harris *et al.* 2005). A series of reefs are on the outer shelf/slope of the NWMR, including Ashmore, Cartier, Scott and Seringapatam reefs (Baker *et al.* 2008). The distribution of seafloor geomorphic features has been systematically mapped over much of the Australian margin and adjacent seafloor. The mapped area can be divided into ten geomorphic regions, of which the NWMR overlays two: the Western Margin and Northern Margin (Harris *et al.* 2005). Most of the region consists of either continental slope (61%) or continental shelf (28%) (DEWHA 2007a), with more than 40% of the NWMR having a water depth less than 200 m. The shallow shelf is contrasted by features such as the Cuvier and Argo abyssal plains, which reach depths of

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

more than 5 km. A unique feature of the region is the significant narrowing of the continental shelf around North West Cape (about 7 km wide) from the broad continental shelf in the north of the region (about 400 km wide at Joseph Bonaparte Gulf) (DEWHA 2007a) (Figure 2-11).

The geological history of the region, as well as its geomorphology and oceanography, has influenced the composition and distribution of sediments (DEWHA 2007a). The sedimentology of the NWMR is dominated by marine carbonates, which show a broad zoning and fining with water depth. Main trends of the NWMR sediments include a tropical carbonate shelf that is dominated by sand and gravel, an outer shelf/slope zone that is dominated by mud, and a relatively homogenous rise and abyssal plain/deep ocean floor that is dominated by non-carbonate mud (Baker *et al.* 2008) (Figure 2-12). In the region, mud content generally increases with water depth due to lower depositional energy, while grain-supported coral-rich sediments are more common on platform margins exposed to higher energy conditions (Gischler 2025). The distribution and resuspension of sediments on the inner shelf is strongly influenced by the strength of tides across the continental shelf as well as episodic events such as cyclones. Further offshore, on the mid to outer shelf and on the slope itself, sediment movement is primarily influenced by ocean currents and internal tides (DEWHA 2007a). In carbonate platform environments, similar to those of the NWMR, sediment redistribution can also be strongly affected by spur-and-groove systems, sand aprons and lagoonal circulation patterns, contributing to patchy and heterogeneous sediment facies across depth zones (Gischler 2025). This variation in bathymetry and interactions with oceanographic processes provides diverse habitats for marine fauna and flora within the NWMR.

2.5 Air quality

The ambient air quality of all three marine regions is largely unpolluted due to the extent of the open ocean area, the activities currently carried out in each, and the relative remoteness of each region.

Vessel traffic and existing offshore surface infrastructure are the only likely sources of pollutants in the marine region. Closer to the coast there may be localised and temporary reductions in air quality around areas of high vessel traffic, or due to the occurrence of dust storms and bushfires. International contributors to reduced air quality in the marine region may include ‘slash-and-burn’ agricultural methods and large forest fires in Southeast Asian regions (Vadrevu *et al.* 2014; Kim Oanh *et al.* 2018).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

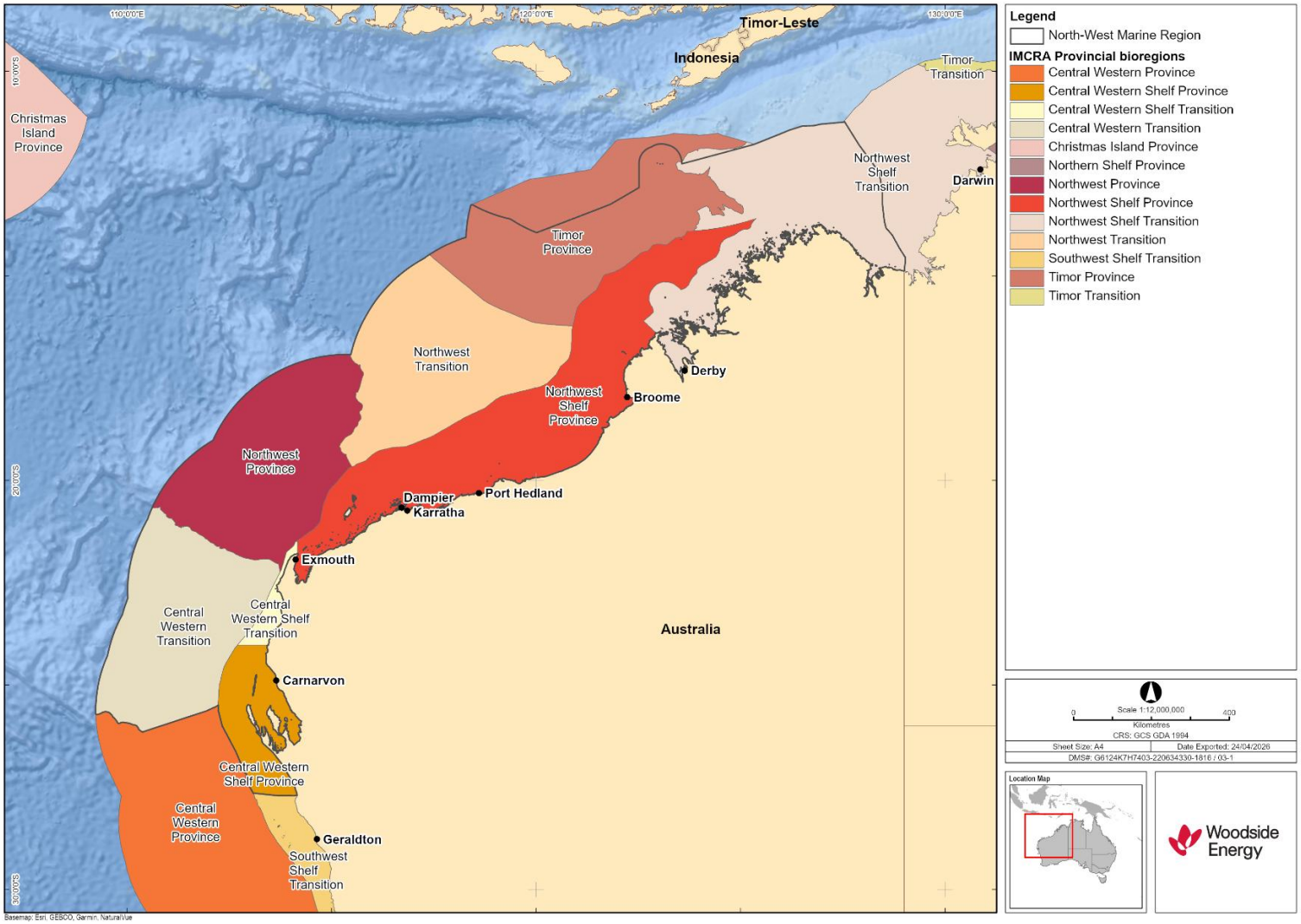


Figure 2-10: The eight provincial bioregions of the NWMR

Source: Geoscience Australia (2026), as per Integrated Marine and Coastal Regionalisation of Australia

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

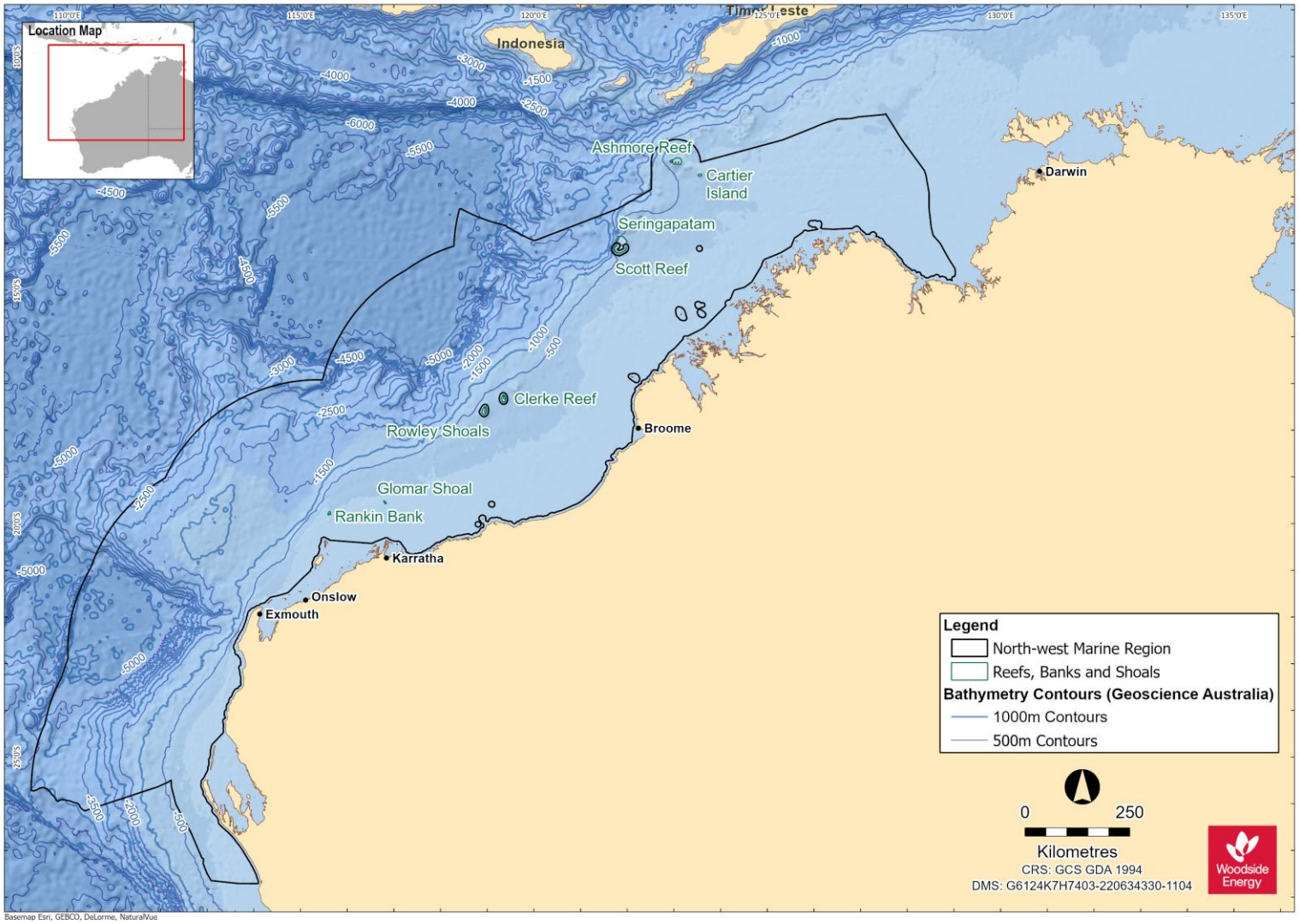


Figure 2-11: Bathymetry of the NWMR

Source: Geoscience Australia (2026)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

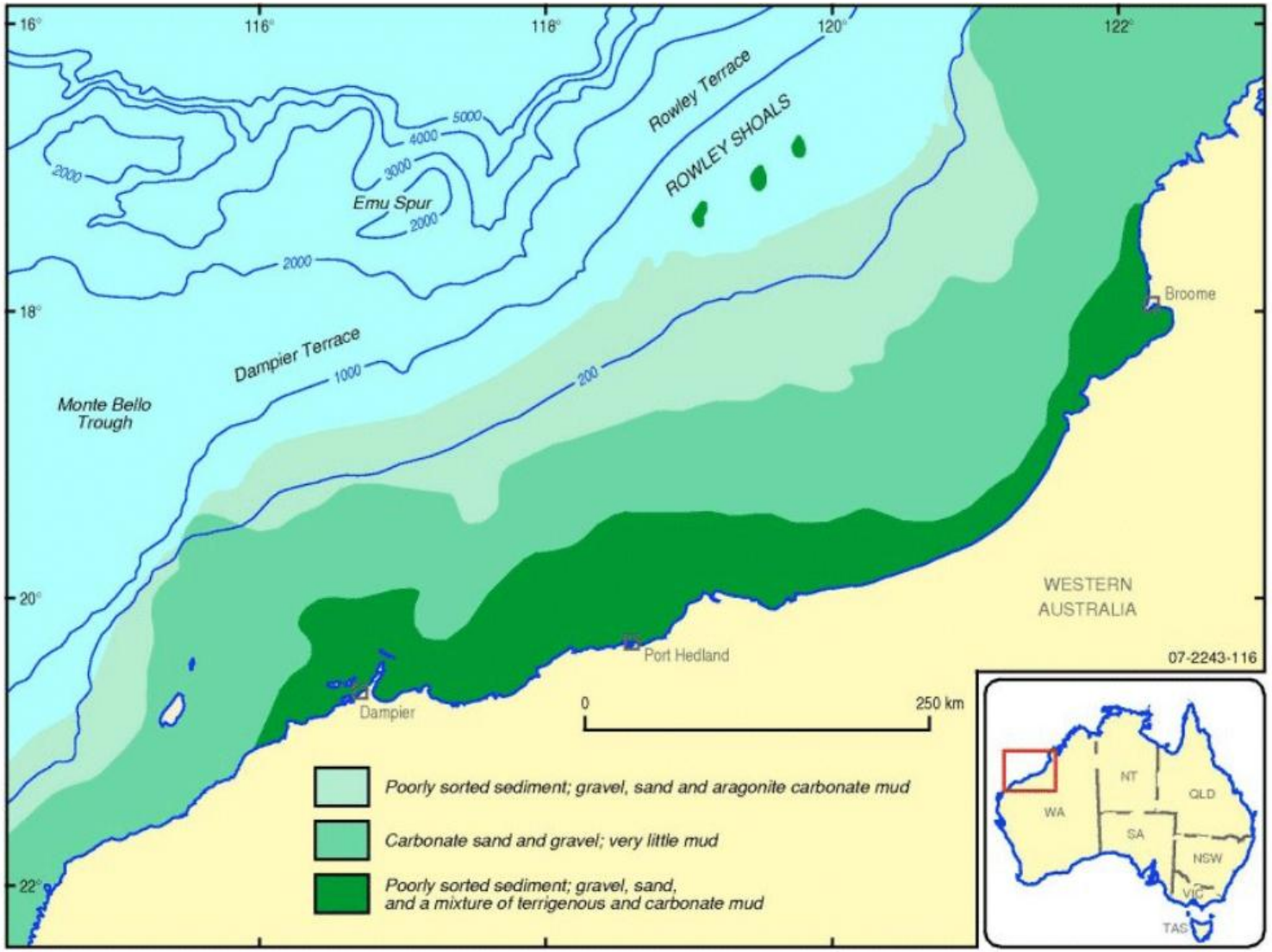


Figure 2-12: Overview of the seabed sediments of the NWMR

Source: Baker et al*. (2008)*

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

3. MATTERS OF NATIONAL ENVIRONMENTAL SIGNIFICANCE

3.1 Summary of matters of national environmental significance

The EPBC Act refers to living things (including plants and animals), habitats and places that need protecting as 'matters of national environmental significance'. There are nine MNES listed under the EPBC Act:

- World Heritage areas
- National Heritage places
- wetlands of international importance (listed under the Ramsar Convention)
- listed threatened species and listed ecological communities
- listed migratory species (protected under international agreements)
- Commonwealth marine areas
- Great Barrier Reef Marine Park
- nuclear actions (including uranium mines)
- water resources (relating to unconventional gas development and large coal mining development).

The EPBC Act Significant Impact Guidelines 1.1 – Matters of National Environmental Significance 2013 state that "An action is likely to have a significant impact on a threatened species if there is a real chance or possibility that it will: adversely affect habitat critical to the survival of a species." Habitat critical to the survival of a species is defined as areas necessary:

- for activities such as foraging, breeding, roosting or dispersal
- for the long-term maintenance of the species or ecological community, including the maintenance of species essential to the survival of the species or ecological community, such as pollinators
- to maintain genetic diversity and long-term evolutionary development, or
- for reintroducing populations or recovering the species or ecological community.

Habitat critical to the survival of species has been identified for marine turtles and marine mammals, and described in Sections 7.2.1.1 and 8.2.3, respectively.

This section summarises the MNES reported for the three bioregions: NWMR (Table 3-1), SWMR (Table 3-2) and NMR (Table 3-3). The summary is based on the PMST reports (Appendix A) and includes MNES that may occur within each bioregion.

The PMST uses a conservative, grid-based search methodology to determine the potential presence of MNES. For marine areas located more than 30 km offshore, this involves using 32 km × 32 km grid cells to identify spatial overlap with listed MNES. As a result, the PMST report (Appendix A) may identify MNES that do not directly intersect with the EMBA, including protected areas that have no coastal interface and terrestrial species. Accordingly, MNES identified in the PMST that are not associated with coastal environments, and species that do not rely on marine or shoreline habitats (for example, species with no marine foraging or life-cycle processes), have not been assessed further.

Additional information about these MNES for the NWMR, SWMR, and NMR is provided in subsequent sections (referenced in Table 3-1, Table 3-2 and Table 3-3, respectively).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 3-1: Summary of matters of national environmental significance (MNES) identified by the EPBC Act Protected Matters Search Tool (PMST) within and potentially occurring within the NWMR

MNES	Number	Description	Section of this document
World Heritage properties	3	• Shark Bay • The Ningaloo Coast • Murujuga Cultural Landscape	Section 12 Section 13
National Heritage places	6	• Dampier Archipelago (including Burrup Peninsula) • Dirk Hartog Landing Site 1616 • Shark Bay • The Ningaloo Coast • The West Kimberley • HMAS Sydney II and HSK Kormoran Shipwreck Sites	Section 12
Wetlands of international importance (Ramsar)	4	• Ashmore Reef National Nature Reserve • Eighty Mile Beach • Ord River Floodplain • Roebuck Bay	Section 12
Commonwealth marine areas	5	• EEZ and Territorial Sea • Key ecological features (KEFs) • Australian Marine Parks (AMPs) • Australian Whale Sanctuary • Extended Continental Shelf	Section 12
Listed threatened ecological communities	2	• Monsoon vine thickets on the coastal sand dunes of Dampier Peninsula • Subtropical and temperate coastal saltmarsh	Section 12
Listed threatened species	73	Refer NWMR PMST report (Appendix A)	Section 6 to Section 9
Listed migratory species	100	Refer NWMR PMST report (Appendix A)	Section 6 to Section 9

Table 3-2: Summary of MNES identified by the EPBC Act PMST within and potentially occurring within the SWMR

MNES	Number	Description	Section of this document
World Heritage properties	0	N/A	Appendix A
National Heritage places	4	• Batavia Shipwreck Site • Cheetup Rock Shelter • HMAS Sydney II and HSK Kormoran • Fitzgerald River National Park	Appendix A
Wetlands of international importance (Ramsar)	3	• Becher Point Wetlands • Peel-Yalgorup System • Vasse-Wonnerup System	Appendix A

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

MNES	Number	Description	Section of this document
Commonwealth marine areas	5	• EEZ and Territorial Sea • KEFs • AMPs • Australian Whale Sanctuary • Extended Continental Shelf	Appendix A
Listed threatened ecological communities	7	• Banksia woodlands of the Swan Coastal Plain • Empodisma peatlands of southwestern Australia • Honey myrtle shrubland on limestone ridges of the Swan Coastal Plain bioregion • Proteaceae dominated kwongkan shrublands of the Southeast Coastal Floristic Province of Western Australia • Sedgelands in Holocene dune swales of the southern Swan Coastal Plain • Subtropical and temperate coastal saltmarsh • Tuart (*Eucalyptus gomphocephala*) woodlands and forests of the Swan Coastal Plain	Appendix A
Listed threatened species	65	Refer SWMR PMST report	Appendix A
Listed migratory species	85	Refer SWMR PMST report	Appendix A

Table 3-3: Summary of MNES identified by the EPBC Act PMST within and potentially occurring within the NMR

MNES	Number	Description	Section of this document
World Heritage properties	1	Kakadu National Park	Appendix A
National Heritage places	1	Kakadu National Park	Appendix A
Wetlands of international importance (Ramsar)	2	• Kakadu National Park • Coburg Peninsula	Appendix A
Commonwealth marine areas	5	• EEZ and Territorial Sea • KEFs • AMPs • Australian Whale Sanctuary • Extended Continental Shelf	Appendix A
Listed threatened ecological communities	0	N/A	N/A
Listed threatened species	46	Refer NMR PMST report	Appendix A
Listed migratory species	79	Refer NMR PMST report	Appendix A

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

3.2 Part 13 statutory instruments for Environment Protection and Biodiversity Conservation Act listed threatened and migratory species in the NWMR, South-west Marine Region (SWMR) and North Marine Region (NMR)

A screening process was conducted to identify which EPBC Act listed threatened and migratory species, and associated Part 13 statutory instruments, are relevant in the context of assessing impacts and risks associated with petroleum activities in each of the Woodside activity areas. The screening criteria included:

- overlap among the Woodside activity areas with habitat critical for survival (such as marine turtles) and with BIAs (overlapping the marine environment) for any listed threatened or migratory species as reported in the PMST searches
- published literature, unpublished reports and credible anecdotal information (such as feedback from stakeholders) indicating species presence or occurrence within the Woodside activity areas
- temporal overlap between the likely timing of petroleum activities and peak periods for key critical life stage behaviours (for example, breeding, nesting, calving, resting, foraging, migration)
- environmental aspects associated with petroleum activities that have been identified as a key threat to a species in a Part 13 statutory instrument (such as anthropogenic noise, light emissions, marine debris).

Table 3-4 lists relevant EPBC Act threatened and migratory species and their Part 13 statutory instruments. For the full list of EPBC Act listed species for each marine bioregion, refer to the PMST reports (Appendix A).

Table 3-4: Summary of EPBC Act threatened and migratory species to be considered for evaluating impacts or risks for Woodside activities

Species	EPBC Act Part 13 statutory instrument
All vertebrate marine fauna	Threat Abatement Plan for the impacts of marine debris on vertebrate marine life (Commonwealth of Australia 2018)
Fishes, sharks, rays and sawfishes	
All sawfishes (largetooth, green, dwarf, speartooth, narrow)	Sawfish and River Sharks Multispecies Recovery Plan (Commonwealth of Australia 2015b)
Grey nurse shark (west coast population)	Recovery Plan for the Grey Nurse Shark (*Carcharias taurus*) 2014 (Department of the Environment (DoE) 2014a)
Largetooth sawfish	Conservation Advice for *Pristis pristis* (largetooth sawfish) (DCCEEW 2025a)
Little gulper shark, southern dogfish	Commonwealth Listing Advice on *Centrophorus zeehaani* (southern dogfish) (Threatened Species Scientific Committee 2013a)
Northern river shark	Conservation Advice for *Glyphis garricki* (northern river shark) (DoE 2014b)
Scalloped hammerhead	Listing Advice for *Sphyrna lewini* (scalloped hammerhead) (Threatened Species Scientific Committee 2024)
Speartooth shark	Approved Conservation Advice for *Glyphis glyphis* (speartooth shark) (DoE 2014c)
White shark	Recovery Plan for the White Shark (*Carcharodon carcharias*) 2013 (DSEWPaC 2013b)
Whale shark	Conservation Advice *Rhincodon typus* whale shark (Threatened Species Scientific Committee 2015d)
Marine reptiles	
All marine turtle species (loggerhead, green, leatherback, hawksbill, flatback, olive ridley)	Recovery Plan for Marine Turtles in Australia 2017–2027 (Commonwealth of Australia 2017) National Light Pollution Guidelines for Wildlife Including Marine Turtles, Seabirds and Migratory Shorebirds (DCCEEW 2023j)
Dusky sea snake	Conservation Advice for *Aipysurus fuscus* (dusky sea snake) (DCCEEW 2024m)
Leaf-scaled sea snake	Approved Conservation Advice for *Aipysurus foliosquama* (leaf-scaled sea snake) (DSEWPaC 2011b)
Leatherback turtle	Approved Conservation Advice for *Dermochelys coriacea* (*leatherback turtle*) (DEWHA 2009c)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species	EPBC Act Part 13 statutory instrument
Mertens' water monitor	Conservation Advice for *Varanus mertensi* (Mertens' water monitor) (DCCEEW 2023i)
Mitchell's water monitor	Conservation Advice for *Varanus mitchelli* (Mitchell's water monitor) (DCCEEW 2023c)
Short-nosed sea snake	Approved Conservation Advice for *Aipysurus apraefrontalis* (short-nosed sea snake) (DSEWPaC 2011a)
Marine mammals	
Australian sea lion	Recovery Plan for the Australian Sea Lion (*Neophoca cinerea*) 2013 (DSEWPaC 2013a) Conservation Advice *Neophoca cinerea* Australian Sea Lion (Threatened Species Scientific Committee 2020) (in effect under the EPBC Act from 23 December 2020)
Australian snubfin dolphin	Conservation Advice for *Orcaella heinsohni* (Australian snubfin dolphin) (DCCEEW 2025d)
Blue whale	Conservation Management Plan for the Blue Whale: A Recovery Plan under the *Environment Protection and Biodiversity Conservation Act 1999* 2015–2025 (Commonwealth of Australia 2015a)
Fin whale	Conservation Advice *Balaenoptera physalus* fin whale (Threatened Species Scientific Committee 2015c)
Humpback whale	Listing Advice *Megaptera novaeangliae* Humpback Whale (Department of Agriculture, Water and the Environment (DAWE) 2022)
Indo-Pacific humpback dolphin (Australian humpback dolphin)	Conservation Advice for *Sousa sahulensis* (Australian humpback dolphin) (DCCEEW 2025e)
Sei whale	Conservation Advice *Balaenoptera borealis* sei whale (Threatened Species Scientific Committee 2015a)
Southern right whale	National Recovery Plan for the Southern Right Whale *Eubalaena australis* (DCCEEW 2024a)
Seabirds	
All seabird species	Wildlife Conservation Plan for Seabirds (Commonwealth of Australia 2020) National Light Pollution Guidelines for Wildlife Including Marine Turtles, Seabirds and Migratory Shorebirds (DCCEEW 2023j)
All albatrosses and petrels	National Recovery Plan for albatrosses and petrels (DCCEEW 2022)
Amsterdam albatross	EPBC Act Threat Abatement Plan for the incidental catch (or bycatch) of seabirds during oceanic longline fishing operations (Commonwealth of Australia 2018)
Australian fairy tern	National Recovery Plan for the Australian Fairy Tern *Sternula nereis nereis* (Commonwealth of Australia 2020) EPBC Act Threat Abatement Plan for the impacts of marine debris on the vertebrate wildlife of Australia's coasts and oceans (Department of Environment and Energy (DoEE) 2018)
Australian lesser noddy	Conservation Advice *Anous tenuirostris melanops* Australian lesser noddy (Threatened Species Scientific Committee 2015e) EPBC Act Threat Abatement Plan to reduce the impacts of exotic rodents on biodiversity on Australian offshore islands of less than 100,000 hectares (ha) (DEWHA 2009a)
Bridled tern	EPBC Act Threat abatement plan for predation by the European red fox (DEWHA 2008b)
Brown booby	EPBC Act Threat Abatement Plan for the impacts of marine debris on the vertebrate wildlife of Australia's coasts and oceans (DoEE 2018)
Christmas Island white-tailed tropic bird	Conservation Advice for *Phaethon lepturus fulvus* (golden bosun) (DCCEEW 2026f)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species	EPBC Act Part 13 statutory instrument
Flesh-footed shearwater	EPBC Act Threat Abatement Plan for the incidental catch (or bycatch) of seabirds during oceanic longline fishing operations (Commonwealth of Australia 2018) EPBC Act Threat Abatement Plan for predation by feral cats (DoE 2024) EPBC Act Threat abatement plan for predation by the European red fox (DEWHA 2008b) EPBC Act Threat Abatement Plan for the impacts of marine debris on the vertebrate wildlife of Australia's coasts and oceans (DoEE 2018) EPBC Act Threat Abatement Plan for the impacts of marine debris on the vertebrate wildlife of Australia's coasts and oceans (DoEE 2018)
Little tern	Conservation Advice for *Sternula albifrons* (little tern) (DCCEEW 2025c)
Little shearwater	EPBC Act Threat Abatement Plan for the impacts of marine debris on the vertebrate wildlife of Australia's coasts and oceans (DoEE 2018) EPBC Act Threat Abatement Plan to reduce the impacts of exotic rodents on biodiversity on Australian offshore islands of less than 100,000 ha (DEWHA 2009)
Masked booby	EPBC Act Threat Abatement Plan to reduce the impacts of exotic rodents on biodiversity on Australian offshore islands of less than 100,000 ha (DEWHA 2009)
Sooty tern	
Soft-plumaged petrel	Conservation Advice *Pterodroma mollis* soft-plumaged petrel (Threatened Species Scientific Committee 2015f)
Wedge-tailed shearwater	EPBC Act Threat Abatement Plan for the incidental catch (or bycatch) of seabirds during oceanic longline fishing operations (Commonwealth of Australia 2018) EPBC Act Threat Abatement Plan for predation by feral cats (DoE 2024) EPBC Act Threat Abatement Plan for predation by the European red fox (DEWHA 2008b) EPBC Act Threat Abatement Plan for the impacts of marine debris on the vertebrate wildlife of Australia's coasts and oceans (DoEE 2018)
Wilson's storm petrel	EPBC Act Threat Abatement Plan for predation by feral cats (DoE 2024) EPBC Act Threat Abatement Plan for the impacts of marine debris on the vertebrate wildlife of Australia's coasts and oceans (DoEE 2018) EPBC Act Threat Abatement Plan to reduce the impacts of exotic rodents on biodiversity on Australian offshore islands of less than 100,000 ha (DEWHA 2009)
Common noddy	EPBC Act Threat Abatement Plan for predation by feral cats (DoE 2024)
Caspian tern	
Greater crested tern	
Lesser frigatebird	
Streaked shearwater	
White-tailed tropicbird	
Red-tailed tropicbird (Indian Ocean)	Conservation Advice for *Phaethon rubricauda westralis* (Indian Ocean red-tailed tropicbird) (DCCEEW 2023h)
Shorebirds	
All migratory shorebird species	Wildlife Conservation Plan for Migratory Shorebirds (Commonwealth of Australia 2015c) EPBC Act Policy Statement 3.21 – Industry guidelines for avoiding, assessing and mitigating impacts on EPBC Act listed migratory shorebird species (DoEE 2017) National Light Pollution Guidelines for Wildlife Including Marine Turtles, Seabirds and Migratory Shorebirds (DCCEEW 2023j)
Asian dowitcher	Conservation Advice for *Limnodromus semipalmatus* (Asian dowitcher) (DCCEEW 2024h)
Australian painted snipe	Conservation Advice *Rostratula australis* Australian painted snipe (Threatened Species Scientific Committee 2013b)
Bar-tailed godwit (menzbieri)	Conservation Advice *Limosa lapponica menzbieri* Bar-tailed godwit (northern Siberia) (DCCEEW 2024c)
Black-tailed godwit	Conservation Advice for *Limosa limosa* Black-tailed godwit (DCCEEW 2024f)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species	EPBC Act Part 13 statutory instrument
Common greenshank	Conservation Advice for *Tringa nebularia* (common greenshank) (DCCEEW 2024g)
Curlew sandpiper	Conservation Advice *Calidris ferruginea* Curlew sandpiper (DCCEEW 2023e)
Eastern curlew	Conservation Advice *Numenius madagascariensis* Far eastern curlew (DCCEEW 2023d)
Great knot	Conservation Advice *Calidris tenuirostris* Great knot (DCCEEW 2024e)
Greater sand plover	Conservation Advice *Charadrius leschenaultia* Greater sand plover (DCCEEW 2023f)
Grey plover	Conservation Advice for *Pluvialis squatarola* (grey plover) (DCCEEW 2024l)
Lesser sand plover	Conservation Advice *Charadrius mongolus* Lesser sand plover (Threated Species Scientific Committee, 2016)
Little curlew	EPBC Act Threat Abatement Plan for predation by the European red fox (DEWHA 2008b)
Pacific golden plover	EPBC Act Threat Abatement Plan for predation by feral cats (DoE 2024)
Red-necked stint	
Red knot	Conservation Advice *Calidris canutus* Red knot (DCCEEW 2024d)
Ruddy turnstone	Conservation Advice for *Arenaria interpres* (ruddy turnstone) (DCCEEW 2024i)
Sharp-tailed sandpiper	Conservation Advice for *Calidris acuminata* (sharp-tailed sandpiper) (DCCEEW 2024j)
Terek sandpiper	Conservation Advice for *Xenus cinereus* (terek sandpiper) (DCCEEW 2024k)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

4. BIOLOGICAL COMMUNITIES

4.1 Regional context

The NWMR is characterised by shallow-water tropical marine ecosystems and features high species richness. The southern extent of the NWMR transitions between tropical and temperate waters and includes some species that are found in the SWMR. High diversity is driven by the interaction with seafloor features in addition to the currents in the NWMR, which support unique ecosystems and trophic interactions. The strong seasonality in wind direction and rainfall is another key driver on the ecological processes in the region. The weakening of the Indonesian Throughflow and Leeuwin Current in the dry season, along with the seasonal wind reversal and cyclones, drives biological productivity by mixing deeper, cold nutrient-rich waters with the surface waters (DSEWPaC 2012a).

The SWMR has high biodiversity and a high number of species endemic to the region. Factors that contribute to the high level of biodiversity and endemism in the region include the long stable period of geological oscillation, persistent high energy environment, warm-water intrusion by the Leeuwin Current, and areas in the east of the SWMR where cold nutrient-rich waters rise from the deep ocean to the surface. The low-nutrient environment of the SWMR leads to clear waters and high levels of light penetration, giving rise to a high diversity of seagrass, algal and benthic communities. Biological productivity of the SWMR is low in global standards in comparison to other Australian marine regions due to the low-nutrient tropical waters carried south by the Leeuwin Current, and its effect in supressing the upwelling of deeper nutrient-rich cold waters, in addition to the absence of nutrient runoff from significant rivers. Small seasonal upwellings occur regularly at known locations and, because of the overall absence of nutrients in the region, these productivity locations have a disproportionate effect on the region's ecosystems. These eddies can be either upwelling, which enhances local biological productivity where they form, or downwelling, which concentrates and transports communities away from the coast (DSEWPaC 2012b).

The NMR is known for its high diversity of tropical species but relatively low endemism. The high diversity and low endemism are thought to be due to the vast species-rich biogeographic ocean zone that stretches from the western Pacific to the east coast of Africa, and is thought to have few physical barriers for species dispersal. Most of the NMR endemic species do not have a long-lived pelagic larval stage, which promotes long-distance travel across deeper waters. The NMR is primarily influenced by tidal flows rather than ocean currents. Tidal movement in the region is complex due to the barrier of islands and submerged reefs in the Torres Strait, which hinder tidal energy. The Indonesian Throughflow and surface-driven currents in the region are likely to influence nutrients, pelagic dispersal, and species and biological productivity in the NMR (DSEWPaC 2012c).

4.2 Biological productivity of the NWMR

Primary productivity of the NWMR is generally low and appears to be largely driven by offshore influences (Brewer *et al.* 2007), with periodic upwelling events and cyclonic influences driving coastal productivity with nutrient recycling and advection. Seasonal weather patterns also influence the delivery of nutrients from deep water to shallow water (Brewer *et al.* 2007). Cyclones and north-westerly winds during the north-west wet season (Brewer *et al.* 2007) (around October to April (BOM 2026a)) facilitate the upwelling and mixing of nutrients from deepwater to shallow water environments (Brewer *et al.* 2007).

The Indonesian Throughflow has an important effect on productivity in the northern areas of the region. Generally, its deep, warm and low-nutrient waters suppress upwelling of deeper comparatively nutrient-rich waters, thereby forcing the highest rates of primary productivity to occur at depths associated with the thermocline. When the Indonesian Throughflow is weaker the thermocline lifts, bringing deeper, more nutrient-rich waters into the photic zone and resulting in conditions favourable to increased productivity (DEWHA 2007a). Similarly, the Leeuwin Current has a significant role in determining primary productivity in the southern areas of the NWMR. As with the Indonesian Throughflow, the overlying warm oligotrophic waters of the Leeuwin Current suppress upwelling. A subsurface chlorophyll maximum is therefore formed at a depth in the water column where nutrients and light are sufficient for photosynthesis to proceed. Seasonal changes in the strength of the Leeuwin Current influence primary productivity levels, and seasonal interactions between the Leeuwin and Ningaloo currents in the south of the NWMR are believed to be particularly important (DEWHA 2007a).

Internal tides (defined as internal waves generated by the barotropic tide) are a striking characteristic of many parts of the NWMR and are associated with highly stratified water columns. Internal waves (solitons), which can raise cooler, generally more nutrient-rich water higher in the water column, are generated between

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

water depths of 400 m and 1,000 m where bottom topography results in a significant change in water depth over a relatively short distance. Cyclones are episodic events in the NWMR that contribute to spikes in productivity through enrichment of surface water layers, due to enhanced vertical mixing of the water column. Temporary increases in primary productivity caused by cyclones generally last between one and two weeks, and it is believed the impacts of cyclones are generally limited to waters less than 100 m deep and affect benthic communities more substantially than pelagic systems (DEWHA 2007a).

Water depth also has a significant overriding influence over productivity in the marine environment, due to its influence on light availability. This is reflected by distinct onshore and offshore assemblages of major pelagic groups of phytoplankton, microzooplankton, mesoplankton and ichthyoplankton. Productivity booms are thought to be triggered by seasonal changes to physical drivers or episodic events, as detailed above, which result in rapid increases in primary production over short periods, followed by extended periods of lower primary production. The trophic systems in the NWMR can take advantage of blooms in primary production, enabling nutrients generated to be used by different groups of consumers over long periods (DEWHA 2007a).

Little detailed information is available about the trophic systems in the NWMR. The use of available nutrients is thought to differ between pelagic and benthic environments, influenced by water depth and vertical migration of some species groups in the water column. In the pelagic system, it is thought about half of the nutrients available are used by microzooplankton (such as protozoa), with the remainder going to macro and meso-zooplankton (such as copepods). As primary and secondary consumers, gelatinous zooplankton (such as salps and coelenterates) and jellyfish are thought to play an important role in the food web, contributing a significant proportion of biomass in the marine system during and for periods after booms in primary productivity. Salps are semi-transparent, barrel-shaped marine animals that can reproduce quickly in response to bursts in primary productivity and provide a food source for many pelagic fish species (DEWHA 2007a).

4.3 Planktonic communities in the NWMR

The NWMR has two distinct phytoplankton assemblages – a tropical oceanic community in offshore waters and a tropical shelf community confined to the NWS (Hallegraeff 1995). MODIS (moderate resolution imaging spectrometer) satellite datasets from the NWMR indicates chlorophyll (and thus phytoplankton) levels are low in summer months (December to March) and higher in winter months (Schroeder *et al.* 2009). Low chlorophyll levels during summer months may be a result of lower plankton productivity during the wet season or lower nutrient inputs from warm surface waters dominant during summer. However, it is likely much of the primary production is taking place below the surface, where the MODIS imagery does not penetrate (Schroeder *et al.* 2009). The winter months are relatively cloud free and surface chlorophyll is high throughout most of the region.

Zooplankton may include organisms that complete their life cycle as plankton (such as copepods, euphausiids) and as larval stages of other taxa, such as fishes, corals and molluscs. Peaks in zooplankton, such as mass coral spawning events (typically in March and April) (Rosser and Gilmour 2008) and fish larvae abundance (Department of Conservation and Land Management (CALM) 2005a), can occur throughout the year.

Spatial and temporal patterns in the distribution and abundance of macro-zooplankton on the NWS are influenced by sporadic climatic and oceanographic events, with large inter-annual changes in assemblages (Wilson *et al.* 2003). Amphipods, euphausiids, copepods, mysids and cumaceans are among the most common components of the zooplankton in the region (Wilson *et al.* 2003). Buenafe *et al.* (2025) analysed near-global larval distribution data for 15 taxa of large pelagic fishes and used habitat-suitability models to infer broad-scale spawning patterns, including for key species of management relevance such as skipjack tuna (*Katsuwonus pelamis*), southern bluefin tuna (*Thunnus maccoyii*), other tropical and subtropical tunas (*Thunnus* spp.), and billfishes (such as marlins and swordfish). The study identified consistent seasonal and regional structure in spawning, with modelled spawning habitat for several of these species occurring off northwest Australia, particularly during the wetter months in spring and summer. This overlap suggests the oceanographic conditions in parts of the NWMR are favourable for early life stages and reproduction of large pelagic fishes (Buenafe *et al*. 2025).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

4.3.1 Browse

Phytoplankton within the Browse activity area is expected to reflect the conditions of the NWMR. There is a tendency for offshore phytoplankton communities in the NWMR to be characterised by smaller taxa (such as bacteria), whereas shelf waters are dominated by larger taxa such as diatoms (Hanson *et al.* 2007). Communities of phytoplankton in oligotrophic tropical waters, such as those around Scott Reef, are usually dominated by picoplankton. Particularly, the marine cyanobacteria genera Prochlorococcus and Synechococcus (Brinkman *et al.* 2009a). Estimates of the phytoplankton biomass (measured as chlorophyll a) near Scott Reef are about twice that of open waters (sampled more than 50 km south-west of South Scott Reef). The open water location sampled is likely to be representative of the general outer shelf pelagic environment, and so is representative of the oceanic waters of the area. This difference is considered to most likely reflect the enhanced vertical mixing of nutrients into the surface layer around Scott Reef through interactions between the local hydrodynamics and the local topography (Brinkman *et al.* 2009a).

Zooplankton within the activity area may include organisms that complete their life cycle as plankton and as larval stages of other taxa, such as fishes, corals and molluscs. Peaks in zooplankton, such as mass coral spawning events (typically in March and April) (Rosser and Gilmour 2008; Simpson *et al.* 1993) and fish larvae abundance (CALM 2005a), can occur throughout the year.

The influence of the Indonesian Throughflow restricts upwelling across the Kimberley System (roughly equates to the Browse activity area) (Sutton *et al.* 2019). However, small-scale topographically associated current movements, tidal pumping, eddies and upwellings are thought to occur, which transport cooler, nutrient-rich water to specific locations, including reefs and shallow ecosystems, which result in ‘productivity hotspots’ (Sutton *et al.* 2019; Green *et al.* 2019). Similarly, internal waves, generated at the shelf break (for example, west of Browse Island and around submerged cliffs located at the continental shelf edge) play a role in making nutrients available in the photic zone. Productivity within shallow nearshore waters is driven primarily by tidal movement and terrestrial runoff, whereby nutrients are mixed by tidal action and new inputs of organic matter come from the land (Sutton *et al.* 2019).

4.3.2 North West Shelf/Scarborough

Plankton communities within the NWS/Scarborough activity area are expected to reflect conditions of the NWMR.

Internal tides along the NWS and Exmouth Plateau draw deeper cooler waters into the photic zone, stir up nutrients and trigger primary productivity. Broadly, the greatest productivity within this subsystem is found around the 200 m isobath associated with the shelf break (Brewer *et al.* 2007). Overall, productivity across the NWS is maintained through strong nutrient recycling and offshore inputs. Cyanobacteria are an important primary producer in the region, with other primary producers such as diatoms increasing in abundance during nutrient influxes in the area. Along the Pilbara coast and Dampier Archipelago, mean levels of chlorophyll and nutrients are locally elevated, suggesting a high level of primary producer productivity in these areas. Inshore waters of the Pilbara coast and Dampier Archipelago feature high turbidity, strong tidal activity, and detritus inputs that increase primary productivity in the region (Brewer *et al.* 2007).

4.3.3 North West Cape

Waters of the North West Cape experience a relatively high diversity of phytoplankton groups including diatoms, coccolithophorids and dinoflagellates. During the warmer months blooms of *Trichodesmium* occur in the region, these have been observed particularly on the frontal systems around Point Murat (Heyward *et al.* 2000).

Average Leeuwin Current phytoplankton biomass is characteristic of low productivity oceanic waters like the Indian, Pacific and Atlantic Oceans (Hanson *et al.* 2005). However, the Canyons linking the Cuvier Abyssal Plain and Cape Range Peninsula KEF are connected to the Commonwealth waters adjacent to Ningaloo Reef and may also have connections to Exmouth Plateau. The canyons are thought to interact with the Leeuwin Current to produce eddies inside the heads of the canyons, resulting in waters from the Antarctic intermediate water mass being drawn into shallower depths and onto the shelf (Brewer *et al.* 2007). These waters are cooler and richer in nutrients and strong internal tides may also aid upwelling at the canyon heads (Brewer *et al.* 2007). The narrow shelf width (about 10 km) near the canyons facilitates nutrient upwelling and relatively high productivity. This high primary productivity leads to high densities of primary consumers such as micro and macro-zooplankton, such as amphipods, copepods, mysids, cumaceans, euphausiids (Brewer *et al.* 2007).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

5. BENTHIC COMMUNITIES AND HABITATS

5.1 Regional context

The NWMR habitats range from nearshore benthic primary producer habitats, such as seagrass beds, coral communities and mangrove forests, to offshore soft sediment seabed habitats and submerged and emergent reef systems. These habitats support biological communities that range from low density sessile and mobile benthos, such as sponges, molluscs and echinoids (with noted areas of sponge hotspot diversity) in offshore soft sediment habitat (DSEWPaC 2012a) to complex, diverse, remote coral reef systems.

Benthic primary producer habitats, such as seagrass beds, coral communities and mangrove forests within the SWMR, are described as a mixture of tropical and temperate species, due to the seasonal influences of the tropical waters carried south by the Leeuwin Current and the temperate waters carried north by the Capes Current (DSEWPaC 2012b).

The NMR shares similar habitat types to the NWMR. The predominant habitat of the region includes soft muddy sediments on relatively flat terrain. Other habitat types include seagrasses, reefs, shoals, and coastal habitats such as mangroves and coastal wetlands (Rochester *et al.* 2007).

Table 5-1, Table 5-2 and Table 5-3 summarise the benthic communities and habitats that are representative of the broader NWMR, SWMR and NMR, respectively. While the next subsections are focused on the primary features of relevance to the activity areas within the NWMR, mainly the offshore habitats of the continental shelf and slope, submerged shoals and banks, and remote oceanic reef systems that are of recognised conservation value.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 5-1: Benthic communities and habitats within the NWMR

Habitat/community	Kimberley	Pilbara	Ningaloo-Leeuwin
Offshore habitats and biological communities			
Soft sediment with infauna	The offshore environment of the NWMR comprises predominantly of seabed habitats dominated by soft sediments (sandy and muddy substrata with occasional patches of coarser sediments) and sparse benthic biota. The benthic communities inhabiting the predominantly soft, fine sediments of the offshore habitats are characterised by infauna such as polychaetes, and sessile and mobile epifauna such as crustacea (shrimp, crabs and squat lobsters) and echinoderms (starfish, cucumbers). The density of benthic fauna is typically lower in deep-sea sediment habitats (greater than 200 m) than in shallower coastal sediment habitats, but the diversity of communities may be similar.		
Soft sediment with hard substrate outcropping	A unique seafloor feature combining both soft sediment and hard substrates, including outcrops, terraces, continental slope and escarpments. This habitat is found in offshore areas of the NWMR, often associated with KEFs such as the Ancient Coastline at 125 m Depth Contour KEF.		
	• Ancient coastline at 125 m depth contour KEF • Continental slope demersal fish communities KEF	• Ancient coastline at 125 m depth contour KEF • Continental slope demersal fish communities KEF	• Ancient coastline at 125 m depth contour KEF • Continental slope demersal fish communities KEF
Coral reef	Coral reef habitats within the NWMR have a high species diversity that includes corals, and associated reef species such as fishes, crustaceans, invertebrates and algae. Coral reef habitats of the offshore environment of the NWMR include remote oceanic reef systems, large platform reefs,and submerged banks and shoals.		
	• Browse Island • Scott Reef • Seringapatam Reef • Ashmore Reef • Cartier Island • Hibernia Reef • Rowley Shoals (including Mermaid Reef, Clerke Reef, Imperieuse Reef)	• Glomar Shoal • Rankin Bank • Montebello, Lowendal and Barrow Island groups	N/A
Seagrass and macroalgae communities	Seagrass beds and benthic macroalgae reefs are a main food source for many marine species and provide key habitats and nursery grounds (Heck *et al.* 2003; Wilson *et al.* 2010). In the northern half of WA, these habitats are restricted to sheltered and shallow waters, including around offshore reef systems, due to large tidal movement, high turbidity, cyclones and large seasonal freshwater runoff.		
	• Scott Reef, Seringapatam Reef, Ashmore Reef • Rowley Shoals (including Mermaid Reef, Clerke Reef, Imperieuse Reef)	Montebello, Lowendal and Barrow Island groups	N/A

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Habitat/community	Kimberley	Pilbara	Ningaloo-Leeuwin
Filter feeders/ heterotrophic	Filter feeder epifauna such as sponges, ascidians, soft corals and gorgonians are animals that feed by actively filtering suspended matter and food particles from water by passing the water over specialised filtration structures (DEWHA 2008a). Filter feeders generally live in areas that have strong currents and hard substratum, often associated with deeper environments of the shoals and banks in the offshore NWMR.		
	Lower outer reef slopes of the oceanic reef systems such as Scott Reef	• Glomar Shoal • Rankin Bank • Ancient coastline at 125 m depth contour KEF	Cape Range canyon system
Sandy beaches	Sandy beaches are dynamic environments, naturally fluctuating in response to external forcing factors such as waves and currents. Sandy beaches vary in length, width and gradient, and in sediment type, composition and grain size throughout the NWMR, being found around islands and reefs in the offshore areas of the region.		
	• Browse Island • Scott Reef (Sandy Islet) • Ashmore Reef • Cartier Island	Montebello, Lowendal and Barrow Island groups	N/A
Nearshore/coastal habitats and biological communities			
Coral reef	Coral reef habitats typically found in nearshore regions of the NWMR include the fringing reefs around coastal islands and the mainland shore.		
	• Kimberley • East Holothuria and Long reefs • Bonaparte and Buccaneer Archipelagos • Montgomery Reef • Adele Complex (Beagle, Mavis, Albert, Churchill reefs, Adele Island)	• Dampier Archipelago • Inshore Pilbara Islands (Northern, Middle and Southern)	• Ningaloo Reef • Muiron Islands • Exmouth Gulf • Shark Bay
Seagrass and macroalgae communities	Seagrass beds and benthic macroalgae reefs are a main food source for many marine species and provide key habitats and nursery grounds (Heck Jr. *et al.* 2003; Wilson *et al.* 2010). In the nearshore areas of the NWMR, these habitats are restricted to sheltered and shallow waters due to large tidal movement, high turbidity, cyclones and large seasonal freshwater runoff. These areas include in bays and sounds and around reef and island groups.		
	King Sound	• Roebuck Bay • Dampier Archipelago	• Ningaloo Reef • Exmouth Gulf • Shark Bay

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Habitat/community	Kimberley	Pilbara	Ningaloo-Leeuwin
Filter feeders/ heterotrophic	Filter feeder epifauna such as sponges, ascidians, soft corals and gorgonians are animals that feed by actively filtering suspended matter and food particles from water by passing the water over specialised filtration structures (DEWHA 2007a). Filter feeders generally live in areas that have strong currents and hard substratum. Conversely, higher diversity infauna is mainly associated with soft unconsolidated sediment, and infauna communities are considered widespread and well represented along the continental shelf and upper slopes of the NWMR. In nearshore areas of the NWMR, these species are generally found around reef systems.		
	• Scott Reef • Rowley Shoals	Deeper habitats of Rankin Bank and Glomar Shoal	Deeper habitats of Ningaloo Reef and the protected sponge zone in the south
Mangroves	Mangroves grow in intertidal mud and sand, with specially adapted aerial roots (pneumatophores) that provide for gas exchange during low tide (McClatchie *et al.* 2006). Mangrove forests can help stabilise coastal sediments, provide a nursery ground for many species of fish and crustacean, and provide shelter or nesting areas for seabirds (McClatchie *et al.* 2006). In regions like the NWMR, mangroves can frequently occur at their physiological limits due to the high temperatures, hypersaline conditions and low humidity. Their condition can fluctuate with climate, with periods of increased rainfall supporting improved growth and dispersal. Mapping of the Pilbara coastline shows mangroves form a relatively stable component of a broader intertidal environment, occupying about 16% of the intertidal zone over the past two decades, and functioning as an important ecological connector between adjacent saltmarshes, cyanobacterial mats and subtidal habitats (Hickey *et al.* 2025). Mangroves are confined to shoreline habitats, in nearshore areas of the NWMR.		
	Dampier Peninsula (including Carnot Bay, Beagle Bay and Pender Bay)	• Pilbara coastline (including Ashburton River Delta, Coolgra Point, Robe River Delta, Yardie Landing, Yammadery Island and the Mangrove Islands) • Montebello, Lowendal and Barrow Island groups • Roebuck Bay	• Shark Bay • Mangrove Bay, Cape Range Peninsula • Exmouth Gulf
Saltmarshes	Saltmarsh communities are confined to shoreline habitats and are typically dominated by dense stands of halophytic plants such as herbs, grasses and low shrubs. The diversity of saltmarsh plant species increases with increasing latitude (in contrast to mangroves). The vegetation in these environments is essential to the stability of the saltmarsh, as they trap and bind sediments. The sediments are generally sandy silts and clays and can often have high organic material content.		
	N/A	• Eighty Mile Beach • Roebuck Bay	Shark Bay

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Habitat/community	Kimberley	Pilbara	Ningaloo-Leeuwin
Sandy beaches	Sandy beaches are dynamic environments, naturally fluctuating in response to external forcing factors such as waves and currents. Sandy beaches vary in length, width and gradient, and in sediment type, composition and grain size throughout the NWMR. Sandy beaches are important for both resident and migratory seabirds and shorebirds, and can provide an important habitat for turtle nesting and breeding. They are located along many coastlines of the nearshore environments of the NWMR.		
	• Cape Domett • Lacrosse Island	• Eighty Mile Beach • Eco Beach • Dampier Archipelago • Inshore Pilbara Islands (Northern, Middle and Southern)	• Ningaloo Coast • Muiron Islands • Exmouth Gulf

Table 5-2: Benthic communities and habitats within the SWMR

Habitat/community	Location
Offshore	
Soft sediment with infauna	Most of the SWMR seafloor is composed of soft unconsolidated sediments, but due to large variations in bathymetry there are marked differences in sedimentary composition and benthic assemblage structure across the region. Despite the prevalence of these habitats in the SWMR, very little is known about the composition or distribution of the region's sedimentary infauna (DEWHA 2008ba).
Soft sediment with hard substrate outcropping	A unique seafloor feature combining both soft sediment and hard substrates, including outcrops, terraces, continental slope and escarpments.
	• Perth Canyon Marine Park • Ancient coastline at 90 to 120 m depth contour KEF • Diamantina Fracture Zone • Naturaliste Plateau
Coral reef	To date, studies and understanding of the corals within the SWMR have concentrated on the shallow water areas in State waters. Within the deeper Commonwealth waters of the SWMR, little is known of the distribution of corals.
Filter feeders/ heterotrophic	Filter-feeder epifauna such as sponges, ascidians, soft corals and gorgonians are animals that feed by actively filtering suspended matter and food particles from water by passing the water over specialised filtration structures (Department of the Environment and Water Resources (DEWR) 2007). Filter feeders generally inhabit deeper habitats (below the photic zone) that have strong currents and hard substratum.
	• Ancient coastline at 90 to 120 m depth contour KEF • Diamantina Fracture Zone Naturaliste Plateau • Perth Canyon Marine Park • South-west Corner Marine Park

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Habitat/community	Location
Nearshore	
Coral reef	The northern extent of the SWMR coincides loosely with the disappearance of abundant and diverse coral from coastal habitats. To the south of Shark Bay, abundant corals occur predominantly around offshore islands, with corals at inshore sites occurring in very isolated patches of non-reef coral communities, usually of reduced species richness.
	• Houtman Abrolhos Islands • Rottnest Island
Seagrass and macroalgae communities	Within the SWMR, macroalgae and seagrass communities are noted for their extent, species richness and endemism. The clear waters of the region allow light to reach greater depths, with some species found at much greater depths than usual (down to 120 m) (DEWR 2007). Of the known species, there are more than 1,000 species of macro-algae and 22 species of seagrass consisting of tropical and temperate species. Seagrass and macro-algae occur in areas with sheltered bays and in the inter-reef lagoons along exposed sections of the coast. Macrophytes in southwest WA are abundant on shallow-water rock platforms and tidal pools, where these habitats support diverse, high-energy coastal communities (Tremblin *et al.* 2025). These environments, which are characteristic of higher-latitude sections of the region, support a wide variety of algal assemblages that provide structural complexity and microhabitats for numerous marine species. The presence of articulate coralline algae (such as *Amphiroa gracilis*), typically occurring among diverse macrophyte stands, illustrates the rich algal cover characteristic of these shallow, wave-exposed environments (Tremblin *et al.* 2025).
	• Houtman Abrolhos Islands • Jurien Marine Park • Shoalwater Islands Marine Park • Geographe Marine Park • Cockburn Sound • Rottnest Island • Commonwealth marine environment within and adjacent to the west-coast inshore lagoons KEF • Commonwealth marine environment within and adjacent to Geographe Bay KEF • Commonwealth marine environment surrounding the Recherche Archipelago KEF
Filter feeders/ heterotrophic	Filter-feeder epifauna such as sponges, ascidians, soft corals and gorgonians are animals that feed by actively filtering suspended matter and food particles from water by passing the water over specialised filtration structures (DEWR 2007). Filter feeders generally live in areas that have strong currents and hard substratum.
	• Houtman Abrolhos Islands • Recherche Archipelago

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Habitat/community	Location
Mangroves	Mangroves grow in intertidal mud and sand, with specially adapted aerial roots (pneumatophores) that provide for gas exchange during low tide (McClatchie *et al.* 2006). Mangrove forests can help stabilise coastal sediments, provide a nursery ground for many species of fish and crustacean, and provide shelter or nesting areas for seabirds (McClatchie *et al.* 2006). Mangroves are confined to shoreline habitats, in nearshore areas of the SWMR.
	Houtman Abrolhos Islands
Sandy beaches	Sandy beaches within the SWMR are important for both resident and migratory seabirds and shorebirds, and can host breeding populations of the Australian sea lion. They are found along many coastlines of the nearshore environments of the SWMR. In addition, beaches in the SWMR provide a variety of socioeconomic values, including tourism, commercial and recreational fishing, and support other recreational activities.
	• Houtman Abrolhos Islands • Marmion Marine Park • Ngari Capes Marine Park • Walpole and Nornalup Inlets Marine Park

Table 5-3: Benthic communities and habitats within the NMR

Habitat/community	Location
Offshore habitats and biological communities	
Soft sediment with infauna	Most of the offshore environment of the NMR is characterised by relatively flat expanses of soft sediment seabed. The soft sediments of the region are characterised by moderately abundant and diverse communities of infauna and mobile epifauna dominated by polychaetes, crustaceans, molluscs and echinoderms.
Soft sediment with hard substrate outcropping	A unique seafloor feature combining both soft sediment and hard substrates, including outcrops, terraces, continental slope and escarpments. The variability in substrate composition may contribute to the presence of unique ecosystems. Species include sponges, soft corals and other sessile filter feeders associated with hard substrate sediments.
	• Carbonate bank and terrace system of the Van Diemen Rise KEF • Pinnacles of the Bonaparte Basin KEF
Coral reef	Offshore coral reefs within the NMR are generally associated with a series of submerged shoals and banks. The shoals and banks in the region support tropical marine biota consistent with that found on emergent reef systems of the Indo-West Pacific region, such as Ashmore Reef, Cartier Island, Seringapatam Reef and Scott Reef (Heyward *et al.* 1997).
	• Pinnacles of the Bonaparte Basin KEF • Evans Shoal • Tassie Shoal • Blackwood Shoal

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Habitat/community	Location
Filter feeders/ heterotrophic	Filter-feeder epifauna such as sponges, ascidians, soft corals and gorgonians are animals that feed by actively filtering suspended matter and food particles from water by passing the water over specialised filtration structures (DEWHA 2007b). Filter feeders generally live in areas that have strong currents and hard substratum, and typically associated with the deeper habitats of the submerged shoals and banks, and canyon features.
	• Carbonate bank and terrace system of the Van Diemen Rise KEF • Pinnacles of the Bonaparte Basin KEF • Tributary Canyons of the Arafura Depression KEF • Evans Shoal • Tassie Shoal • Goodrich Bank
Nearshore	
Coral reef	Within the NMR corals occur both as reefs and in non-reef coral communities. Nearshore reefs include patch reefs and fringing reefs sparsely distributed within the region. Coral reefs within the NMR provide breeding and aggregation areas for many fish species, including mackerel and snapper, and offer refuges for sea snakes and apex predators such as sharks.
	• Submerged coral reefs of the Gulf of Carpentaria KEF • Darwin Harbour
Seagrass and macroalgae communities	Seagrasses provide key habitats in the NMR. They stabilise coastal sediments and trap and recycle nutrients. They provide nursery grounds for commercially harvested fish and prawns and provide feeding grounds for dugongs and green turtles. Seagrass distribution in the region is largely associated with sheltered small bays and inlets, including shallow waters surrounding inshore islands.
	• Field Island • The mainland coastline adjacent to Kakadu National Park
Filter feeders/ heterotrophic	Filter-feeder epifauna such as sponges, ascidians, soft corals and gorgonians are animals that feed by actively filtering suspended matter and food particles from water by passing the water over specialised filtration structures (DEWHA 2007b). Filter feeders generally inhabit areas that have strong currents and hard substratum.
	Cape Helveticus
Mangroves	Mangroves grow in intertidal mud and sand, with specially adapted aerial roots (pneumatophores) that provide for gas exchange during low tide (McClatchie *et al.* 2006). Mangroves provide habitat for waterbirds and support many commercially and recreationally important fish and crustacean species for parts of their life cycles. They buffer the coast from large tidal movements, storm surges and flooding.
	• Tiwi Islands • Darwin Harbour • The mainland coastline adjacent to the Daly River

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Habitat/community	Location
Sandy beaches	Sandy beaches vary in length, width and gradient, and in sediment type, composition and grain size throughout the NMR, and are important for both resident and migratory seabirds and shorebirds. Sandy beaches can also provide an important habitat for turtle nesting. They are located along many coastlines of the nearshore environments of the islands and mainland shores of the NMR.
	• Tiwi Islands • Cobourg Peninsula • Joseph Bonaparte Gulf

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

5.2 Key benthic communities and habitats of the NWMR

The NWMR encompasses offshore and coastal waters, islands and mainland shoreline habitats typified by mangroves, tidal flats, saltmarshes, coral reefs (remote, offshore reef systems to extensive fringing reef systems such as Ningaloo), sandy beaches and smaller areas of rocky shores. Each of these habitat types has the potential to support different flora and fauna assemblages due to the different physical factors (such as waves, tides, light) influencing the habitat.

The NWMR has a large area of continental shelf and continental slope, with a range of bathymetric features such as canyons, plateaus, terraces, ridges, reefs, banks and shoals. The marine environment in this region is typified by tropical to subtropical marine ecosystems with diverse habitats from soft sediments, canyons, remote oceanic coral reef systems and continental shelf limestone pavement seabed habitat. The NWMR encompasses large seabed areas of deepwater seabed habitats dominated by soft sediments (sandy and muddy substrata with occasional patches of coarser sediments) and spare benthic biota.

Comprehensive surveys and documentation of habitats and biota from the shelf to deep waters (100 m to 1,000 m) spanning 13 sites between Barrow Island and Ashmore Reef, running downslope across the continental shelf and slope of NWS, were conducted in 2007 (Williams *et al.* 2010). Sites on the continental slope (about 400 m deep) predominantly comprised soft, muddy sediments, and epifauna were sparsely distributed and limited to isolated individual sessile biota such as crinoids, anemones, glass sponges and sea pens. Occasional non-sessile biota, characteristic of the deeper water benthic communities, were recorded and included echinoderms (urchins, holothurians and sea stars) and decapod crustaceans (prawns and crabs). Similar benthic biota composition was reported for the continental slope seabed habitats at depths of 700 to −1,000 m (Williams *et al.* 2010).

With reference to the NWS, surveys have documented habitats comprising bare unconsolidated carbonate sediments supporting a sparse assemblage of deposit and filter-feeding organisms, including glass sponges, urchins, sea cucumbers, sea stars and crustaceans (URS 2010). Filter-feeding communities documented within the NWS include bryozoans, sponges, gorgonians and hydroids attached to consolidated substrate; these were interspersed with sand, which hosted fewer filter feeders (Australian Institute of Marine Science (AIMS) 2014). Infauna associated with soft, unconsolidated sediment habitat such as polychaetes are widespread and well represented along the continental shelf and upper slopes (Brewer *et al.* 2007; RPS 2012). Table 5-1 summarises the key habitats and biological communities that are representative of the broader NWMR.

There is a marked biodiversity gradient from high ecologically valued coastal (primary producer habitats and associated benthic and mobile biota) to the lower valued deeper offshore habitats comprising soft, unconsolidated sediments and typically sparser biota (epifauna and infauna), except the submerged shoal features, remote oceanic reef systems of the Rowley Shoals, Scott Reef and Ashmore Reef, the submerged shoals of Glomar Shoal and Rankin Bank in the NWS, in addition to the fringing reef habitats of Ningaloo, the Kimberley coastline, the offshore island groups such as Barrow Island, Lowendal and Montebello Islands, and the Dampier Archipelago. The next subsections present a brief overview of the high valued biodiversity reef and mesophotic habitats and associated benthic communities.

Table 11-1 details the 13 KEFs within the NWMR ,as identified by the PMST (Appendix A). Table 12-4 describes protected areas of the NWMR.

5.2.1 Browse

The most diverse habitats and benthic communities in the Kimberley region of north-western Australia are where the oceanic reef systems of Ashmore, Cartier, Scott and Seringapatam reefs, and the Rowley Shoals, sit near the edge of the continental shelf hundreds of kilometres from the mainland and from each other (Gilmour *et al.* 2019; 2023); see Figure 5-1. The long-term monitoring program for Scott Reef and the Rowley Shoals conducted by AIMS since 1994 is now one of the world's longest studies of coral reef ecosystems. It provides unprecedented understanding of the background (baseline) changes at oceanic reefs on Australia's NWS, encompassing the physical drivers and the underlying processes of change (impact and recovery) from acute disturbances (cyclones, heat stress causing coral mass-bleaching).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

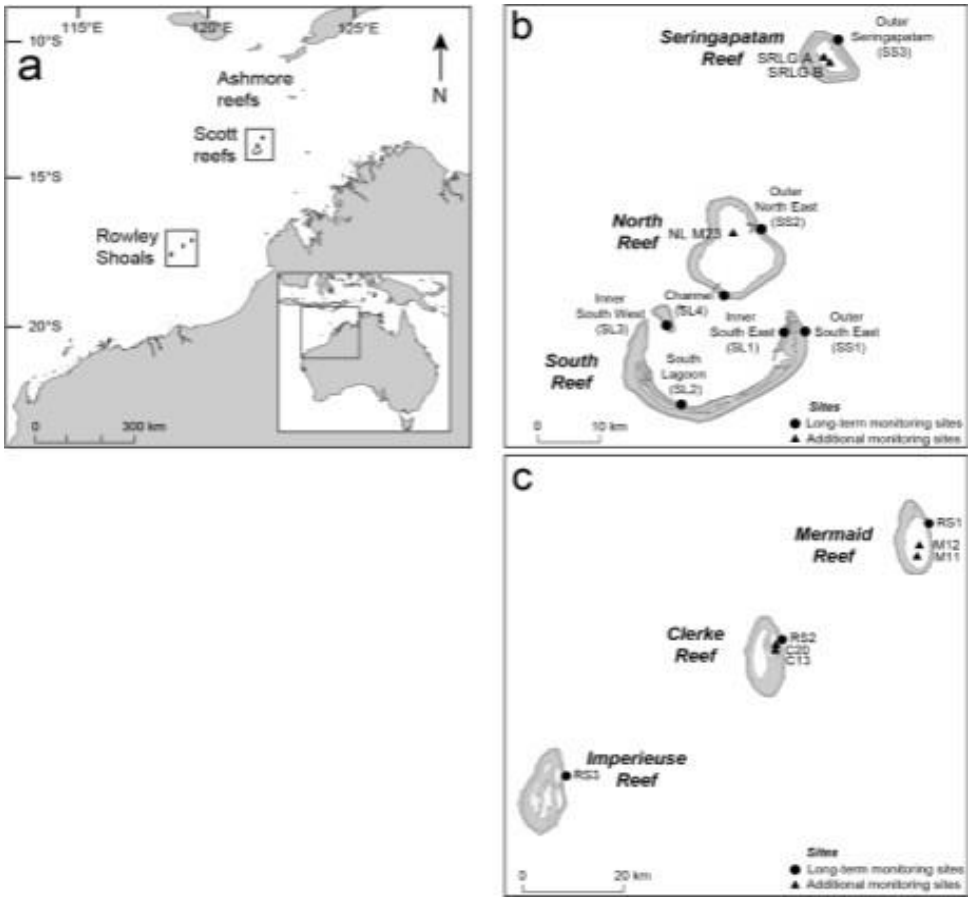


Figure 5-1: The position of Scott Reef, Ashmore Reef and the Rowley Shoals off north-western Australia and location of permanent long-term monitoring sites

Source: Gilmour et al. *(2023)*

5.2.1.1 Scott Reef

Scott Reef is an annular reef about 17 km long and 16 km wide comprising two coral reef atolls rising steeply from depths of around 400 to 500 m. These atolls, referred to as South Scott Reef and North Scott Reef, are separated by a deep channel (Figure 5-1). North Scott Reef features an emergent reef flat, outer slope habitats and a shallow lagoon about 20 m deep, with two small channels linking it to the surrounding ocean. The shallow closed waters of North Scott Reef lagoon contain a range of habitats, from bare sand, sand with coral outcrops, to shallow to deep lagoonal coral dominated habitats (Gilmour *et al.* 2013). This contrasts with the deeper, more open lagoon of South Scott Reef, described as an extensive, unique mesophotic (30 to 70 m depth) coral-dominated habitat comprising hard corals, calcareous algae, soft corals, sponges, bryozoans and other invertebrates (Gilmour *et al.* 2013; Heyward and Radford 2019). It is largely protected from the direct influence of major storms by the surrounding horseshoe-shaped emergent reef rim (Heyward and Radford 2019).

South Scott Reef shallow water habitats also include reef flats (of low coral cover) and extensive outer reef slopes with the highest hard coral diversity of any habitat at Scott Reef (Gilmour *et al.* 2013). Studies at Scott Reef have identified that two short and distinct periods of mass spawning occur during spring and autumn, unlike single mass spawning events at most other reefs around Australia (Gilmour *et al.* 2009a). The dominant coral spawning period at Scott Reef is autumn (March/April), with a secondary, lesser spawning event in spring (October/November). Corals at Scott Reef that are brooders are likely to have multiple gametogenic cycles and spawn several times throughout the year (Gilmour *et al.* 2008; Gilmour *et al.* 2009a).

Over the past 30 years, the coral communities at Scott Reef have been extensively studied and the long-term monitoring program showed that from 1994 to 2021, the mean cover of hard and soft corals on the reef slopes was 36% and ranged between 13% and 59%. Decreases in coral cover were caused by damaging waves, generated by storms and cyclones, and recurrent heat stress causing coral bleaching. The

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

most severe heat stress and mass coral bleaching occurred in 1998 and 2016 (Gilmour *et al.* 2023). In 1998 a mass-bleaching event caused coral cover at Scott Reef to collapse from about 60% to 6%, representing one of the most severe disturbance events recorded for the system (Birt *et al.* 2025). Recovery took over a decade. By 2010, coral cover had reached pre-bleaching levels (45%). Despite moderate coral bleaching and cyclone disturbances, cover increased to 49% in January 2016, after which the reefs were impacted by a second mass bleaching event that reduced mean coral cover to 15%. Five years after the 2016 mass bleaching event, total cover of hard and soft corals had reached 34%, showing a similar rate of recovery to that after the 1998 mass bleaching (Gilmour *et al.* 2023). Long-term monitoring of reef fish demonstrated the 1998 coral collapse caused strong shifts in fish trophic structure, including marked declines in several species' groups. Although fish assemblages changed substantially after disturbance, they showed resilience and eventual recovery over time. Functional responses were complex, with functional originality at Scott Reef generally increasing as *Acropora* coral cover declined (Birt *et al.* 2025).

Scott Reef supports five species of seagrass: *Thalassia hemprichii, Thalassodendron ciliatum, Cymodocea rotundata, Halophila ovalis* and *H. decipiens* (URS 2006). These species occur widely throughout the Indo-Pacific region. *Thalassia hemprichii* is the most abundant seagrass at Scott Reef (Skewes *et al.* 1999; URS 2006). Skewes *et al.* (1999) reported the dominance of *T. hemprichii*, along with less common *H. ovalis* at South Scott Reef and *T. hemprichii* and *H. ovalis* as co-dominants, with minor *T. ciliatum* at North Scott Reef, all occurring on the reef edge, lagoon edge and shallow lagoon. Seagrasses recorded in less than 15 m depth covered a total of 23 ha out of 10,613 ha (0.22%) at North Scott Reef, and 77 ha out of 14,400 ha (0.54%) at South Scott Reef.

A total of 121 species of algae have been reported from Scott Reef. However, there is likely to be smaller, cryptic species not yet recorded (Western Australian Museum 2009) (SKM 2007). Surveys of macroalgae in 2006 found algal cover to be about 5 to 10% in shallow and intertidal areas, but highly variable, with some areas approaching 100% cover (Western Australian Museum 2009). Higher-energy reef fronts typically supported encrusting coralline *Hydrolithon onkodes* near the reef crest, characteristic of Indo-Pacific reefs. Other reef-front species were associated with dark recesses, including *Peyssonnelia inamoena* and *Corynocystis prostrata*. *Halimeda* species were common across reef flats, outcrops and sandy pools. The turf green algae *Boodlea vanbosseae* and spongy green *Boodlea composita* were commonly present on outcrops, along with red algae *Polysiphonia* spp., *Coelothrix irregularis* and *Gelidiopsis* spp. Dense monospecific stands of algae were observed, most commonly *Ulva* spp. In shallow sandy habitats, as well as *Polysiphonia* spp. at North Scott Reef and *Coelothrix irregularis* at South Scott Reef. An additional survey of deepwater habitats in the Scott Reef lagoons (URS 2007b) identified areas where *Halimeda* occurred in clumps many metres in diameter and was the dominant component of the community. Such densities of *Halimeda* are not considered unique in the region, with similar densities observed at Mermaid, Scott and Seringapatam reefs (Western Australian Museum 2009).

5.2.1.2 Rowley Shoals

The Rowley Shoals comprise three distinct reef continental shelf atolls of similar dimension, shape and orientation, named Mermaid Reef, Clerke Reef and Imperieuse Reef. The reefs are orientated north-south and are about 30 to 40 km apart. Each atoll covers an area about 80 to 90 km² and extends almost vertically from seafloor depths of around 400 m. Each atoll comprises extensive lagoon habitat composed of bare sand, coral-dominated patches and coral outcrops, emergent reef crests and outer reef slopes. At high tide only the sandy cays of Clerke Reef and Imperieuse Reef remain visible.

Across the Rowley Shoals, the reef crest and reef slope were most similar and the lagoon most unique in terms of habitat and benthic communities. Hard corals and coralline algae were the most abundant biota (>40%) and other benthic organisms such as sponges, ascidians and macroalgae are rare (<5%). Soft corals were also rare (<1%) at all reefs and habitats, apart from the reef slope (4%) at Mermaid Reef. Across all surveys (1995 to 2019), the mean cover of hard and soft corals at the reef slope was 46% and ranged between 26% and 58%. Decreases in coral cover were primarily due to frequent storms and cyclones. Between 2005 and 2008, three cyclones and moderate heat stress caused a mean reduction in coral cover (52% to 42%) at the reef slope habitat across the Rowley Shoals. Coral bleaching was low (<10%) in January 2016, except for minor to moderate (11 to 30%) bleaching at two lagoon sites at Mermaid Reef. A prolonged heat stress period (45 days) in May 2020 caused the worst coral bleaching on record (about 20%) across reef habitats, with the highest heat stress and declines in coral cover at the reef slope for Imperieuse Reef (9%) and minor bleaching and small decreases in coral cover at the reef slope (5%) and lagoon (3%) at Clerke Reef (Gilmour *et al.* 2023). Keesing *et al.* (2025) surveyed coral reef communities at Mermaid Reef in July 2022. This survey also compared data from studies in previous and subsequent years and quantified the benthic coverage of coral, invertebrates, algae and sponge. The survey demonstrated densities of

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

invertebrates, including sea cucumbers, coral communities and giant clams, remained consistent with previous surveys, with mean hard coral cover being highest (40-50%) on the exposed western outer reef slope and lowest on the reef flat (<10%). *Acropora* was the most abundant coral genus and was significantly greater on the exposed outer western slope. Turf algae on reef surfaces were an important element of the benthic cover (25 to 60%) but lowest in the shallow lagoon. Macroalgae accounted for >1% of benthic cover on the reef flat, while soft corals comprised about 2 to 3% of cover on the back reef outer slope. Sponges were also a minor part of the benthic cover (mostly <0.5%) (Keesing *et al.* 2025).

Sparsely-distributed seagrass communities are also within the Rowley Shoals. *Thalassia hemprichii* has been recorded at both Mermaid and Clerke reefs and *Thalassodendron ciliatum* and *Halophila ovalis* have been recorded at Mermaid Reef (Berry 1986; Walker and Prince 1987), primarily within the lagoon.

The reefs of Seringapatam, Scott Reef, Ashmore Reef and Cartier Island are recognised as KEFs within the NWMR; see Section 11. Protected area status is in Section 12 and includes the AMPs of Ashmore Reef, Cartier Island, Kimberley and Mermaid Reef, and the State marine parks of the North Kimberley, the Rowley Shoals, Lalang-garram horizontal falls and North Lalang-garram.

5.2.2 North West Shelf

The NWS contains numerous benthic habitats and biological communities, both nearshore and offshore, important in supporting biodiversity across the region.

The nearshore NWS environment contains the Dampier Archipelago, a complex coastal ecosystem. Extensive surveys have demonstrated its high biodiversity values comprising of coral, macroalgae, seagrass and benthic communities across the intertidal and subtidal environments.

Offshore, the NWS comprises various submerged shoal features of high biodiversity value, which support hard coral and macro-algae communities on upper reaches of the shoals and mesophotic filter-feeding benthic communities in deeper waters on and near the shoal features, namely Glomar Shoal and Rankin Bank.

5.2.2.1 Dampier Archipelago

The Dampier Archipelago, on the Pilbara coast of WA, comprises a complex of offshore islands, intertidal and subtidal reefs, embayments and coastal waters on the NWS. The region supports a highly diverse marine environment shaped by strong tidal processes, seasonal monsoonal influences, cyclones, and variability associated with El Niño southern oscillation and the Leeuwin Current system.

Coral communities of the Dampier Archipelago predominantly occur as narrow linear features fringing the shorelines of islands and the Burrup Peninsula, typically between 2 m and 10 m mean lower low water (Blakeway and Radford 2005; Jones 2004). The fringing reefs are not true coral reefs; they establish and grow on existing hard substratum (Jones 2004; WorleyParsons 2009). Both zooxanthellate and azooxanthellate corals are found throughout the Dampier Archipelago, including a total of 229 species from 57 hermatypic coral genera (Woodside 2006; Griffith 2004), representing a large proportion of the 318 hermatypic species from 70 genera known to occur in WA (URS 2004). Studies have indicated the coral assemblage distribution in Mermaid Sound is largely driven by turbidity, wave exposure and tidal currents, with inner Mermaid Sound exhibiting more sediment-tolerant species (Blakeway and Radford 2005; CALM 1994). A baseline assessment of the status of coral communities within Mermaid Sound was completed in May 2019 (MScience 2019). Coral cover measured in this survey was very similar to historic cover levels, ranging from 5.7% to 56.7%.

The ecology, particularly reproductive, of corals in the Dampier Archipelago has been extensively studied (Simpson 1985a; Simpson 1985b; Simpson 1988; Heyward *et al.* 2000; Baird *et al.* 2011). Most of the major coral species are broadcast spawners and have their major peak of reproductive activity in autumn between March and April, about seven to ten nights after the full moon, but there is also some participation in a spring spawning (Gilmour *et al.* 2017). Periods of reproduction through these seasons may be more protracted than on the northern reefs, and species common to the Pilbara display distinct cycles of reproduction (Gilmour *et al.* 2017).

Seagrasses in the Dampier Archipelago are generally sparse, occurring in low abundance on shallow sandy sediments in sheltered areas and interspersed with other benthic communities and habitats (CALM 2005b; Jones 2004; MScience 2014). Surveys and studies (McMahon *et al.* 2017; Woodside 2006) of the region have identified nine species; however, *Halophila* is the predominant genus and is typically restricted to the 6 m (chart datum) depth contour (MScience 2014).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

The most significant areas of seagrass in the Dampier Archipelago are found between Keast and Legendre islands to the north of the Burrup Peninsula, and between West Intercourse Island and Cape Preston. Recorded occurrences of *Halophila* spp. In the Dampier Archipelago fluctuate, depending on factors such as salinity, success of seed set and colonisation, temperature, and grazing by dugongs (Woodside 2006). Furthermore, this fluctuation may indicate the presence of transitory communities, which are annual meadows that develop from the seed bank, grow flower, set seed and die back each year (McMahon *et al.* 2017). The species composition and temporal patterns of abundance and distribution of seagrasses in northwest Australia are highly dynamic and highly variable, often seasonal, dying off over certain periods of the year then re-establishing (Vanderkliff *et al.* 2017).

Macroalgal assemblages in the Pilbara region display an ephemeral growth pattern and may not be present year-round, despite the presence of suitable habitat. Large algal habitats occur around West Intercourse Island and shallow reef flats on the western and eastern margins of Mermaid Sound. In nearshore areas, macroalgae are mostly found on shallow limestone pavements located on the northern and western portions of West Intercourse, West Lewis and Malus islands. More broadly, large expanses of macroalgae are prevalent along the seaward side of West Intercourse Island, extending south-west along the coast to Cape Preston and beyond. The most abundant group of algae in the region is brown algae; particularly, species from the genera *Sargassum, Dictyopteris* and *Padina* are very common (Woodside 2006). The most common species of green algae in the Dampier Archipelago include *Caulerpa* and calcareous *Halimeda* (CALM 2005b; Jones 2004). Various red algae are also found in the Dampier Archipelago, including corallines, calcified red algae and algal turf (Jones 2004).

The Pilbara region has a very high diversity of marine sponges (Fromont *et al.* 2016). Fromont (2003) recorded 275 sponge species within the Dampier Archipelago. About 20% of these species are known to be limited to WA and are likely to be endemic (Fromont 2003). Surveys conducted by Fromont (2004) found the highest diversity of sponges in the Dampier Archipelago occurred in sponge communities that were either low relief or pavement habitats, often with a sediment layer with strong tidal currents. High-diversity sponge communities have been observed at the eastern end of Flying Foam Passage, at the western end of Mermaid Strait, and between Enderby and West Lewis islands (Fromont 2004; Jones 2004). Generally, the high habitat complexity of the Dampier Archipelago corresponds with high sponge species richness, contributing to the high biodiversity value of the nearshore environment of the Pilbara region (Fromont 2016).

5.2.2.2 Glomar Shoal

Glomar Shoal is a large (215 km²) and complex bathymetrical feature on the outer continental shelf off the Pilbara coast. Glomar Shoal is about 8.5 times wider than Rankin Bank at the 60 m contour. Glomar Shoal rises from 80 m depth on its south-west side and 70 m depth on its north-eastern side to form a single plateau at 40 m depth (Abdul Waheb *et al.* 2018). Together with Rankin Bank, these remote shallow water areas represent regionally unique habitats and are considered likely to play an important role in the productivity of the Pilbara region (AIMS 2014; Abdul Wahab *et al.* 2018) (Figure 5-1).

Baseline biodiversity and habitat mapping surveys of the benthic habitats and communities at Glomar Shoal and Rankin Bank were undertaken in 2013 and 2017 by AIMS (2014), as detailed in Abdul Waheb *et al.* (2018) and Jones *et al.* (2021), respectively. Salinity and temperature were found to be slightly higher in 2017 compared with the 2013 values (Abdul Wahab *et al.* 2018), most likely due to seasonality. Substrates at Glomar Shoal were found to vary with depth, from coarse unconsolidated sediment at depths greater than 60 m and hard substrate (as in, consolidate reef) supporting benthic communities comprising hard and soft corals, sponges and macroalgae at depths <40 m (Abdul Wahab *et al.* 2018). Total cover of benthic taxa (hard coral, soft coral, sponges and other benthic biota) was highest at depths <40 m and decreased with depth (Abdul Wahab *et al.* 2018). At depths of 60 to 80 m, benthic cover was low (about 2%) and at depths greater than 80 m, benthic cover was barely present (Abdul Wahab *et al.* 2018).

A total of 170 fish species were identified at Glomar Shoal and fish abundance and diversity of the demersal fish communities of Glomar Shoal were found to vary with seabed habitat type; sand, hard coral and sponge coverage influenced fish communities, with higher abundance and diversity of fish associated with shallow hard coral habitats (Abdul Wahab *et al.* 2018). In general, the fish abundance and diversity of Glomar Shoal are considered comparable with other reefs and the submerged shoals and banks in the region, although less diverse and abundant than fish assemblages at Rankin Bank (Abdul Wahab *et al.* 2018).

Glomar Shoal is recognised as a KEF within NWMR; see Table 11-1. Protected area status is described in Section 12 and includes the Commonwealth Marine Park of Montebello, the State marine parks of Montebello Islands and Barrow Island, and the Barrow Island marine management area.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

5.2.2.3 Rankin Bank

Rankin Bank comprises three main sedimentary banks rising steeply from between 80 and 120 m below sea level, reaching 20 to 40 m below the sea surface and featuring plateaus and troughs (Abdul Wahab *et al.* 2018). Rankin Bank is one of only two large, complex bathymetrical features on the outer western shelf of the West Pilbara (the other being Glomar Shoal, about 125 km west-southwest) (Abdul Waheb *et al.* 2018) (Figure 5-1).

Surveys of Rankin Bank were undertaken by AIMS in 2013 and in 2017 to better understand the habitats and complexity of the submerged shoal ecosystems, and associated fish assemblages (AIMS 2014; Abdul Waheb *et al.* 2018 and 2017; Jones *et al.* 2021). The surveys were undertaken using various methods, including multibeam survey, towed video, stereo baited underwater video survey and beam transmissions (to measure turbidity), at depths between 20 and 115 m (Abdul Waheb *et al.* 2018). Water column data were also collected in January 2017 to examine potential temporal variation in these parameters (Abdul Waheb *et al.* 2018).

Seabed sediments at Rankin Bank were primarily carbonate with a grain size of mostly sand, with finer muds found at the deeper sample sites (AIMS 2014). Sand was also found to increase with depth and unconsolidated reef exceeded 30% at all depths (Abdul Waheb *et al.* 2018). Hydrocarbon and trace metal concentrations in sediments indicated the bank was unaffected by anthropogenic pollution (AIMS 2014). Turbidity was lower at Rankin Bank than Glomar Shoal during the survey, with beam transmissions remaining above 95% at all depths (Abdul Waheb *et al.* 2018). Turbidity was slightly lower in 2017, whereas temperature and salinity were slightly higher at all depths (Abdul Waheb *et al.* 2018).

The proportion of cover by benthic taxa was highest for macroalgae and hard corals, particularly at depths less than 40 m, and decreased with increasing depth. Other benthic taxa included soft corals and sponges, which were present in lower proportions at all depths. Encrusting corals were common, reaching cover of about 12.5% at depths less than 40 m. Solitary corals were also present (about 10% cover) primarily at depths between 40 and 60 m. Foliose and submassive/columnar corals were also present (Abdul Waheb *et al.* 2018).

Fish abundance and diversity at Rankin Bank were found to be comparable with other reefs in north-west Australia, and notably twice as abundant and 1.5 times more diverse than those fishes identified in a comparable survey at Glomar Shoal (Abdul Waheb *et al.* 2018). A total of 205 fish species were recorded at Rankin Bank, 100 of which were common to both Glomar Shoal and Rankin Bank. Depth, location, sand, sponges and hard coral were all found to contribute to the fish communities present. Specifically, fish communities were primarily associated with hard coral and shallow depths at Rankin Bank (Abdul Waheb *et al.* 2018).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

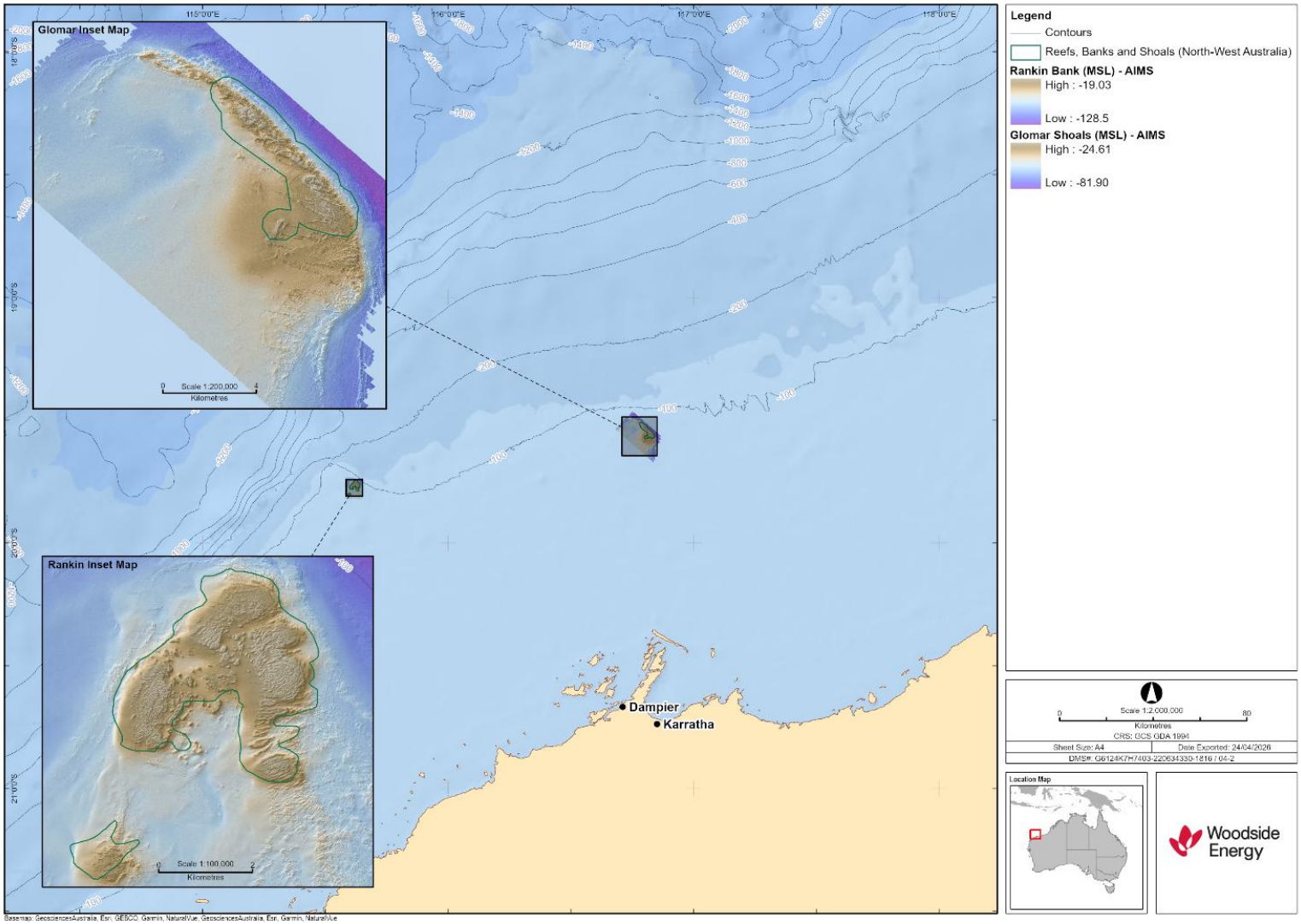


Figure 5-2: Habitat maps of Rankin Bank and Glomar Shoal

Source: AIMS (2014)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

5.2.3 North West Cape

The North West Cape contains highly diverse benthic habitats and biological communities, both nearshore and offshore, important in supporting biodiversity across the North West Cape region. The benthic habitats of Exmouth Gulf, Ningaloo Reef and Muiron Islands are ecologically significant, supporting high biodiversity and important habitats for a range of marine species.

The Exmouth Gulf supports diverse benthic habitats, including seagrass meadows, cyanobacterial mats, coral communities and filter-feeding assemblages, which contribute to primary productivity, nutrient cycling and provide habitat for species of ecological and conservation significance. Ningaloo Reef and the Muiron Islands are characterised by extensive coral and algal reef communities that underpin the region's internationally recognised biodiversity values, supporting diverse marine life and important ecological connectivity across the broader North West Cape region. The next subsections describe benthic communities and habitats for the North West Cape.

5.2.3.1 Exmouth Gulf

The Exmouth Gulf supports highly diverse subtidal and intertidal habitats, including cyanobacterial mats, seagrass meadows, mangroves, coral communities and salt flats. Spanning land and sea, within and beyond Exmouth Gulf, the habitats support nutrient flows and species connectivity, while groundwater and seawater interact to regulate the unique karst system and subterranean fauna of Cape Range (Western Australian Marine Science Institution (WAMSI) 2025).

Subtidal benthic habitats within the Exmouth Gulf are dominated by a combination of unvegetated sediments (about 60.5% of benthos), filter-feeding communities (about 24%), seagrass meadows (about 8.1%) and coral reef habitats (about 1.9%) (WAMSI 2025). Cyanobacterial mats are a particularly important benthic component. These mats contribute to primary production and nitrogen fixation within the coastal system, with estimates indicating they contribute up to about 15% of total primary production in the Gulf, supporting higher trophic levels, including fish and elasmobranchs (WAMSI 2025).

Seagrass meadows occur in shallow subtidal waters, particularly along the eastern margins of the Gulf, where they provide essential nursery and foraging habitat for commercially important prawn species, dugongs and marine turtles, while also stabilising sediments and contributing to carbon cycling. Seagrass cover and extent vary seasonally, with the highest densities recorded in summer and the lowest spatial extent recorded in winter. A study conducted in the eastern Gulf between 2013 and 2015 found that seagrass area coverage more than doubled in summer compared to the coverage recorded in winter (WAMSI 2025). This seasonal shift can be attributed to lower turbidity in the Gulf in summer allowing increased sunlight into the water column, which facilitates seagrass expansion before declining in winter due to increased turbidity and cooler water (Evans *et al.* 2025).

Coral reefs of the Gulf occupy a relatively small proportion but support a disproportionately high biodiversity, and are particularly important around the Muiron Islands, Bundegi and offshore islands (WAMSI 2025). Many reefs within Exmouth Gulf are considered marginal or turbid systems, yet they demonstrate complex responses to environmental stressors and contribute to regional connectivity with Ningaloo Reef and the wider Pilbara (WAMSI 2025).

Habitats of the Exmouth Gulf support a high diversity of fauna, including fauna of ecological and conservation importance, such as sawfish, sea snakes, dugongs, marine turtles, humpback whales and migratory birds (WAMSI 2025). Further, the benthic environment of the Gulf supports a diverse and ecologically distinct assemblage of sessile benthic marine invertebrates, particularly within shallow waters (<30 m depth) (Richards *et al.* 2025). A comprehensive review of museum specimens, verified photographic records and biodiversity databases identified at least 295 species of sessile benthic invertebrates from Exmouth Gulf, representing a substantial component of the North West Cape regional biodiversity. Notably, 165 of these species are restricted to Exmouth Gulf and have not been recorded within the neighbouring habitats of Ningaloo Reef or the Muiron Islands. A distinctive community of filter-feeding and habitat-forming invertebrates, including more than 125 sponge species, 27 tunicate species and 18 anemone species, have also been identified in the Gulf and found to be absent from neighbouring areas. All three sea pen species recorded within the broader study area occur exclusively within Exmouth Gulf (Richards *et al.* 2025). The distinctive communities highlight the Gulf as a centre of unique benthic diversity, shaped by turbid, low light and dynamic environmental conditions (Richards *et al.* 2025).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

5.2.3.2 Ningaloo Reef and Muiron Islands

Ningaloo Reef is one of Australia's iconic marine areas. The significance of this ecosystem is recognised through the reef's inclusion in State and Commonwealth marine parks and the World Heritage Register. Ningaloo Reef is the only example in the world of an extensive fringing reef on the west coast of a continent. It is one of the longest (about 300 km) and most pristine fringing reefs in the world, with an unusually narrow continental shelf. Deep oceanic waters, the reef and coastline habitats and benthic communities are close, resulting in a huge array of internationally significant marine life coexisting. More than 200 hard coral, 500 fish, 650 mollusc, 600 crustacean, 1,000 marine algae, 155 sponge and 25 echinoderm species have been recorded from the shelf, slope and deepwater habitats[2]. Refer to the CSIRO Ningaloo Outlook program for more information and publications relating to the shallow and deepwater reef systems, and megafauna species (marine turtles and whale sharks)[3].

The extensive reef system has been classified by topography and benthic cover using airborne hyperspectral surveys; much of the area was allocated as shallow, flat lagoons intersected by narrow, deeper channels that facilitate water circulation. Some of the geomorphic/benthic classes of coral-algae mosaics in different topographic settings are presented below (Kobryn *et al.* 2022):

- coral and algal communities – reef flat and very shallow areas
- coral and algal communities – backreef and shallow forereef
- coral and algal communities – deep forereef and other deep areas
- sand or limestone pavement – lagoonal slopes and flat lagoon areas.

Ningaloo Reef, and the Muiron Islands, at the northern tip of the Ningaloo Reef, contain fringing reef habitat that supports benthic communities dominated by algae and consolidated reef in the shallow reef environment. Surveys by AIMS in 2024 documented hard coral cover averaged about 13% across the Ningaloo Marine Park area (Miller *et al.* 2015). A notable pattern in the benthos recorded by Miller *et al.* (2015) was an increase in coral cover with latitude, with the highest coral cover recorded around Coral Bay and the reef areas in southern Ningaloo. Coral cover was the lowest at the East Ningaloo Province (northern Exmouth Gulf) (<6%). Relative to Scott Reef and the Rowley Shoals (Section 5.2.1), the Ningaloo benthic communities are distinct in that they are characterised by high biotic cover overall, but dominated by algal cover and with less than half the cover of key biota including hard corals, soft corals and sponges as recorded on offshore reefs (Miller *et al.* 2015).

Ningaloo Reef is vulnerable to storm damage and marine heat stress events, which have resulted in past localised coral damage and moderate coral bleaching. Coral bleaching occurred in 2022 due to warm ocean temperatures driven by the 2021–22 La Niña. The region's last severe marine heatwave was driven by the 2010–11 La Niña, which resulted in bleaching being recorded for the first time on Ningaloo[4]. Also of note are recurrent deoxygenation events at Bills Bay (Coral Bay) after coral spawning events. Last occurring in March 2022, deoxygenation was triggered by a combination of weather and oceanographic conditions that led to prolonged trapping of coral spawn in Bills Bay, which in turn caused mass coral mortality and a large but localised fish kill. The 2022 deoxygenation event was the seventh such event recorded in documented history (Richards *et al.* 2024).

Commonwealth waters adjacent to Ningaloo Reef are recognised as a KEF within the NWMR (Table 11-1).

5.2.4 Shark Bay

Shark Bay is the most westerly point of Australia and represents a transition zone between temperate and tropical marine fauna, resulting in high species diversity (Miller *et al.* 2015), including fringing coral communities on the leeside of the barrier islands of Dirk Hartog, Bernier and Dorre. The region is renowned for its terrestrial and marine biodiversity, including seagrass cover.

Seagrass in Shark Bay extends over 4,000 km² of the bay and the 1,030 km² Wooramel Seagrass Bank, which is the largest structure of its type in the world. Benthic communities in relatively sheltered areas of outer Shark Bay are characterised by seagrass and turf algae, whereas in more exposed locations, benthos is dominated by macroalgal and turf algal communities (AIMS 2014). Towards the outer Bay area, seagrass is less abundant. Baseline surveys by AIMS in 2014, targeting the outer Shark Bay area and the habitats and

[2] https://library.dbca.wa.gov.au/FullTextFiles/PAM04552.pdf
[3] https://research.csiro.au/ningaloo/outlook/research-outputs/publications/
[4] https://www.csiro.au/en/research/environmental-impacts/climate-change/state-of-the-climate

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

benthic communities surrounding the barrier islands of Dirk Hartog, Bernier and Dorre, found sand was a dominant feature of the benthos (>60%), particularly in areas inside the Bay and in deep water.

Corals and sponges made up <1% of the cover in outer Shark Bay, although due to inclement weather during surveys, shallow areas where coral species are more likely to occur could not be assessed (AIMS 2014). Observations of patchy but high coral cover in shallow parts of some towed video transects suggest coral cover across outer Shark Bay may have been underestimated. The highest coral cover was recorded in the channel between Dirk Hartog and Dorre islands, indicating this area may be particularly favourable for coral growth (Miller *et al.* 2015).

Marine heatwaves and other extreme climatic events are causing widespread mortality of habitat-forming species and driving significant ecological change globally, including the loss of seagrass. As marine heatwaves become more frequent and intense, the long-term resilience of these critical habitats becomes increasingly uncertain. In Shark Bay, fragmentation after a 2010–11 heatwave was found to coincide with extensive seagrass loss, indicating the loss was strongly influenced by heat-stress exposure and water depth (Taylor *et al.* 2025).

After the 2011 marine heatwave, a study assessed the changes in seagrass meadows within Monkey Mia and Shark Bay. The study used long-term *in situ* monitoring with satellite-derived habitat classification and revealed a significant loss of seagrass habitat and density (about 1,382 ha) had occurred six years after the 2011 heatwave event. While some was recorded by 2020, the dense seagrass coverage remained lower than levels recorded in 2010. Fragmentation of seagrass had increased dramatically between 2010 and 2013, with seagrass loss most evident on the edges of continuous meadows and near deep channels. Losses were mostly comprised of seagrass *Amphibolis antarctica*. *Posidonia australis* coverage remained stable initially, before a decline was observed in 2016. Despite this, recovery of overall seagrass coverage was observed in 2020, with a higher proportion of sparse meadows indicating recovery (Strydom *et al.* 2026).

Further analysis of marine heatwaves in Shark Bay has highlighted the strong influence bathymetry and geomorphology have on heat stress patterns. Hu *et al.* (2025) observed that the shallow in-bay zones of Shark Bay experience frequent short heatwave events and deeper offshore areas are subject to less frequent, intense heatwaves that are driven by El Niño southern oscillation-modulated warm-water advection. Spatial variability in thermal regimes likely intensified the 2010–11 marine heatwave impacts, as low thermal inertia in shallow seagrass meadows and restricted hydrodynamic exchange amplified thermal stress, contributing to heightened mortality and canopy fragmentation (Hu *et al.* 2025).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6. FISHES, SHARKS AND RAYS

6.1 Regional context

WA waters provide important habitat for listed fishes, sharks and rays, including areas that support key life stages such as breeding and foraging, and migration routes for fish species. Pelagic and demersal fishes occupy a range of habitats throughout each region, from coral reefs to open offshore waters, and are an extremely important component of ecosystems, providing a link between primary production and higher predators, with many species being of conservation value and important for commercial and recreational fishing.

Table 6-1 describes the fish assemblages of each marine bioregion.

Table 6-1: Description of the fish assemblages of the marine bioregions

Marine bioregion	Overview
North-west	The NWMR supports a wide diversity of global fish species. The region is characterised by the highest level of endemism and species diversity compared with other areas of the Australian continental slope. Last *et al.* (2005) recorded 1,431 fish species from the three bioregions encompassing the continental slope, while also acknowledging some information gaps. Of the abut 500 shark species found worldwide, 94 are found in the region (DEWHA 2008a). About 54 species of syngnathids (seahorses, seadragons, pipehorses and pipefishes) and one species of solenostomids (ghostpipefishes) are also known to occur in the NWMR or adjacent State waters (DSEWPaC 2012a). The PMST report (Appendix A) identified a total of 17 EPBC Act listed threatened or migratory shark and ray species within the NWMR (Table 6-2). An additional 53 EPBC Act listed marine fish species, including a variety of pipefish, sea dragons and ghost pipefish (Syngnathidae and Solenostomidae), that do not have a threatened or migratory status were recorded within the NWMR. Appendix A provides a full list of the species identified in the PMST report.
South-west	The fish fauna of the SWMR are highly diverse, with hundreds of species occupying a large variety of habitats, including high biodiversity of tropical and temperate fish species found at Houtman Abrolhos due to the Leeuwin Current, nutrient upwelling events attracting large aggregations of small pelagic fish and predatory fish such as tuna, billfish and sharks, and migratory fish such as herring, garfish, tailor and Australian salmon visiting the west-coast inshore lagoons seasonally. The demersal slope and associated fish communities of the Central Western Province are important habitats for demersal communities with high diversity and endemism. Depths below 400 m are dominated by small benthic species such as grenadiers, dogfish and cucumber fish. Only three species of bony fishes known to occur in the region are listed under the EPBC Act as threatened or marine species, and six listed species of shark (DSEWPaC 2012b). The PMST report (Appendix A) identified a total of nine EPBC Act listed threatened or migratory fish and shark species within the SWMR. An additional 36 EPBC Act listed marine fish species. including a variety of pipefish, sea dragons and ghost pipefish (Syngnathidae and Solenostomidae), that do not have a threatened or migratory status were recorded within the SWMR. Appendix A provides a full list of the species identified in the PMST report.
North	The NMR is considered an important area for sawfish and river shark species, with three species of sawfishes and two species of river sharks listed under the EPBC Act known to occur in the region. Relatively little is known about the distribution and abundance of sawfish and river sharks in the NMR. However, the NMR is crucial for supporting nationally and globally significant populations of sawfish and river shark species found nowhere else in the world. A vast array of seahorse and pipefish species are found in the area, but there is little knowledge about the distribution, relative abundance and habitats of these species in the region. Higher-order fish predators of coral and rock reef habitats include snapper, emperor and grouper. The Gulf of Carpentaria basin supports assemblages of pelagic species, including planktivorous and schooling fish, with top predators such as shark, snapper, tuna and mackerel (DSEWPaC 2012c). The PMST report (Appendix A) identified a total of 15 EPBC Act listed threatened or migratory shark and ray species within the NMR. An additional 45 EPBC Act listed marine fish species, including a variety of pipefish, sea dragons and ghost pipefish (Syngnathidae and Solenostomidae), that do not have a threatened or migratory status were recorded within the NMR. Appendix A provides a full list of the species identified in the PMST report.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.2 Fish, shark and rays in the NWMR

The NWMR contains a diverse range of fishes of tropical Indo-west Pacific affinity (Allen *et al.* 1988). The region is characterised by the highest level of endemism and species diversity compared with other areas of the Australian continental slope. Last *et al.* (2005) recorded 1,431 species from the three bioregions encompassing the continental slope, while also acknowledging some information gaps.

The NWMR is known for its demersal slope fish assemblages; the continental slope of the Timor Province and the Northwest Transition support more than 418 and 505 species of demersal fishes, respectively, of which 64 are considered to be endemic. This is the second richest area for demersal fish species across the entire Australian continental slope. Conversely, the broad Southern Province, which covers most of southern Australia, supports 463 species, with only 26 possibly being endemic. The continental slope demersal fish assemblages of the NWMR have been identified as a KEF (DEWHA 2008a), as described in Section 11. The Browse, NWS/Scarborough and the North West Cape activity areas overlap the continental slope demersal fish communities KEF. The continental slope between North West Cape and the Montebello Trough has more than 500 fish species, 76 of which are endemic, which makes it the most diverse slope bioregion in Australia (Last *et al.* 2005).

The ancient coastline at 125 m depth contour KEF within the NWMR is thought to support enhanced diversity. Drivers of fish species richness, biodiversity and assemblage composition have been assessed, finding that depth, seafloor complexity and habitat type explain richness and abundance of fish assemblages (Currey-Randall *et al.* 2021). This study also found fish communities along the ancient coastline at 125 m depth contour KEF are similar to other mesophotic areas on the NWS. Most of the surveyed feature was characterised by soft sediment and highly mobile fish species (Currey-Randall *et al.* 2021).

The NWMR also features a diversity of pelagic fishes (those living in the pelagic zone) and bentho-pelagic fishes, including tuna, billfish, bramids, lutjanids, serranids and some sharks (DEWHA 2007a). These species feed on salps and jellyfish, and more often on secondary consumers such as squid and bait fish. Water depth provides an indication of the level of interaction between pelagic and benthic communities within the NWMR; in waters deeper than 1,000 m, for instance, the trophic system is pelagically-driven and benthic communities rely on particulates that fall to the seafloor (DEWHA 2007a).

Pelagic fishes play an important ecological role within the NWMR; small pelagic fishes, such as lantern fish, inhabit a range of marine environments, including inshore and continental shelf waters, and form a vital link in and between many of the region's trophic systems, feeding on pelagic phytoplankton and zooplankton and providing a food source for a wide variety of predators, including large pelagic fishes, sharks, seabirds and marine mammals (Bulman 2006; Mackie *et al.* 2007). Large pelagic fishes, such as tuna, mackerel, swordfish, sailfish and marlin, are found mainly in oceanic waters and occasionally on the continental shelf (Brewer *et al.* 2007). Both juvenile and adult phases of the large pelagic species are highly mobile and have a wide geographic distribution, although the juveniles more frequently inhabit warmer or coastal waters (DEWHA 2008a).

Table 6-2 outlines the threatened and migratory fish species that may occur, are likely to occur or are known to occur within the NWMR, with their conservation status and relevant recovery plans and conservation advice, while the next subsections focus on the fish species (including sharks and rays) listed as threatened or migratory that are known to occur within the NWMR. Section 13.2.1 provides a detailed account of commercial and recreational fisheries that operate in the region.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 6-2: Threatened and migratory fish, shark and ray species identified by the EPBC Act PMST that may, likely or are known to occur within the NWMR

Species name	Common name	EPBC Act (Commonwealth) (as per PMST report Appendix A)			*Biodiversity Conservation Act 2016* (BC Act) (WA)[5]	IUCN Red List (non-statutory)[6]	EPBC Act Part 13 statutory instrument
		Threatened status	Migratory status	Listed	Conservation status	Global status	
Anoxypristis cuspidata	Narrow sawfish	N/A	Migratory	Marine	Migratory	Critically Endangered	N/A
Carcharias taurus	Grey nurse shark (west-coast population)	Vulnerable	N/A	Marine	Vulnerable	Near Threatened	Recovery Plan for the Grey Nurse Shark (*Carcharias taurus*) (DoE 2014a)
Carcharodon carcharias	White shark	Vulnerable	Migratory	Marine	Vulnerable	Vulnerable	Recovery Plan for the White Shark (*Carcharodon carcharias*) (DSEWPaC 2013b)
Carcharhinus longimanus	Oceanic whitetip shark	N/A	Migratory	Marine	Migratory	Critically Endangered	N/A
Centrophorus zeehaani (previously known as *Centrophorus uyato)*	Little gulper shark, southern dogfish	Conservation Dependant	N/A	N/A	N/A	Endangered	Commonwealth Listing Advice on *Centrophorus zeehaani* (southern dogfish) (Threatened Species Scientific Committee 2013a)
Isurus oxyrinchus	Shortfin mako	N/A	Migratory	Marine	Migratory	Endangered	N/A
Isurus paucus	Longfin mako	N/A	Migratory	Marine	Migratory	Endangered	N/A
Lamna nasus	Porbeagle shark, mackerel shark	N/A	Migratory	Marine	Migratory	Vulnerable	N/A

[5] Threatened and Priority Fauna List – July 2025 - https://www.dbca.wa.gov.au/management/threatened-species-and-communities (accessed on 21/05/2026).
[6] International Union for Conservation of Nature (IUCN), 2026. The IUCN Red List of Threatened Species. Version 2025-2. https://www.iucnredlist.org (accessed on 21/05/2026).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species name	Common name	EPBC Act (Commonwealth) (as per PMST report Appendix A)			*Biodiversity Conservation Act 2016* (BC Act) (WA)[5]	IUCN Red List (non-statutory)[6]	EPBC Act Part 13 statutory instrument
		Threatened status	Migratory status	Listed	Conservation status	Global status	
Glyphis garricki	Northern river shark	Endangered	N/A	Marine	Priority	Vulnerable	Sawfish and River Sharks Multispecies Recovery Plan (Commonwealth of Australia 2015b) Conservation Advice for *Glyphis garricki* (northern river shark) (DoE 2014b)
Sphyrna lewini	Scalloped hammerhead	Conservation Dependant	N/A	N/A	N/A	Critically Endangered	Listing Advice for *Sphyrna lewini* (scalloped hammerhead) (Threatened Species Scientific Committee 2024)
Glyphis glyphis	Speartooth shark	Critically Endangered	N/A	N/A	N/A	Vulnerable	Approved Conservation Advice for *Glyphis glyphis* (speartooth shark) (DoE 2014c)
Manta alfredi	Reef manta ray	N/A	Migratory	Marine	Migratory	Vulnerable	N/A
Manta birostris	Giant manta ray	N/A	Migratory	Marine	Migratory	Endangered	N/A
Pristis clavata	Dwarf sawfish	Vulnerable	Migratory	Marine	Priority	Critically Endangered	Sawfish and River Sharks Multispecies Recovery Plan (Commonwealth of Australia 2015b) Conservation Advice for *Pristis clavata* (dwarf sawfish) (DEWHA 2009b)
Pristis zijsron	Green sawfish	Vulnerable	Migratory	Marine	Vulnerable	Critically Endangered	Sawfish and River Sharks Multispecies Recovery Plan (Commonwealth of Australia 2015b)
Pristis pristis	Largetooth (freshwater) sawfish	Endangered	Migratory	Marine	Priority	Critically Endangered	Sawfish and River Sharks Multispecies Recovery Plan (Commonwealth of Australia 2015b) Conservation Advice for *Pristis pristis* (largetooth sawfish) (DCCEEW 2025a)
Rhincodon typus	Whale shark	Vulnerable	Migratory	Marine	Migratory	Endangered	Conservation Advice *Rhincodon typus* whale shark (Threatened Species Scientific Committee 2015d)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

6.2.1 Fish

The PMST report identified 53 Syngnathidae and Solenostomidae EPBC Act listed marine species within the NWMR. Table 6-3 describes the Syngnathidae and Solenostomidae families.

Table 6-3: Information about the EPBC Act listed threatened fish species that may, likely or are known to occur within the NWMR

Family	Preferred habitat and diet	Habitat location
Syngnathidae and Solenostomidae	The family Syngnathidae is a group of bony fishes that includes seahorses, pipefishes, pipehorses and seadragons. Along with syngnathids, members of the related Solenostomidae family (ghost pipefishes) are also found in the NWMR (DSEWPaC 2012a). Syngnathids live in nearshore and inner shelf habitats, usually in shallow coastal waters, among seagrasses, mangroves, coral reefs, macroalgae-dominated reefs, and sand or rubble habitats (Dawson 1985; Lourie *et al.* 1999; Lourie *et al.* 2004; Vincent 1996). Two listed marine species, the winged seahorse (*Hippocampus alatus*) and western pipehorse (*Solegnathus sp. 2*) have been identified in deeper waters of the NWMR (up to 200 m) (DSEWPaC 2012a). However, these species were not identified by the PMST for the NWMR.	Knowledge about the distribution, abundance and ecology of both syngnathids and solenostomids in the NWMR is limited. No BIAs for syngnathids and solenostomids have been identified in the NWMR.

6.2.2 Sharks and sawfishes

Table 6-4 details the shark, river shark and sawfish species that may, likely or are known to occur within the NWMR.

BIAs are identified within the NWMR for the whale shark, freshwater sawfish, green sawfish and dwarf sawfish. See Table 6-6.

Table 6-4: Information about the EPBC Act listed threatened shark and sawfish species that may, likely or are known to occur within the NWMR

Species	Preferred habitat and diet	Habitat location
Dwarf sawfish	Preferred habitat[1]: Shallow (up to 20 m) silty coastal waters and estuarine habitats, occupying relatively restricted areas and moving only small distances (Stevens *et al.* 2008; Kyne *et al.* 2015). Diet: Shoaling fish such as mullet, molluscs and small crustaceans (Cliff and Wilson 1994).	Northern Australia is considered a stronghold for sawfish (*Pristis* sp.). With observations generally higher in numbers in the western coastal regions of the NT compared to the south-western Gulf of Carpentaria region (Udyawer *et al.* 2025). Literature indicates the most southern range for the dwarf sawfish is Port Hedland (Bateman *et al.* 2024). See Table 6-6 for the BIA summary for the dwarf sawfish.
Green sawfish	Preferred habitat[1]: Inshore coastal environments including estuaries, river mouths, embayments, and along sandy and muddy beaches, as well as offshore marine habitat (Stevens *et al.* 2005; Thorburn *et al.* 2003). They are found at depths of up to 70 m (Kyne *et al.* 2021). Diet: Schools of baitfish and prawns (Poganoski *et al.* 2002), molluscs and small crustaceans (Cliff and Wilson 1994).	Northern Australia is considered a stronghold for sawfish (*Pristis* sp.). With observations generally higher in numbers in the western coastal regions of the NT compared to the south-western Gulf of Carpentaria region (Udyawer *et al.* 2025). An aggregation of green sawfish (*Pristis zijsron*) has been identified in the Garig Gunak Barlu National Park (Cobourg Peninsula, NMR). Davies *et al. (*2022) suggest this may be a nursery area. The Ashburton River Estuary (Onslow region) has been recorded as a nursery site, with juveniles also observed along the Pilbara coast and Exmouth Gulf (Bateman *et al.* 2024). See Table 6-6 for the BIA summary for the green sawfish.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species	Preferred habitat and diet	Habitat location
Grey nurse shark (west-coast population)	Preferred habitat: Most found in temperate waters on, or near, the bottom of the continental shelf (McAuley 2004; Kyne *et al*. 2021), around coral rocky reefs that span from inshore surf zones to the outer continental reef. They are generally found in depths between 10 and 40 m, with reported maximum depths of 230 m (Krause and Stow 2025). Diet: A variety of teleost and elasmobranch fishes and some cephalopods (Gelsleichter *et al*. 1999; Smale 2005).	Movement patterns of the western subpopulation are unclear (McAuley 2004) and key aggregation sites have not been formally identified within the NWMR (Chidlow *et al*. 2006). The known distribution for the western population extends from the SA border up to Exmouth (Krause and Stow 2025). The NWMR represents the northern limit of the west-coast population. Sighting and bycatch data have indicated grey nurse sharks are present near Exmouth and Shark Bay between May to December (Hoschke *et al*. 2023). Grey nurse sharks have also been recorded around the tropical reefs of Browse Island, and anecdotal sightings from the Arafura Sea. In addition, one individual has been recorded in trawling nets off the north-west coast of the Tiwi Islands, NT (Krause and Stow 2025).
Largetooth (freshwater) sawfish	Preferred habitat: Sandy or muddy bottoms of shallow coastal waters, estuaries, river mouths and freshwater rivers, and isolated water holes. Diet: Shoaling fishes, such as mullet, as well as molluscs and small crustaceans (Cliff and Wilson 1994).	Northern Australia is considered a stronghold for the sawfish (*Pristis sp.*), with observations generally higher in numbers in the western coastal regions of the NT compared to the south-western Gulf of Carpentaria region (Udyawer *et al*. 2025). The largetooth sawfish has a wide Northern Australia range (Kyne *et al*. 2021). The Kimberley region, particularly the Fitzroy River, is identified as an important nursery site (Bateman *et al*. 2024). The Exmouth Gulf represents the approximate southern limit for the largetooth (freshwater) sawfish, although there are a few historical records further south (Bateman *et al*. 2024). See Table 6-6 for the BIA summary for the largetooth (freshwater) sawfish.
Little gulper shark	Preferred habitat: the little gulper shark are found in waters on the upper continental slopes and undertake diel migrations across their depth ranges from relatively deep depths during the day to shallower feeding depths at night (Threatened Species Scientific Committee 2013a). Diet: Primarily fish and invertebrates, with lanternfish and squid being the primary prey (Threatened Species Scientific Committee 2013a).	The little gulper shark may occur within the NWMR, however the species is primarily associated with continental slope habitats of southern Australia, including New South Wales, Tasmania, South Australia and south-west Western Australia, typically occurring at depths greater than 400 m (White et al 2008)
Longfin mako	Preferred habitat: A pelagic species with a wide-ranging, patchy, oceanic distribution in tropical and temperate seas (Mollet *et al.* 2000; Kyne *et al.* 2021). They have been recorded at depth ranges of 0 to 1,752 m (Kyne *et al.* 2021). Diet: Primarily teleost fishes and cephalopods (mainly squid) (Last and Stevens 2009).	Records for longfin mako sharks are sporadic and their complete geographic range is not well known (Reardon *et al.* 2006). Given the migratory nature of the species, most likely has a broad distribution within the NWMR. No BIAs identified for the NWMR.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species	Preferred habitat and diet	Habitat location
Mackerel/ porbeagle shark	Preferred habitat: The porbeagle shark primarily inhabits offshore waters around the edge of the continental shelf. They occasionally move into coastal waters, but these movements are temporary (Campana and Joyce 2004; Francis *et al.* 2002). The porbeagle shark is known to dive to depths exceeding 1,300 m (Campana *et al.* 2010; Saunders *et al.* 2011). Depth range records are 0 to 370 m (Kyne *et al.* 2021). Diet: Primarily teleost fish, elasmobranchs and cephalopods (primarily squid) (Joyce *et al.* 2002; Last and Stevens 2009).	In Australia, the species occurs in waters from southern Queensland to south-west Australia (Last and Stevens 2009). Distribution within the NWMR is unknown, but there are several records for this species within the NWS (Atlas of Living Australia, 2020).
Narrow sawfish	Preferred habitat[1]: Shallow coastal, estuarine and riverine habitats, but it may occur in waters up to 40 m deep (D'Anastasi *et al.* 2013). Diet: Shoaling fishes, such as mullet, as well as molluscs and small crustaceans (Cliff and Wilson 1994).	Northern Australia is considered a stronghold for sawfish (*Pristis* sp.), with observations generally higher in numbers in the western coastal regions of the NT compared to the south-western Gulf of Carpentaria region (Udyawer *et al.* 2025). This species has been found in shallow coastal waters of the Pilbara and Kimberly coasts (Last and Stevens 2009).
Northern river shark	Preferred habitat[1]: Rivers, tidal sections of large tropical estuarine systems and macrotidal embayments, as well as inshore and offshore marine habitats (Pillans *et al.* 2009; Thorburn and Morgan 2004). Adults have been recorded only in marine environments. Juveniles and sub-adults have been recorded in freshwater, estuarine and marine environments (Pillans *et al.* 2009). Depth range of up to 23 m (Kyne *et al.* 2021). Diet: A variety of fish and crustaceans (Stevens *et al.* 2005).	Northern Australia is considered a stronghold for river sharks (*Glyphis sp.),* with observations generally higher in numbers in the western coastal regions of the NT compared to the south-western Gulf of Carpentaria region (Udyawer *et al.* 2025). The northern river shark has a relatively restricted northern Australian range (although with an extent of occurrence >20,000 km²) (Kyne *et al.* 2021). Within the NWMR records have come from both the West and East Kimberley, including King Sound, the Ord and King rivers, West Arm of Cambridge Gulf and from Joseph Bonaparte Gulf (Thorburn and Morgan 2004; Stevens *et al.* 2005; Thorburn 2006; Field *et al.* 2008; Pillans *et al.* 2008, Whitty *et al.* 2008; Wynen et al. 2008).
Oceanic whitetip shark	Preferred habitat: The oceanic whitetip shark is globally distributed in warm-temperate and tropical oceans (Andrzejaczek *et al.* 2018). The species may occur in tropical and subtropical offshore and coastal waters around Australia. They primarily occupy pelagic waters in the upper 200 m of the water column; however, they have been observed diving to depths of around 1,000 m, potentially associated with foraging behaviour (Howey-Jordan *et al.* 2013; D'Alberto *et al.* 2017). The species is highly migratory, travelling large distances between shallow reef habitats in coastal waters and oceanic waters (Howey-Jordan *et al.* 2013). The species does exhibit a strong preference for warm and shallow waters above 120 m. Diet: Opportunistic feeders that generally target a variety of finfishes and pelagic squid, depending on habitat. Targets pelagics such as tuna in open ocean, as noted by the large bycatch numbers in the longline fisheries.	Given its migratory nature, this species most likely has a broad distribution within the NWMR. No BIAs identified for NWMR.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species	Preferred habitat and diet	Habitat location
Scalloped hammerhead	Preferred habitat: In northern Australia, juveniles inhabit inshore environments while adults typically occur in deeper waters near the edge of the continental shelf. Pregnant females will move to shallow nursery areas to give birth. The scalloped hammerhead is found in waters ranging from the surface to depths of at least 275 m. The species has also been recorded at a depth of 1,042 m (Threatened Species Scientific Committee 2024).	In WA, the scalloped hammerhead is recorded along the northern coastline to about 34°S (Geographe Bay). It is suggested a high proportion of adult females may migrate from Australia to Indonesia and Papua New Guinea waters, and return to give birth in coastal nursery areas in northern Australia (Threatened Species Scientific Committee 2024).
Shortfin mako	Preferred habitat: The shortfin mako shark is a pelagic species with a circumglobal, wide-ranging oceanic distribution in tropical and temperate seas (Mollet *et al.* 2000). Tagging studies indicate shortfin makos spend most of their time in water less than 50 m deep but with occasional dives up to 880 m (Abascal *et al.* 2011; Stevens et al. 2010). Satellite telemetry suggests shortfin makos have multiple movement phases, displaying both high connectivity between Australian populations and periods of residency (Corrigan *et al.* 2018). Diet: Feeds on a variety of prey, such as teleost fishes, other sharks, marine mammals and marine turtles (Campana *et al.* 2005).	Given its migratory nature, this species most likely has a broad distribution within the NWMR. No BIAs identified for the NWMR.
Speartooth shark	Speartooth sharks are elasmobranchs that can inhabit and move between freshwater and marine environments (DoE 2014c). Juveniles and sub-adults have been observed to inhabit large tropical river systems, while adults are assumed to live outside of rivers in coastal marine areas, due to their physiological and life history similarities with bull sharks (DoE 2014c).	The speartooth shark is a medium sized shark found in tidal rivers and estuaries within the NT, northern WA and Queensland (DoE 2014c). Speartooth sharks have been recorded in tidal rivers and estuaries (Pillans *et al.* 2009). Data on a small number of speartooth sharks indicate this species has tidally influenced movement patterns (Pillans *et al.* 2009). Within Australia, speartooth sharks are known to occur in four distinct locations: Cambridge Gulf in WA; Van Diemen Gulf drainage in the NT, including the Adelaide River, South, East and West Alligator Rivers and Murganella Creek; Port Musgrave in Queensland, including the Wenlock and Ducie Rivers; and the Princess Charlotte Bay area of Eastern Cape York (Field *et al.* 2008, Pillans *et al.* 2009).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species	Preferred habitat and diet	Habitat location
Whale shark	Preferred habitat: Whale sharks have a widespread distribution in tropical and warm temperate seas, throughout oceanic and coastal Australian waters (Last and Stevens 2009). Diet: Whale sharks are planktivorous and feed on various planktonic species, including krill, jellyfish, and crab larvae (Last and Stevens 2009). At Ningaloo Reef, whale shark habitat use is strongly driven by fine-scale prey availability, with whale sharks concentrating in reef-edge areas where complex bathymetry and local oceanographic processes aggregate zooplankton. While elevated prey density drives horizontal space use, whale sharks' vertical movements are not tightly coupled to prey depth distributions, indicating that prey availability influences foraging locations but does not directly govern diving behaviour (D'Antonio *et al.* 2024).	Ningaloo Reef is the main known aggregation site for whale sharks in Australian waters and has the largest density of whale sharks per kilometre in the world (Martin 2007). A study by D'Antonio *et al.* (2025) investigated the influence of geomorphological features and oil and gas platforms on the broad-scale movement patterns and habitat connectivity of whale sharks across the eastern Indian Ocean and the north-west of Australia. Satellite telemetry from 78 whale sharks tagged between 2005 and 2019 during their seasonal aggregations in coastal waters at Ningaloo Reef and at Shark Bay during the austral autumn and winter were used to identify movement patterns and habitat connectivity. Geomorphological features such as pinnacles, canyons and seamounts promoted habitat connectivity and strongly influenced the habitat use of whale sharks across regional and local spatial scales. Oil and gas platforms were observed to have a similar effect on habitat use as natural feature types and enhanced habitat connectivity. The platforms most visited by whale sharks were situated near the edge of the continental shelf and near natural geomorphological features that likely enhance productivity, and were likely used as migratory stepping stones (D'Antonio *et al.* 2025). Satellite tracking at Ningaloo Reef showed whale shark distribution ranged widely across the eastern Indian Ocean, spending more than 90% of their time in epipelagic waters (≤200 m) while also performing occasional deep dives to bathypelagic depths (about 1,900 m). Geographical and vertical habitat use differed between sexes, with females more likely to occupy offshore areas, use deeper waters, and prefer cooler sea-surface temperatures than males. In contrast, males displayed more consistent space and depth use with warmer (<28 °C), coastal shelf waters (Bignell *et al.* 2025). Acoustically tagged whale sharks have been detected on the NWS in June, July and October to January (Thomson *et al.* 2021). Satellite tagging and sightings of whale sharks off the WA coast indicate that while whale sharks aggregate in higher numbers at Ningaloo Reef seasonally, they may be present year-round (Norman *et al.* 2017). See Table 6-6 for the BIA summary for the whale shark.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species	Preferred habitat and diet	Habitat location
White shark	Preferred habitat: The species typically occurs in temperate coastal waters between the shore and the 100 m depth contour; however, adults and juveniles have been recorded diving to depths of 1,000 m (Bruce *et al.* 2006; Bruce 2008). Diet: Smaller white sharks (less than 3 m length) feed primarily on teleost and elasmobranch fishes, broadening their diet as larger sharks to include marine mammals (Last and Stevens 2009).	There are no known aggregation sites for white sharks in the NWMR, and this species is most often found south of North West Cape, in low densities (DSEWPaC 2012a). Given its migratory nature, this species most likely has a broad distribution within the NWMR. No BIAs identified for the NWMR.

1. *Preferred habitat as described within the Sawfish and River Sharks Multispecies Recovery Plan (Commonwealth of Australia 2015b).*

6.2.3 Rays

Rays are commonly found in the NWMR. Two listed and migratory species are known to occur within this region: the reef manta ray and giant manta ray.

No BIAs for either the reef or giant manta ray species have been identified in the NWMR.

Table 6-5: Information about migratory ray species within the NWMR

Species	Preferred habitat and diet	Habitat location
Reef manta ray	Preferred habitat: The reef manta ray is commonly sighted within productive nearshore environments, such as island groups, atolls or continental coastlines. However, the species has also been recorded at offshore coral reefs, rocky reefs and seamounts (Marshall *et al.* 2009). Recorded depth range of 0 to 432 m (Kyne *et al.* 2021). Diet: Feeds on planktonic organisms, including krill and crab larvae.	A resident population of reef manta rays has been recorded at Ningaloo Reef. No BIAs identified for the NWMR.
Giant manta ray	Preferred habitat: The species primarily inhabits nearshore environments along productive coastlines with regular upwelling, but they appear to be seasonal visitors to coastal or offshore sites, including offshore island groups, offshore pinnacles and seamounts (Marshall *et al.* 2011). Recorded depth range of up to 1,000 m (Kyne *et al.* 2021). Diet: Feeds on planktonic organisms, including krill and crab larvae.	The Ningaloo coast is an important area for giant manta rays from March to August (Preen *et al.* 1997). No BIAs identified for the NWMR.

6.3 Fish, shark and sawfish biologically important areas in the NWMR

A review of the Australian Marine Spatial Information System (Geoscience Australia, 2026) identified BIAs for four species of fish, shark and sawfish – whale shark, largetooth (freshwater) sawfish, green sawfish and dwarf sawfish – within the NWMR. The BIAs for the whale shark and the sawfish species include foraging, nursing, juvenile and pupping areas. Table 6-6 describes these.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 6-6: Fish, whale shark and sawfish BIAs within the NWMR (Source: Geoscience Australia, 2026)

Species	Woodside activity area			BIAs			
	Browse	***NWS/ Scarborough***	***North West Cape***	***Reproduction – pupping***	***Reproduction – nursing***	***Juvenile***	***Foraging***
Whale shark	✓	✓	✓	-	-	-	Foraging (high density) in Ningaloo Marine Park and adjacent Commonwealth waters (Mar to Jul) Foraging northward from Ningaloo along the 200 m isobath (Jul to Nov)
Green sawfish	✓	✓	-	Pupping in Cape Keraudren (in summer in a narrow area adjacent to the shoreline) Pupping in Willie Creek Pupping in Roebuck Bay Pupping in Cape Leveque Pupping in waters adjacent to Eighty Mile Beach Pupping (likely) in Camden Sound	Nursing in Cape Keraudren Nursing in waters adjacent to Eighty Mile Beach	-	Foraging in Cape Keraudren Foraging in Roebuck Bay Foraging in Cape Leveque Foraging in Camden Sound
Largetooth (freshwater) sawfish	✓	✓	-	Pupping in the mouth of the Fitzroy River (Jan to May) Pupping in Roebuck Bay (Jan to May) Pupping likely in waters adjacent to Eighty Mile Beach (Jan to May)	Nursing (likely) in King Sound	Waters adjacent to Eighty Mile Beach Roebuck Bay	Foraging in the mouth of the Fitzroy River (Jan to May) Foraging in King Sound and Roebuck Bay (Jan to May) Foraging in waters adjacent to Eighty Mile Beach
Dwarf sawfish	✓	✓	-	Pupping in King Sound Pupping in waters adjacent to Eighty Mile Beach	Nursing in King Sound Nursing waters adjacent to Eighty Mile Beach	King Sound	Foraging in King Sound Foraging in Camden Sound Foraging in waters adjacent to Eighty Mile Beach

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

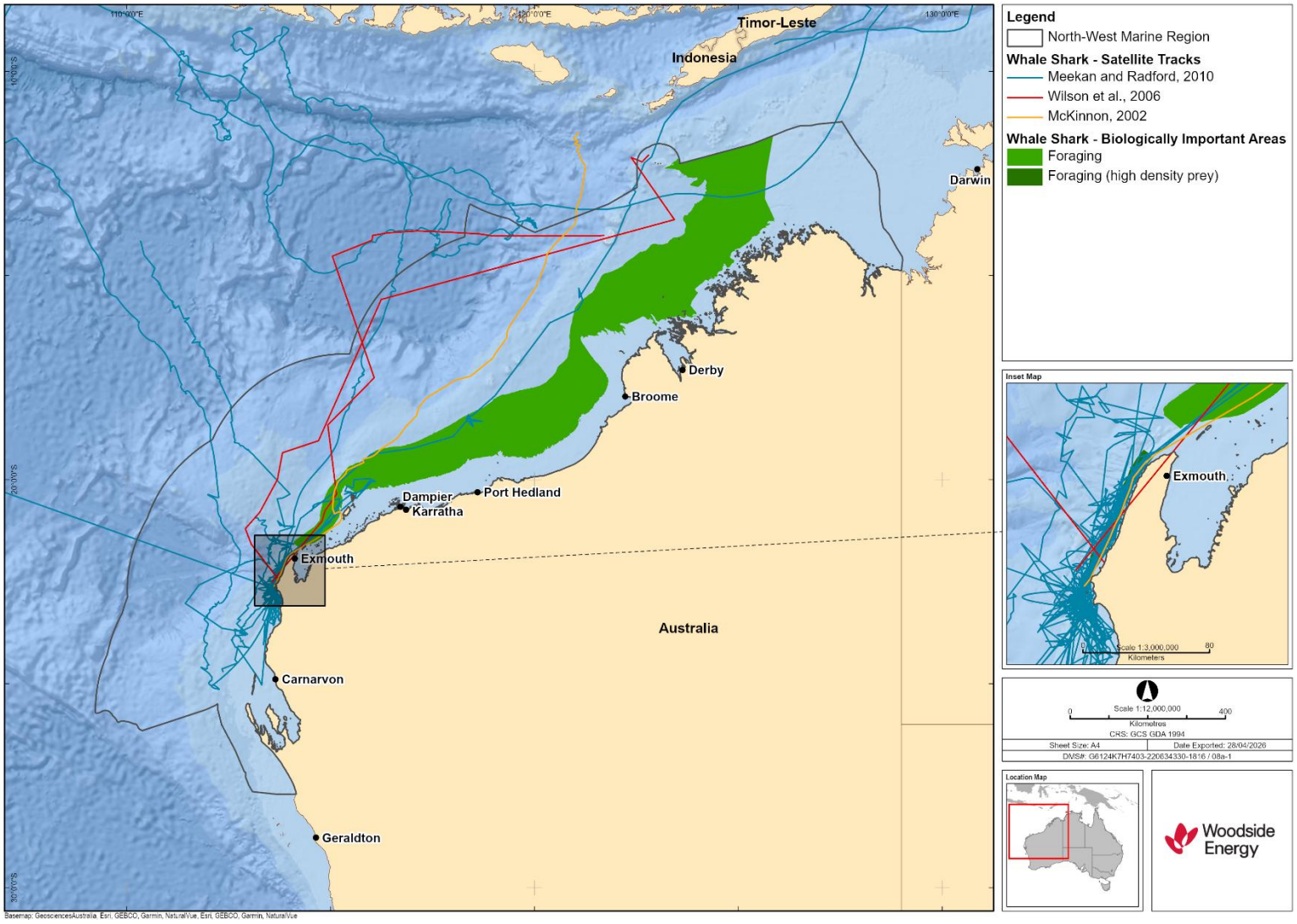


Figure 6-1: Whale shark biologically important areas (BIAs) for the NWMR and tagged whale shark satellite tracks

Source for BIAs: DCCEEW (2025b)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

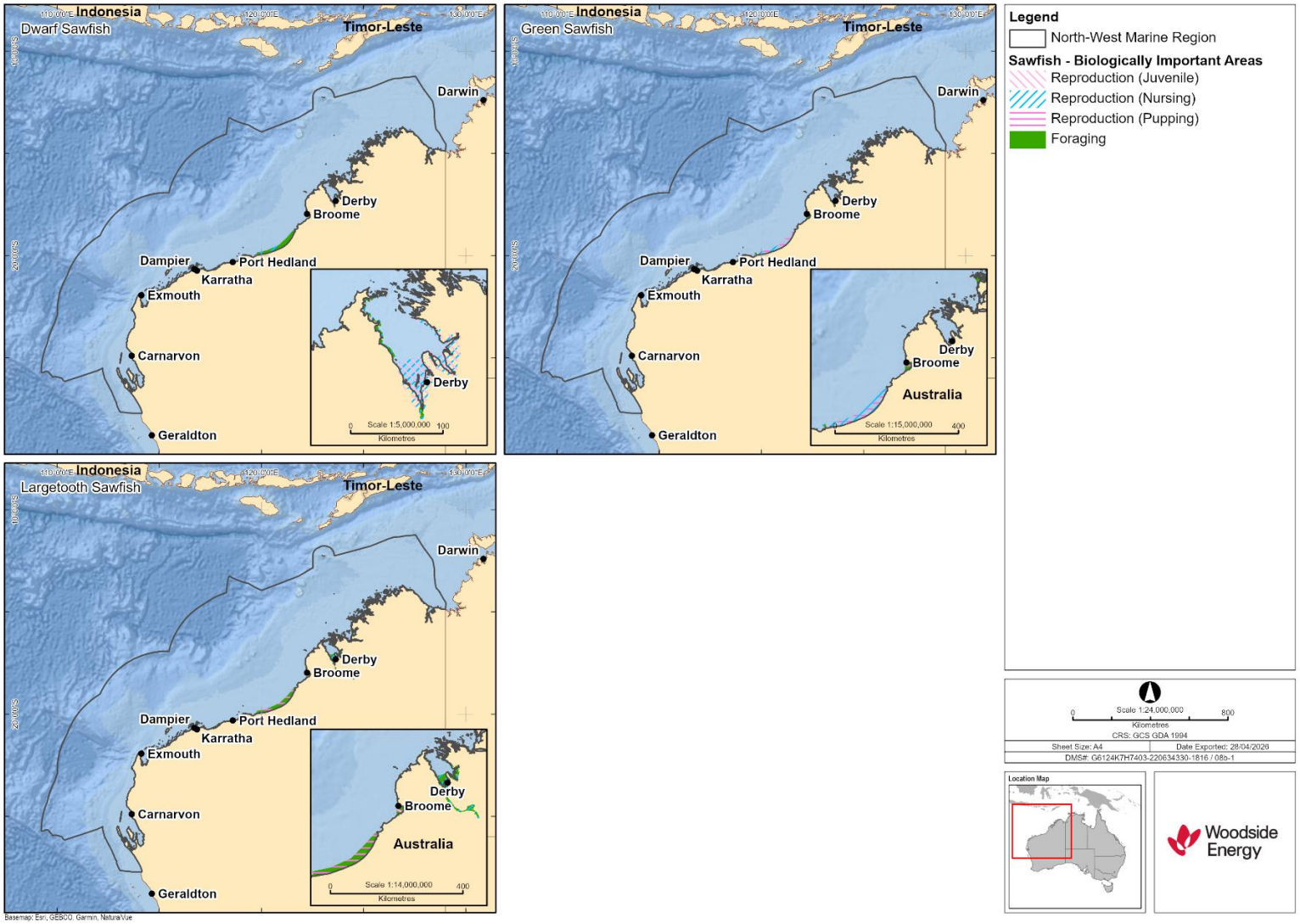


Figure 6-2: Sawfish BIAs for the NWMR

Source: DCCEEW (2025b)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

7. MARINE REPTILES

7.1 Regional context

The NWMR and NMR contain important habitat for listed marine reptiles, including areas that support key life stages such as nesting, internesting, migration and foraging for marine turtle species, and habitats supporting resident sea snake, crocodile, and water monitor (NWMR only) populations. Habitats within the SWMR also support marine reptiles; however, these are primarily associated with foraging marine turtle species.

Six of the seven marine turtle species occurring globally are in Australian waters, of which all six – the green, hawksbill, loggerhead, flatback, leatherback and olive ridley turtle – occur in the NWMR and NMR. Four species of marine turtles – the green, loggerhead, flatback and leatherback turtle – have known distribution within the SWMR (see PMST report in Appendix A). However, no known nesting areas exist within the SWMR region (DSEWPaC 2012b).

The PMST report (Appendix A) identified a total of 12 EPBC Act listed threatened or migratory reptile species, including marine turtles, sea snakes, water monitors and crocodiles, within the NWMR. An additional 23 EPBC Act listed marine sea snake species that do not have a threatened or migratory status were recorded within the NWMR. Appendix A contains a full list.

The PMST report identified a total of ten EPBC Act listed threatened or migratory reptile species within the NMR. An additional 28 EPBC Act listed marine sea snake and sea krait species that do not have a threatened or migratory status were recorded within the NMR. Appendix A contains a full list.

The PMST report identified a total of four EPBC Act listed threatened or migratory marine turtle species within the SWMR. Appendix A contains a full list.

7.2 Marine reptiles in the NWMR

The next subsections focus on the listed marine reptile species known to occur within the NWMR.

Table 7-1 outlines the threatened and migratory marine reptile species that may, are likely or are known to occur within the NWMR, with their conservation status and relevant recovery plans and conservation advice.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 7-1: Threatened and migratory marine reptile species identified by the EPBC Act PMST that may, likely or are known to occur within the NWMR

Species name	Common name	EPBC Act (Commonwealth) (as per PMST report Appendix A)			BC Act (WA)[7]	IUCN Red List (non-statutory)[8]	EPBC Act Part 13 statutory instrument
		Threatened status	Migratory status	Listed	Conservation status	Global status	
Aipysurus apraefrontalis	Short-nosed sea snake	Critically Endangered	N/A	Marine	Critically Endangered	Data Deficient	Approved Conservation Advice for *Aipysurus apraefrontalis* (short-nosed sea snake) (DSEWPaC 2011a)
Aipysurus foliosquama	Leaf-scaled sea snake	Critically Endangered	N/A	Marine	Critically Endangered	Data Deficient	Approved Conservation Advice for *Aipysurus foliosquama* (leaf-scaled sea snake) (DSEWPaC 2011b)
Aipysurus fuscus	Dusky sea snake	Endangered	N/A	Marine	N/A	Endangered	Conservation Advice for *Aipysurus fuscus* (dusky sea snake) (DCCEEW 2024m)
Crocodylus porosus	Salt-water crocodile	N/A	Migratory	Marine	N/A	Least Concern	N/A
Caretta caretta	Loggerhead turtle	Endangered	Migratory	Marine	Endangered	Vulnerable	Recovery Plan for Marine Turtles in Australia 2017–2027 (Commonwealth of Australia 2017)
Chelonia mydas	Green turtle	Vulnerable	Migratory	Marine	Vulnerable	Least Concern	
Dermochelys coriacea	Leatherback turtle	Endangered	Migratory	Marine	Vulnerable	Vulnerable	Recovery Plan for Marine Turtles in Australia 2017–2027 (Commonwealth of Australia 2017) Approved Conservation Advice for *Dermochelys coriacea* (leatherback turtle) (DEWHA 2009c)
Eretmochelys imbricata	Hawksbill turtle	Vulnerable	Migratory	Marine	Vulnerable	Critically Endangered	Recovery Plan for Marine Turtles in Australia 2017–2027 (Commonwealth of Australia 2017)
Lepidochelys olivacea	Olive ridley turtle	Endangered	Migratory	Marine	Endangered	Vulnerable	
Natator depressus	Flatback turtle	Vulnerable	Migratory	Marine	Vulnerable	Data Deficient	

[7] Threatened and Priority Fauna List – July 2025 - https://www.dbca.wa.gov.au/management/threatened-species-and-communities (accessed on 21/05/2026).
[8] IUCN, 2026. The IUCN Red List of Threatened Species. Version 2025-2. https://www.iucnredlist.org (accessed on 21/05/2026).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species name	Common name	EPBC Act (Commonwealth) (as per PMST report Appendix A)			BC Act (WA)[7]	IUCN Red List (non-statutory)[8]	EPBC Act Part 13 statutory instrument
		Threatened status	Migratory status	Listed	Conservation status	Global status	
Varanus mertensi	Mertens' water monitor	Endangered	N/A	N/A	Endangered	Endangered	Conservation Advice for *Varanus mertensi* (Mertens' water monitor) (DCCEEW 2023i)
Varanus mitchelli	Mitchell's water monitor	Critically Endangered	N/A	N/A	Critically Endangered	Critically Endangered	Conservation Advice for *Varanus mitchelli* (Mitchell's water monitor) (DCCEEW 2023c)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

7.2.1 Marine turtles

The PMST report (Appendix A) identified six species of threatened and migratory (three Vulnerable and three Endangered) EPBC Act listed marine turtles within the NWMR: the green (*Chelonia mydas*), hawksbill (*Eretmochelys imbricata*), flatback (*Natator depressus*), loggerhead (*Caretta caretta*), leatherback (*Dermochelys coriacea*) and olive ridley (*Lepidochelys olivacea*) turtles (see Table 7-1).

The NWMR supports globally significant breeding populations of four marine turtle species: the green, hawksbill, flatback and loggerhead turtles. Olive ridley turtles are known to forage within the NWMR, but there are only occasional records of the species nesting in the region. Leatherback turtles regularly forage over Australian continental shelf waters within the NWMR, but there are also no records of the species nesting in the region (DSEWPaC 2012a).

Marine turtles are highly migratory during non-reproductive life phases and have high site fidelity during breeding and nesting life phases. They spend most of their lives in the ocean, with only adult female marine turtles coming ashore to lay eggs in the sand above the high-water mark on natal beaches (Commonwealth of Australia 2017). Figure 7-1 summarises the generalised life cycle of marine turtles. Species-specific life cycle information is outlined within the Recovery Plan for Marine Turtles of Australia (Commonwealth of Australia 2017).

Discrete genetic stocks have evolved within each marine turtle species. This is the result of marine turtles returning to where they hatched. These genetically distinct stocks are defined by the presence of regional breeding aggregations. Stocks are composed of multiple rookeries in a region and are delineated by where there is little or no migration of individuals between nesting areas. Turtles from different stocks typically overlap at feeding grounds (Commonwealth of Australia 2017). There are 17 genetic stocks across both the NWMR and NMR – nine in the NWMR, six in the NMR, and two overlapping both regions. Of these, 11 are known to occur within Woodside's three activity areas. Table 7-2 describes key information about marine turtles within the NWMR.

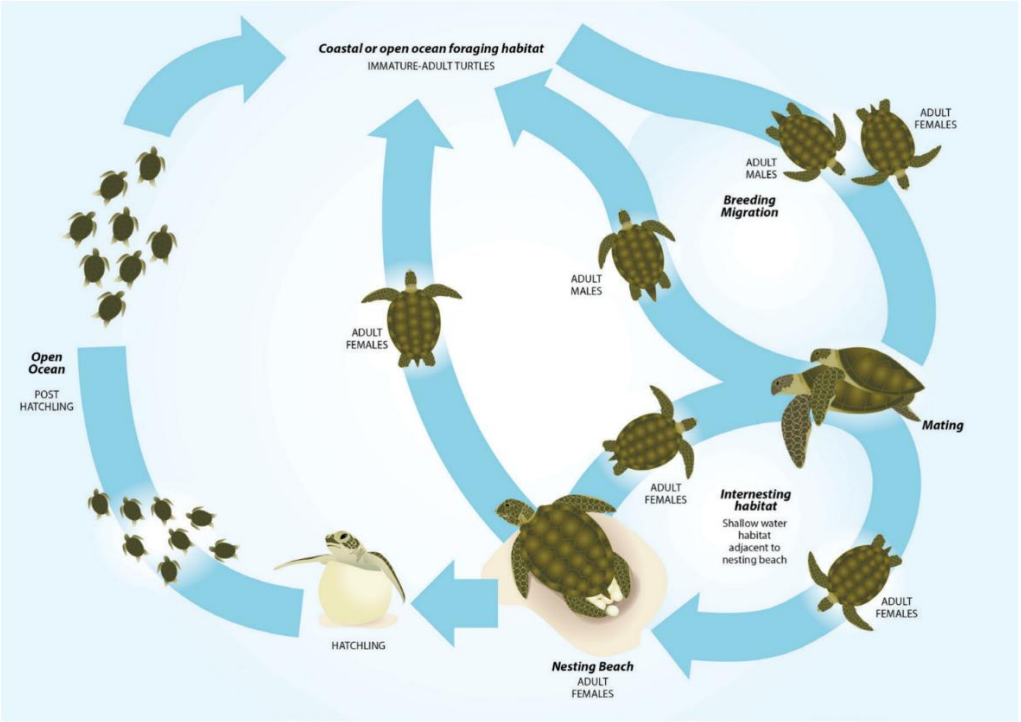


Figure 7-1: Generalised life cycle of marine turtles

Source: Commonwealth of Australia (2017)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 7-2: Marine turtle key information within the NWMR

Species/ genetic stock	Woodside activity area			Key information
	Browse	***NWS/ Scarborough***	***North West Cape***	
Flatback turtle				
Distribution: There are five stocks of flatback turtles described in Australian waters. Note, the extent of genetic relatedness of flatback turtles along the WA coast is currently under review. Flatback turtles forage in waters across the Australian continental shelf and into the continental waters off Indonesia and Papua New Guinea. The flatback turtle is found in the tropical waters of northern Australia, Papua New Guinea and Irian Jaya. It is one of the only two species of marine turtle without a global distribution (Limpus 2007). Nesting is known to only occur in Australia for this species. Diet: Juvenile flatback turtles feed on gastropods, molluscs, squid and siphonophores. Limited data indicate cuttlefish, hydroids, soft corals and jellyfish also form part of the juvenile flatback diet. During the adult stage, they are primarily carnivorous, foraging on soft-bodies invertebrates (Commonwealth of Australia 2017).				
Cape Domett stock (F-CD)	✓	-	-	Cape Domett is an important high density nesting area (Tucker *et al.* 2021). Combined with a smaller site at Lacrosse Island, the F-CD stock is one of the largest flatback turtle stocks in Australia. Average nesting abundance at Cape Domett is estimated at 3,250 females per year (Whiting *et al.* 2008). Designated habitat critical for the F-CD stock are the nesting locations of Cape Domett and Lacrosse Island, and an internesting buffer of 60 km radius around these rookeries, year-round with peak internesting activity occurring August to September (Commonwealth of Australia 2017). Extending further than the habitat critical internesting buffer, an internesting buffer BIA of 60 km is at Cape Domett and Lacrosse Island.
Pilbara stock (F-Pil)	-	✓	✓	The major rookeries for the F-Pil stock are on the eastern coast of Barrow Island and at Mundabullangana Station near Cape Thouin on the mainland (greater than 500 km south of Broome) (Limpus 2006) and Delambre Island (Commonwealth of Australia 2017). This stock also nests on many islands in the Pilbara and southern Kimberley, including Thevenard, Varanus, Muiron Islands and Montebello group. The Dampier Archipelago contains several regionally significant flatback turtle rookeries and forms part of the core nesting distribution of the F-Pil stock (Fossette *et al.* 2021b). These areas are designated habitat critical for the F-Pil stock and include an internesting buffer of 60 km radius around these rookeries from October to March. A study using aerial photogrammetry showed nesting beaches were spread across the Pilbara from Y Island (Exmouth Gulf) in the south-west, to Bedout Island in the north and Mulla Mulla Downs Creek in the east (Fossete *et al.* 2021b). Extending further than the habitat critical internesting buffer, a year-round internesting buffer BIA of 60 km is north and north-west of the Montebello Islands. However, use level for this BIA has been defined as very low (Commonwealth of Australia 2017). Satellite tracking data by Whittock *et al.* (2016) found flatback turtles displayed varying internesting movements, with distances travelled ranging between 3.4 and 62.1 km upwards along the coast. Nearshore behaviour was displayed across all Pilbara rookeries, with a consistent occurrence of tagged individuals remaining <10 km of nesting beaches during the internesting period (Whittock *et al.* 2016). Flatbacks exhibit high fidelity to nesting beaches during periods of nesting attempts (Whittock *et al.* 2016; Peel *et al.* 2024).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species/ genetic stock	Woodside activity area			Key information
	Browse	*NWS/ Scarborough*	*North West Cape*	
				Post-nesting satellite tracking indicates foraging occurs along the WA coast in water shallower than 130 m and within 315 km of shore (Commonwealth of Australia 2017).
South-west Kimberley stock (F-swKim)	✓	✓	-	Eighty Mile Beach and Eco Beach are important nesting areas, with nesting occurring year round but peaking in December to January. These areas are designated habitat critical for the stock and include an internesting buffer of 60 km radius around these rookeries from October to March. Juveniles are likely to remain in waters over the Australian continental shelf after hatching. Flatback turtles are usually found around soft sediment habitat that supports benthic invertebrates. Important foraging habitats are not identified for this species (Commonwealth of Australia 2017).
Green turtle				
Distribution: Green turtles are distributed across nine genetically distinct stocks in Australian waters off WA, the NT and Queensland, with limited numbers in New South Wales, Victoria and SA (Commonwealth of Australia 2017). Diet: During their pelagic juvenile stage, green turtles feed on algae, pelagic crustaceans and molluscs. They are primarily herbivorous during their adult stage, foraging on algae, seagrass and mangroves. However, some green turtles maintain a considerable carnivorous component to their diets (Commonwealth of Australia 2017).				
Ashmore Reef stock (G-AR)	✓	-	-	The G-AR stock nests in the Ashmore Reef and Cartier Island AMP areas. Population estimates are not available for Ashmore Reef, although annual breeding numbers are thought to be in the low hundreds (Whiting 2000). Designated habitat critical for the G-AR stock are the nesting locations of Ashmore Reef and Cartier Reef, and an internesting buffer of 20 km radius around these rookeries, year-round with peak internesting activity occurring December to January (refer Table 6 of the Recovery Plan). Juvenile and adult turtles forage within the tidal/subtidal habitats of offshore islands and coastal waters with coral reef, mangrove, sand, rocky reefs and mudflats where there are algal turfs or seagrass meadows (Commonwealth of Australia 2017).
NWS stock (G-NWS)	-	✓	✓	The G-NWS stock is one of the largest green turtle stocks in the world and the largest in the Indian Ocean. The G-NWS stock is estimated at about 20,000 individuals (DSEWPaC 2012a) and the trend for the stock is reported as stable (Commonwealth of Australia 2017). Major rookeries of the G-NWS stock within the NWS/Scarborough activity area are at Lacepede Islands, Montebello Islands and Barrow Island (Tucker *et al.* 2021), with minor rookeries at Boodie, Middle, Serrurier, Thevenard, Lowendal, Rosemary, Legendre and Delambre islands (Commonwealth of Australia 2017). These areas are designated habitat critical for survival of the stock and include an internesting buffer of 20 km radius around these rookeries from November to March. Major rookeries for the G-NWS stock located within the North West Cape Woodside activity area include the North West Cape and Muiron Islands (Commonwealth of Australia 2017). Located on the mainland coast of

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species/ genetic stock	Woodside activity area			Key information
	Browse	*NWS/ Scarborough*	*North West Cape*	
				the North West Cape, this area is designated habitat critical for the stock and includes an internesting buffer of 20 km radius around the rookery from November to March. A 2018 survey, including on-beach monitoring of the Muiron Islands and Ningaloo Coast from North West Cape to Bungelup (Rob *et al.* 2019), supports the concept that North West Cape and the Muiron Islands are major important nesting areas for green turtles, as identified in the Recovery Plan (Commonwealth of Australia 2017). For the 2024–25 Ningaloo Turtle Program season, green turtles were the most active species in the North West Cape division, accounting for 97.08% of total turtle activity (Department of Biodiversity, Conservation and Attractions (DBCA) 2025). The number of green turtle nests has varied among the years since the program began in 2002 (ranging from 1.06 to 18.13 nests per subsection per day), with a long-term average of about 6.16. The average number of green turtle nests recorded during the 2024–25 peak season was slightly above average at 6.6 nests per subsection per day, ranking as the seventh highest out of 23 seasons that have been monitored (DBCA 2025). Long-term trends indicate several clear peaks in activity since the program began, including 2011–12, 2020–21 and 2023–24, where nesting activity was about 2.5 to 11 times greater than lower-activity seasons (DBCA 2025). All seasons coincided with La Niña weather patterns (DBCA 2021).
Scott Reef-Browse Island stock (G-ScBr)	✓	-	-	The G-ScBr stock is a genetically discrete stock known to nest at only two locations within the north-east Indian Ocean – Sandy Islet and Browse Island. There are currently very limited data available for the G-ScBr stock, so population numbers are not known (Commonwealth of Australia 2017). Designated habitat critical for the G-ScBr stock are the nesting locations of Sandy Islet and Browse Island, and an internesting buffer of 20 km radius around these rookeries, for the period November to March (see Table 6 of the Recovery Plan). Surveys conducted at Scott Reef in 2006, 2008 and 2009 indicate the summer months from late November to February are the preferred breeding season for green turtles at Sandy Islet (Guinea 2009). Satellite tagging studies (Pendoley 2005; Guinea 2011) have provided an indication of the behaviour and migratory routes of adult green turtles leaving Scott Reef. Most animals appear to swim through South Reef lagoon and disperse toward the WA mainland via two distinct post-nesting migration pathways: travelling east and north toward the Bonaparte Archipelago then north along the coast to foraging areas in NT waters, or travelling south to Cape Leveque then south along the coast to the Turtle Islands off the mouth of the De Grey River in the Pilbara region (Ferreira *et al.* 2021).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species/ genetic stock	Woodside activity area			Key information
	Browse	***NWS/ Scarborough***	***North West Cape***	
Hawksbill turtle				
Distribution: There are three genetic stocks of hawksbill in Australia with distribution occurring across northern and eastern Australia and widely within the NWMR, with most of the H-WA stock in the Pilbara. Hawksbill turtles forage in pelagic environments during the first five to ten years of their life cycle. Upon reaching maturity, they return to their hatching location to settle in tropical tidal and subtidal coral and rocky reef habitats (Commonwealth of Australia 2017). They have also been found within seagrass habitats of coastal waters and deeper habitats, although less frequently. They are distributed throughout the NWS of WA (DoE 2026c). Diet: Hawksbill turtles are omnivorous, foraging on algae, sponges, soft corals and other soft-bodies invertebrates (Commonwealth of Australia 2017).				
WA genetic stock (H-WA)	✓	✓	-	Major rookeries of the H-WA stock occur in the NWS/Scarborough Woodside activity area at islands within the Dampier Archipelago (particularly Rosemary Island), Delambre Island and Montebello Islands, with lower density nesting at the Lowendal Islands and Sholl Island (Limpus 2009b). These areas are designated habitat critical for the stock and include an internesting buffer of 20 km radius around these rookeries from October to February. Peak nesting season occurs from October to January (Commonwealth of Australia 2017). Rosemary Island supports the most significant hawksbill turtle rookery in the WA region and one of the largest in the Indian Ocean; about 500 to 1,000 females nest on the island annually, more than at any other WA rookery (Pendoley 2005; Pendoley *et al.* 2016). In the Browse Woodside activity area, Sandy Islet is recognised as a key nesting BIA for this species, with an internesting BIA in the surrounding waters. In 2006, a single hawksbill turtle was tagged and recaptured in 2009 on Sandy Islet (Guinea 2009). There are no other records of hawksbill turtles nesting at Scott Reef, although the Recovery Plan for Marine Turtles recognises some nesting for this species occurs at Scott Reef and Ashmore Reef (Commonwealth of Australia 2017). The hawksbill turtle is also known to occur within the Rowley Shoals Marine Park. However, the habitats within the marine park are not considered to be significant for the species (Department of Environment and Conservation (DEC) 2007a).
Leatherback turtle				
Distribution: There are potentially three leatherback genetic stocks in the Indo-Pacific. However, genetic linkages are yet to be determined for those found in Australian waters. Leatherback turtles are more commonly found foraging in waters on the east coast of Australia. Leatherbacks foraging in WA may come from nesting areas in the Andaman Sea and Indonesia. Small numbers of leatherback turtles nest along the Cobourg Peninsula in the NT and there have been unconfirmed accounts of leatherbacks nesting in WA (Commonwealth of Australia 2017). Diet: The leatherback is an oceanic species remaining planktivorous throughout its life cycle, feeding on jellyfish and large planktonic ascidians such as sea squirts in the water column (Commonwealth of Australia 2017).				

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species/ genetic stock	Woodside activity area			Key information
	Browse	***NWS/ Scarborough***	***North West Cape***	
Nesting in Australia	✓	-	-	The leatherback turtle is the largest of all marine turtles. They are pelagic feeders and spend most of their lives in the open ocean in tropical, subtropical and temperate waters throughout the world (Limpus 2009a). Leatherback turtles have been recorded feeding in the coastal waters of all Australian states and territories. It is thought they migrate from Australian waters to breed at larger rookeries in neighbouring countries such as Indonesia, Papua New Guinea and Solomon Islands. There are no known foraging sites for this species within WA and no records of leatherback turtles nesting in WA (Commonwealth of Australia 2017).
Loggerhead turtle				
Distribution: There are two genetically distinct stocks of loggerheads in Australia, one in Queensland and one in WA. Foraging occurs in coastal areas in WA and the NT, ranging from nearshore benthic habitats to depths of 55 m (Commonwealth of Australia 2017). Diet: In the post-hatchling stage, the loggerhead feeds on algae, pelagic crustaceans and molluscs. During the adult stage, they are carnivorous, feeding primarily on benthic invertebrates (Commonwealth of Australia 2017).			
WA (LH-WA)	-	-	✓	Loggerhead turtles have a global distribution and occur throughout eastern, northern and western Australia (Limpus 2008). Major rookeries of the LH-WA stock are at Dirk Hartog Island, Muiron Islands, North West Cape and Gnaraloo Bay. These areas are designated habitat critical for the stock and include an internesting buffer of 20 km radius around these rookeries from November to May (Commonwealth of Australia 2017). Loggerhead turtles migrate over 2,600 km between foraging and nesting areas (Limpus 2008). There has been one reported loggerhead nesting at Ashmore Reef (DoE 2026a). The LH-WA stock is one of the largest in the world (Limpus 2009c). The trend for the stock is reported as stable (Commonwealth of Australia 2017). A 2018 survey, including on-beach monitoring of the Muiron Islands and Ningaloo Coast from North West Cape to Bungelup (Rob *et al.* 2019), supports the concept that North West Cape and the Muiron Islands are major important nesting areas for loggerhead turtles, as identified in the Recovery Plan (Commonwealth of Australia 2017). The standardised level of loggerhead turtle nesting along the North West Cape was above the long-term average (0.36) for the 2022–23 season and the third highest since the Ningaloo Turtle Program began (2002), with 0.46 nests per subsection per day (DBCA 2021). Dirk Hartog Island in the Shark Bay Marine Park, with an average of 122 nests per day over 2.1 km (Reinhold and Whiting 2014), is recognised as the most important loggerhead turtle rookery in WA (Commonwealth of Australia 2016; as cited in Rob *et al.* 2019).
Olive ridley turtle				
Distribution: There are two genetic stocks in Australia, one in the NT and the other that nests on western Cape York. Low-density nesting occurs in the Kimberley and genetic relatedness is unknown. There is limited data about olive ridley individuals, but satellite tracking indicates they appear to remain on the Australian continental shelf and into waters off Indonesia. Foraging occurs in depths ranging between 15 and 200 m (Commonwealth of Australia 2017). Diet: The olive ridley turtle is primarily carnivorous, feeding on soft-bodied invertebrates including sea pens, soft corals, beche-der-mer (sea cucumbers) and jellyfish (Commonwealth of Australia 2017).			

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species/ genetic stock	Woodside activity area			Key information
	Browse	***NWS/ Scarborough***	***North West Cape***	
Unknown genetic stock, Kimberley	✓	-	-	The olive ridley turtle is the smallest of all marine turtles. It has a global tropical and subtropical distribution and is known to forage primarily in soft-bottom habitats ranging from 6 to 35 m in nearshore locations (DSEWPaC 2012a), and offshore in depths of up to 200 m (Whiting *et al.* 2018). Olive ridley nesting is recorded as incidental and sparse in the Kimberley region (Whiting *et al.* 2018). It has been recorded nesting in WA only twice, both times in the Kimberley region (RPS Environment and Planning Pty Ltd, 2010), with most nesting occurring in the NT (Commonwealth of Australia 2017). Key nesting locations in the NT include Cape Leveque, Darcy Island, Prior Point, Llanggi and Vulcan Island (Commonwealth of Australia 2017).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

7.2.1.1 Habitat critical to survival for marine turtles

The Recovery Plan for Marine Turtles of Australia (Commonwealth of Australia 2017) identifies habitat critical to the survival of a species for marine turtle stocks under the EPBC Act. Habitat critical to survival is defined by the EPBC Act Significant Impact Guidelines 1.1 – Matters of National Environmental Significance as areas necessary:

- for activities such as foraging, breeding or dispersal
- for the long-term maintenance of the species, including species essential to their survival
- to maintain genetic diversity and long-term evolutionary development
- for the reintroduction of populations or recovery of the species.

The Recovery Plan for Marine Turtles of Australia (Commonwealth of Australia 2017) has identified nesting locations and associated internesting areas as habitat critical to survival for five marine turtle species within the NWMR. These are identified, described and mapped in Table 7-3 and Figure 7-2 to Figure 7-6. No habitat critical to survival of leatherback turtles has been identified within the NWMR.

Table 7-3 outlines the relevant genetic stock, habitat critical to survival and key life cycle stage seasonality of the four species of marine turtles within the NWMR.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 7-3: Genetic stock, habitat critical to survival and key life cycle stage seasonality of marine turtles within the NWMR

Species	Woodside activity area			Habitat critical to survival			
	Browse	*NWS/ Scarborough*	*North West Cape*	*Nesting (*major rookery[1])*	*Internesting buffer*	*Seasonality nesting*	*Preferred habitat[2]*
Green turtle							
NWS stock (G-NWS)	✓	✓	✓	Adele Island Maret Island Cassini Island Lacepede Islands* Barrow Island* Montebello Islands (all with sandy beaches)* Serrurier Island Dampier Archipelago Thevenard Island North West Cape* Ningaloo Coast	20 km radius	Nov to Mar (peak Dec to Feb)	Nearshore reef habitats in the photic zone
Ashmore Reef stock (G-AR)	-	-	-	Ashmore Reef* Cartier Reef*		All year (peak: Dec to Jan)	
Scott Reef-Browse Island stock (G-ScBr)	✓	-	-	Scott Reef (Sandy Islet)* Browse Island*		Nov to Mar (peak Jan to Feb)	
Hawksbill turtle							
WA stock (H-WA)	-	✓	-	Dampier Archipelago (including Rosemary Island and Delambre Island)* Montebello Islands (including Ah Chong Island, South East Island and Trimouille Island)* Lowendal Islands (including Varanus Island, Beacon Island and Bridled Island) Sholl Island	20 km radius	All year (peak: Oct to Jan)	Nearshore and offshore reef habitats

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species	Woodside activity area			Habitat critical to survival			
	Browse	***NWS/ Scarborough***	***North West Cape***	***Nesting (*major rookery[1])***	***Internesting buffer***	***Seasonality nesting***	***Preferred habitat[2]***
Flatback turtle							
Cape Domett stock (F-CD)	-	-	-	Cape Domett* Lacrosse Island	60 km radius[3]	All year (peak: Aug to Sep)	Nearshore and offshore subtidal and soft bottomed habitats of offshore islands
South-west Kimberley stock (F-swKim)	✓	✓	-	Eighty Mile Beach* Eco Beach* Lacepede Islands		All year (peak: Dec to Jan)	
Pilbara stock (F-Pil)	-	✓	-	Montebello Islands Mundabullangana Beach* Barrow Island* Cemetery Beach Dampier Archipelago (including Delambre Island* and Huay Island) Coastal islands from Cape Preston to Locker Island		Oct to Mar (peak: Nov to Jan)	
Unknown genetic stock, Kimberley, WA	✓	-	-	Maret Islands Montilivet Islands Cassini Island Coronation Islands (includes Lamarck Island) Napier-Broome Bay Islands (West Governor Island, Sir Graham Moore Island – near Kalumbaru) Champagny, Darcy and Augustus Islands (Camden Sound)		May to Jul	

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species	Woodside activity area			Habitat critical to survival			
	Browse	***NWS/ Scarborough***	***North West Cape***	***Nesting (*major rookery[1])***	***Internesting buffer***	***Seasonality nesting***	***Preferred habitat[2]***
Loggerhead turtle							
WA stock (LH-WA)	-	-	✓	Dirk Hartog Island* Muiron Islands* Gnaraloo Bay* Ningaloo Coast	20 km radius	Nov to Mar (peak Jan)	Nearshore and island coral reefs, bays and estuaries in tropical and warm temperate latitudes
Olive ridley turtle							
Unknown genetic stock, Kimberley, WA	✓	-	-	Cape Leveque Darcy Island Prior Point Llanggi Vulcan Island	20 km radius	May to Jul	Nearshore coastal areas; present year round over soft-bottom habitats

1. *Major rookeries as outlined in the Recovery Plan (Commonwealth of Australia 2017).*
2. *Preferred habitat as outlined in the Recovery Plan (Commonwealth of Australia 2017).*
3. *Although flatback turtles have a 60 km internesting buffer for habitat critical to survival, Whittock* et al. *(2016) reports that internesting flatback turtles (n=47) from each rookery remained in water <44 m deep, with the mean depth for all turtles at each rookery <10 m. The internesting locations from all five rookeries reached a maximum distance from the nearest coastline of 27.8 km, with the mean maximum distance away from the nearest coastline <6.1 km for each rookery.*

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

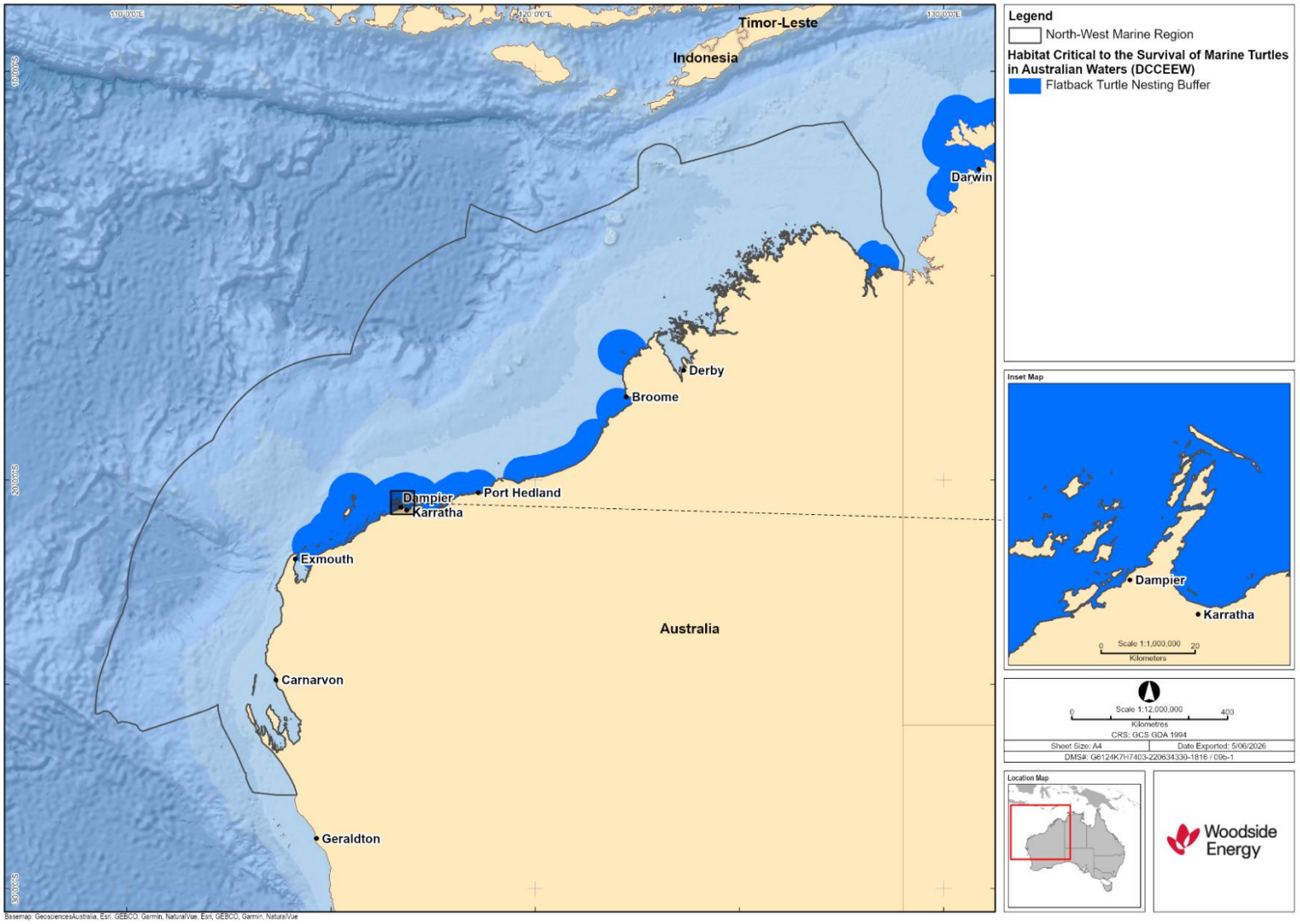


Figure 7-2: Flatback turtle habitat critical to survival (nesting beaches and internesting buffers) for the NWMR

Source: DCCEEW (2025b)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

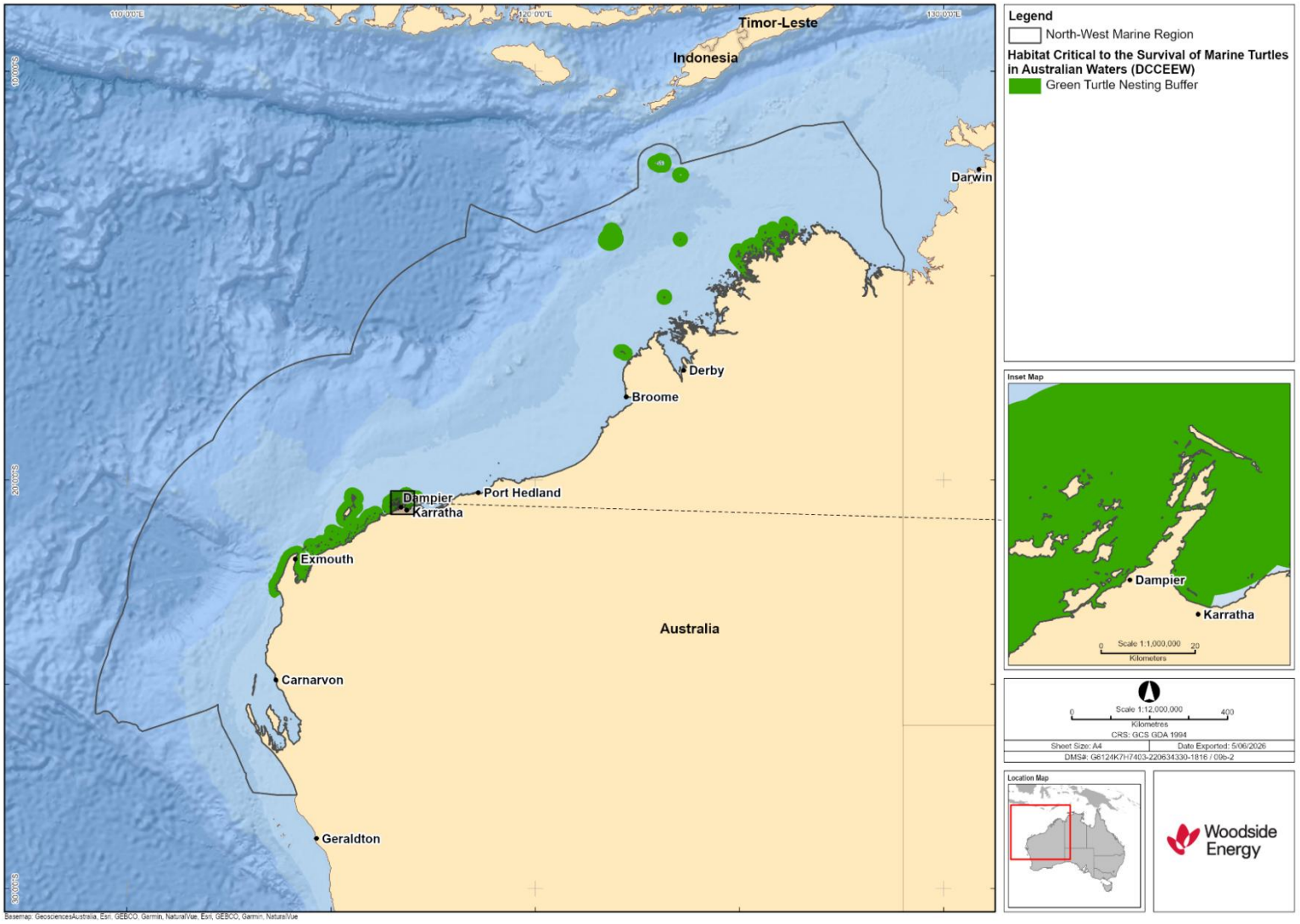


Figure 7-3: Green turtle habitat critical to survival (nesting beaches and internesting buffers) for the NWMR

Source: DCCEEW (2025b)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

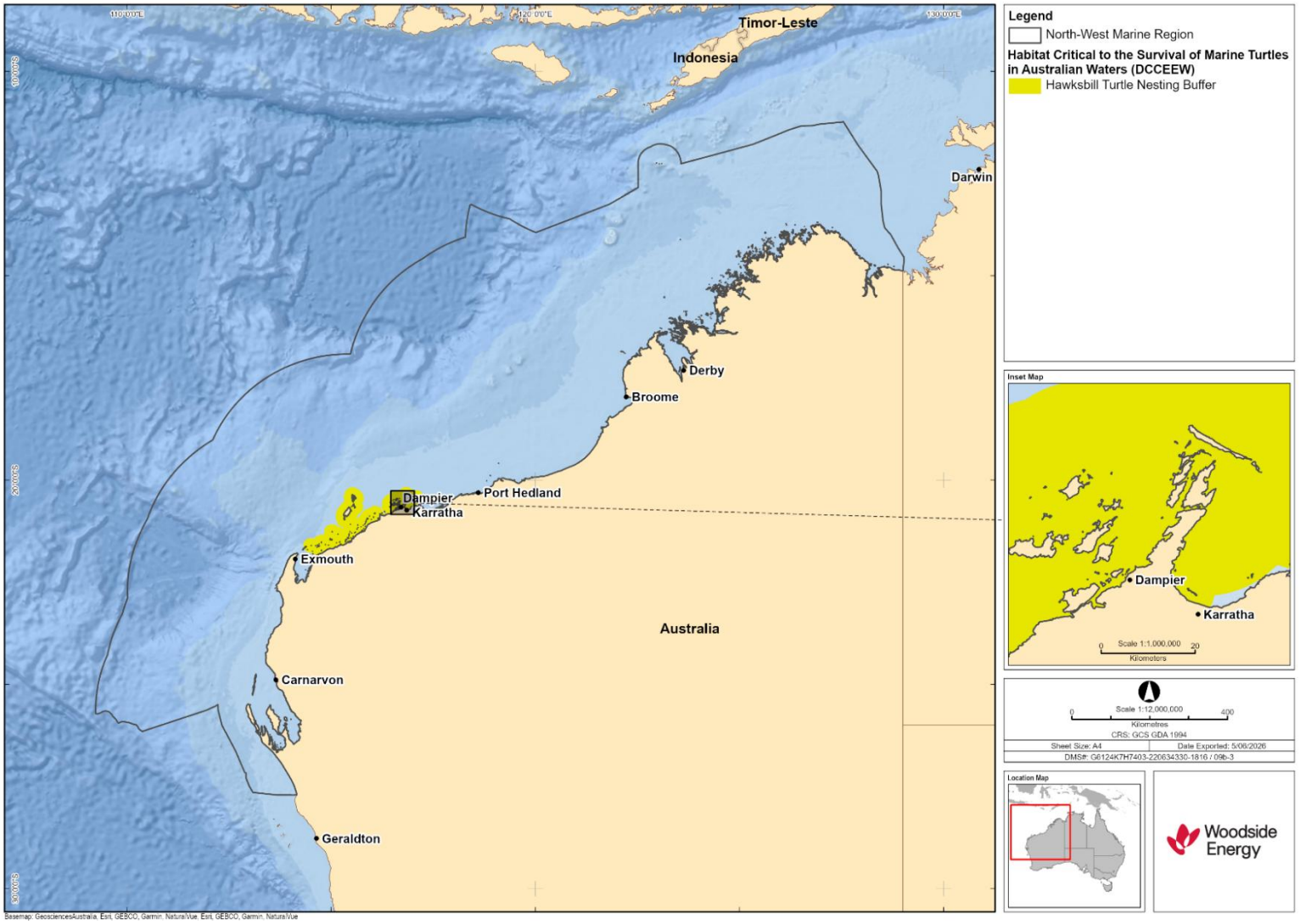


Figure 7-4: Hawksbill turtle habitat critical to survival (nesting beaches and internesting buffers) for the NWMR

Source: DCCEEW (2025b)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

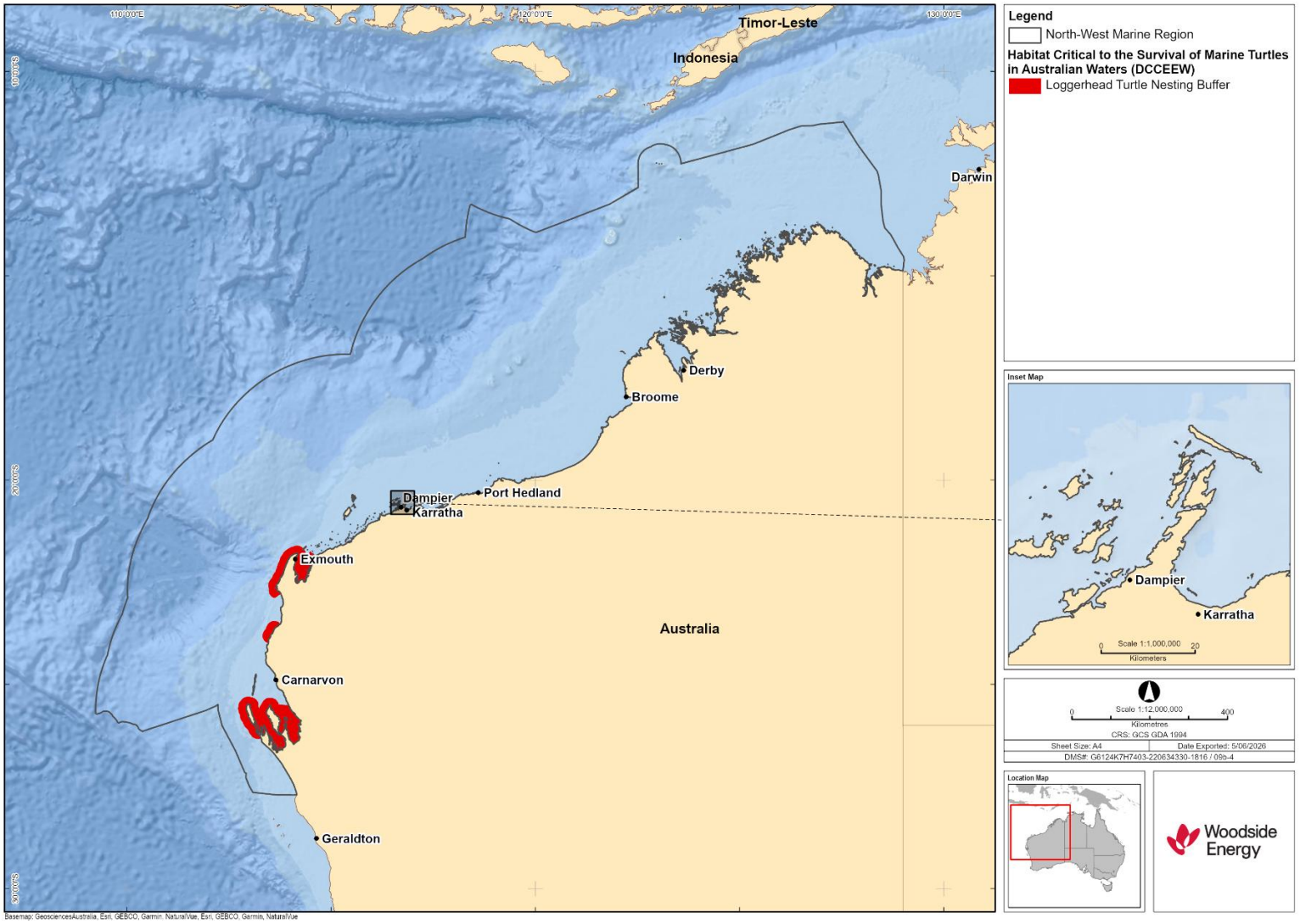


Figure 7-5: Loggerhead turtle habitat critical to survival (nesting beaches and internesting buffers) for the NWMR

Source: DCCEEW (2025b)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

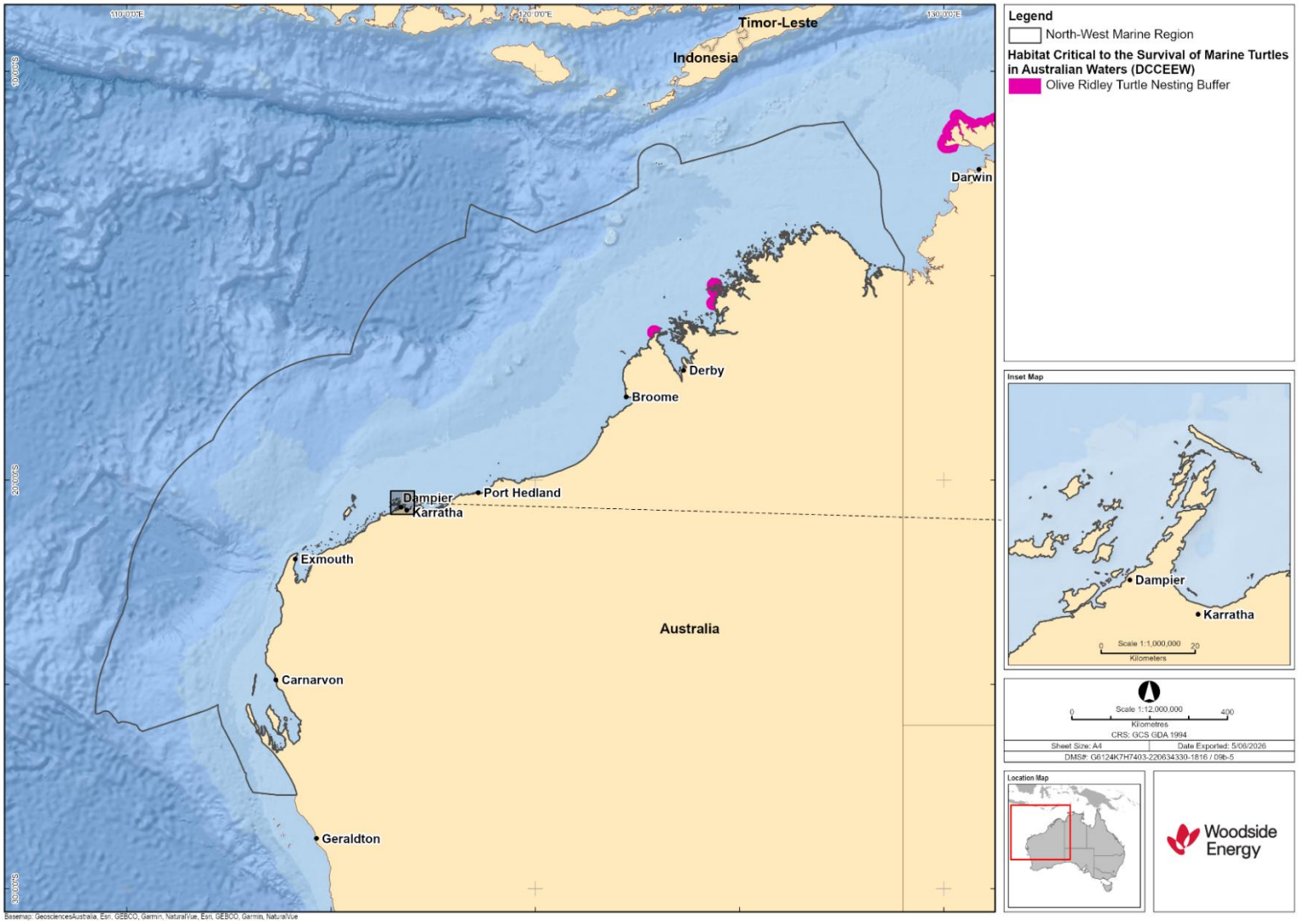


Figure 7-6: Olive ridley turtle habitat critical to survival (nesting beaches and internesting buffers) for the NWMR

Source: DCCEEW (2025b)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

7.2.1.2 Marine turtle biologically important areas

A review of the Australian Marine Spatial Information System (Geoscience Australia 2026), the Marine Bioregional Plan for the North-west Marine Region (DSEWPaC 2012a) and the Recovery Plan for Marine Turtles in Australia (Commonwealth of Australia 2017) identified BIAs for five of the marine turtle species that occur within the NWMR. Table 7-4 describes these.

Table 7-4: Marine turtle BIAs within the NWMR

Species	Woodside activity area			BIAs				
	Browse	***NWS/ Scarborough***	***North West Cape***	***Mating***	***Nesting***	***Internesting***	***Foraging***	***Migration[9]***
Green turtle	✓	✓	✓	• Barrow Island • Montebello Islands (including Hermite Island, North West Island, Trimouille Island) • Dampier Archipelago (islands to the west of the Burrup Peninsula) • Ashmore Reef	• Barrow Island • Montebello Islands (including Hermite Island, North West Island, Trimouille Island) • Middle Island • Dampier Archipelago (islands west of the Burrup Peninsula) • North and South Muiron Islands • North West Cape • Delambre Island • Legendre Island and Huay Island • Lacepede Islands • Scott Reef – Sandy Island • Ashmore Reef • Cartier Island	Locations of 20 km internesting buffer BIAs for green turtles are described in the Marine Bioregional Plan for the North-west Marine Region (DSEWPaC 2012a). Year-round and seasonal 20 km internesting buffer BIAs are around nesting sites. Habitat critical to survival internesting buffer (Table 7-3) is the legally recognised area of protection under the EPBC Act.	• Inshore areas of Barrow Island • Montgomery Reef • Montebello Islands • Dixon Island • Ashmore Reef • Seringapatam Reef and Scott Reef • De Grey River area to Bedout Island • Around the islands between Cape Preston and Onslow and inshore of Barrow Island • Dampier Archipelago (islands west of the Burrup Peninsula) • Legendre Island and Huay Island • Delambre Island	Migration corridor at Dampier Archipelago (islands west of the Burrup Peninsula). Green turtles can migrate more than 2,600 km between their feeding and nesting grounds. Individual turtles foraging in the same area do not necessarily take the same migration route (Limpus *et al.* 1992). Ferreira *et al.* (2021) broadly identified two migratory corridors, one used by the NWS Pilbara Stock and another used by the NWS Kimberley Stock and the G-ScBr stock, with some overlap at the northern and southern extents respectively. This study showed the foraging

[9] Migration BIA included in Australian Marine Spatial Information System (Geoscience Australia 2026). General information for migratory behaviours also provided.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species	Woodside activity area			BIAs				
	Browse	*NWS/ Scarborough*	*North West Cape*	*Mating*	*Nesting*	*Internesting*	*Foraging*	*Migration*[9]
					• Cassini Island		• Joseph Bonaparte Gulf • In waters adjacent to James Price Point	distribution of green turtles from two stocks in WA expands throughout north-west and northern Australian coastal waters, including the NT and Queensland.
Hawksbill turtle	✓	✓	✓	• Montebello Islands Barrow Island • Lowendal Island Group • Dampier Archipelago (to the west of the Burrup Peninsula)	• Lowendal Island Group • Montebello Islands (including Ah Chong and South East islands) • Rosemary Island • Delambre Island • Barrow Island • Varanus Island and Thevenard Island • Dampier Archipelago (west of the Burrup Peninsula) • Ningaloo Coast and Jurabi Coast • Sandy Islet at Scott Reef	Locations of 20 km internesting buffer BIAs for hawksbill turtles are described in the Marine Bioregional Plan for the North-west Marine Region (DSEWPaC 2012a) and Recovery Plan for Marine Turtles in Australia 2017–2027 (Commonwealth of Australia 2017). Year-round and seasonal 20 km internesting buffer BIAs are around nesting sites. Habitat critical to survival internesting buffer (Table 7-3) is the legally recognised area of protection under the EPBC Act.	Recent data shows foraging ranges from north of Exmouth Gulf to offshore Broome (Fossette *et al.* 2021a). Known foraging BIAs in the NWMR include: • Lowendal Island group • Delambre Island • around Dixon Island • in the De Grey River area to Bedout Island • around the islands between Cape Preston and Onslow and inshore of Barrow Island • around the islands of the Dampier Archipelago (west of the Burrup Peninsula)	Migration corridor at Dampier Archipelago (islands west of the Burrup Peninsula). Individuals may migrate up to 2,400 km between their nesting and foraging grounds (DSEWPaC 2012a), although reproductive migration distances over 1,000 km appear less common in hawksbill turtles than other species (Fossette *et al.* 2021a). Recent satellite tracking data show turtles migrating from WA rookeries remained on the continental shelf, with most following the coastline and dispersing in a north-easterly direction, with some turtles from the Montebello Archipelago and

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species	Woodside activity area			BIAs				
	Browse	***NWS/ Scarborough***	***North West Cape***	***Mating***	***Nesting***	***Internesting***	***Foraging***	***Migration[9]***
							• Ashmore Reef	Lowendal Islands moving in a south-westerly direction and some stopping around Barrow Island. A migratory corridor was observed from Cape Preston to De Grey River (Fossette *et al.* 2021a).
Flatback turtle	✓	✓	-	• Lacepede Islands • Montebello Islands • Dampier Archipelago (islands to the West of the Burrup Peninsula) • Mating at Barrow Island	Flatback turtles nest exclusively in the northern regions of Australia, between latitudes of 22°S in the west and 25°S in the east. There are seven genetically distinct stocks, identified across 17 rookeries, with Delambre Island representing a key nesting site in the NWS genetic stock (Whiting *et al.* 2025). Known nesting BIA locations in the NWMR include: • Thevenard Island – South Coast (summer) high use on beaches with high dune height	Locations of 60 km internesting buffer BIAs for flatback turtles are described in the Recovery Plan for Marine Turtles in Australia 2017–2027 (Commonwealth of Australia 2017). Year-round and seasonal internesting buffer BIAs of 60 km are around nesting sites, extending 20 km further than the habitat critical to survival. Habitat critical to survival internesting buffer (60 km, Table 7-3) is the legally recognised area of protection under the EPBC Act. Flatback turtles preferentially use shallow continental	• Islands between Cape Preston and Onslow and inshore of Barrow Island. • Montebello Islands • Dampier Archipelago (islands west of the Burrup Peninsula) • Legendre Island and Huay Island • Delambre Island • Joseph Bonaparte Depression • In waters adjacent to James Price Point Bathymetry and distance from the coast are key environmental features that influence the suitability of flatback	Migration corridor at Dampier Archipelago (islands west of the Burrup Peninsula). The flatback turtle is a resident to Australian waters and spends 99% of its time within the Australian EEZ. A migratory corridor connects the coastlines between the Kimberley and Pilbara (Peel *et al.* 2024). There is evidence some flatback turtles migrate long distances between breeding and feeding grounds (Limpus *et al.* 1983). However, flatback turtles generally do not have a pelagic phase to their life cycle. Instead, hatchlings grow to maturity in

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species	Woodside activity area			BIAs				
	Browse	*NWS/ Scarborough*	*North West Cape*	*Mating*	*Nesting*	*Internesting*	*Foraging*	*Migration*[9]
					• Barrow Island • Montebello Islands (including Hermite Island, North West Island, Trimouille Island) • Dampier Archipelago (islands west of the Burrup Peninsula) • Delambre Island • Legendre Island and Huay Island • Dixon Island • Intercourse Island • West of Cape Lambert • Various locations along the Pilbara coast between Karratha and Broome, including Cape Thouin, Mundabullangana, Cowrie Beach, Port Hedland (Cemetery Beach, Paradise Beach) and Eighty Mile Beach • Lacepede Islands	shelf waters near nesting beaches during the internesting period, with habitat suitability strongly influenced by bathymetry, proximity to the coastline and sea surface temperature. Tracking data from multiple rookeries show internesting individuals remain in relatively shallow waters near the shore in depths of generally <44 m, while typically averaging under 10 m. Internesting flatbacks rarely exceed 28 km from the coastline and usually remain within about 6 km. Habitat suitability modelling by *Whittock et al*. (2016) indicates internesting areas are spatially constrained, nearshore and associated with relatively warm shelf waters (about 27 to 30°C), rather than being widely dispersed offshore.	turtle foraging and behaviours in the NWMR (Hounslow *et al.* 2025). Suitable habitats for flatback foraging include soft-sediment habitats containing a plethora of invertebrates, sea pens and sea cucumbers, which are their typical diet. These habitats are usually in intertidal and nearshore areas about 5 to 10 km from the coast in areas characterised by shallow bathymetry (<15 m depth). The probability of suitable foraging habitats for flatbacks declines in depths >15 m and >10 km from the coastline (Hounslow *et al.* 2025).	shallow coastal waters thought to be near their natal beaches (DSEWPaC 2012a). A study predicting the dispersal of flatback turtle hatchlings found core areas were predominantly on the continental shelf (<200 m depth contour) during all dispersal phases, indicating flatback turtles remain in neritic areas (Wilson *et al.* 2023). Flatback turtles tagged at Roebuck Bay showed high residency, using the area year round as a foraging site, with movement patterns strongly influenced by tides rather than long-distance displacement (Hounslow *et al.* 2025). Flatback turtles are endemic to northern Australia and have a largely cryptic life history, from entering the ocean immediately after hatching until the turtles return to nest as adults. Therefore, there

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species	Woodside activity area			BIAs				
	Browse	***NWS/ Scarborough***	***North West Cape***	***Mating***	***Nesting***	***Internesting***	***Foraging***	***Migration[9]***
								are knowledge gaps about juvenile demographics, growth, habitat use and migratory distribution (Whiting *et al.* 2025).
Loggerhead turtle	✓	✓	-	No mating BIA identified within the NWMR	• Dirk Hartog Island • Muiron Islands • Ningaloo and Jurabi coasts • Montebello Islands • Lowendal Island • Rosemary Island • Gnaraloo Station	Locations of 20 km internesting buffer BIAs for loggerhead turtles are described in the Marine Bioregional Plan for the North-west Marine Region (DSEWPaC 2012a) and the Recovery Plan for Marine Turtles in Australia 2017–2027 (Commonwealth of Australia 2017). Year-round and seasonal 20 km internesting buffer BIAs are around nesting sites. Habitat critical to survival internesting buffer (Table 7-3) is the legally recognised area of protection under the EPBC Act.	• De Grey River area to Bedout Island • Western Joseph Bonaparte Depression • Waters adjacent to James Price Point	No migration BIA identified within the NWMR. Adult loggerhead turtles dispersing from Dirk Hartog Island beaches (near Shark Bay) have remained within WA waters from southern WA to the Kimberley. Turtles dispersing from the North West Cape – Muiron Islands nesting area have ranged north as far as the Java Sea and the north-western Gulf of Carpentaria, and to south-west WA (DSEWPaC 2012a).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species	Woodside activity area			BIAs				
	Browse	***NWS/ Scarborough***	***North West Cape***	***Mating***	***Nesting***	***Internesting***	***Foraging***	***Migration[9]***
Olive ridley turtle	-	-	-	No mating BIA identified within the NWMR	No nesting BIA identified within the NWMR	No internesting BIA identified within the NWMR	Western Joseph Bonaparte Depression and Gulf	No migration BIA identified within the NWMR. Migration routes and distances between nesting beaches and foraging areas are not known for Australian olive ridley turtles.

Source: Geoscience Australia (2026)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

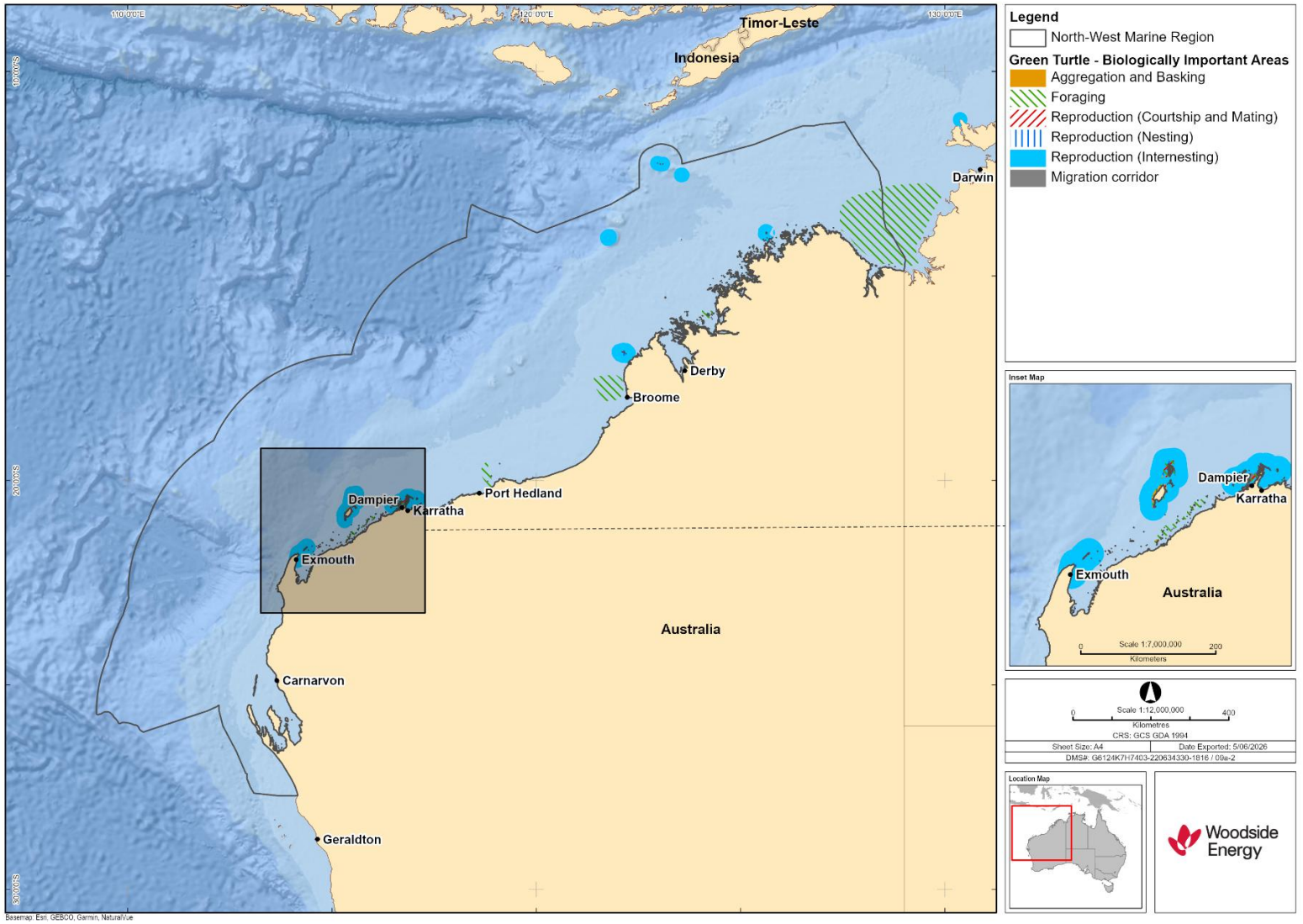


Figure 7-7: Green turtle BIAs within the NWMR

Source: DCCEEW (2025b)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

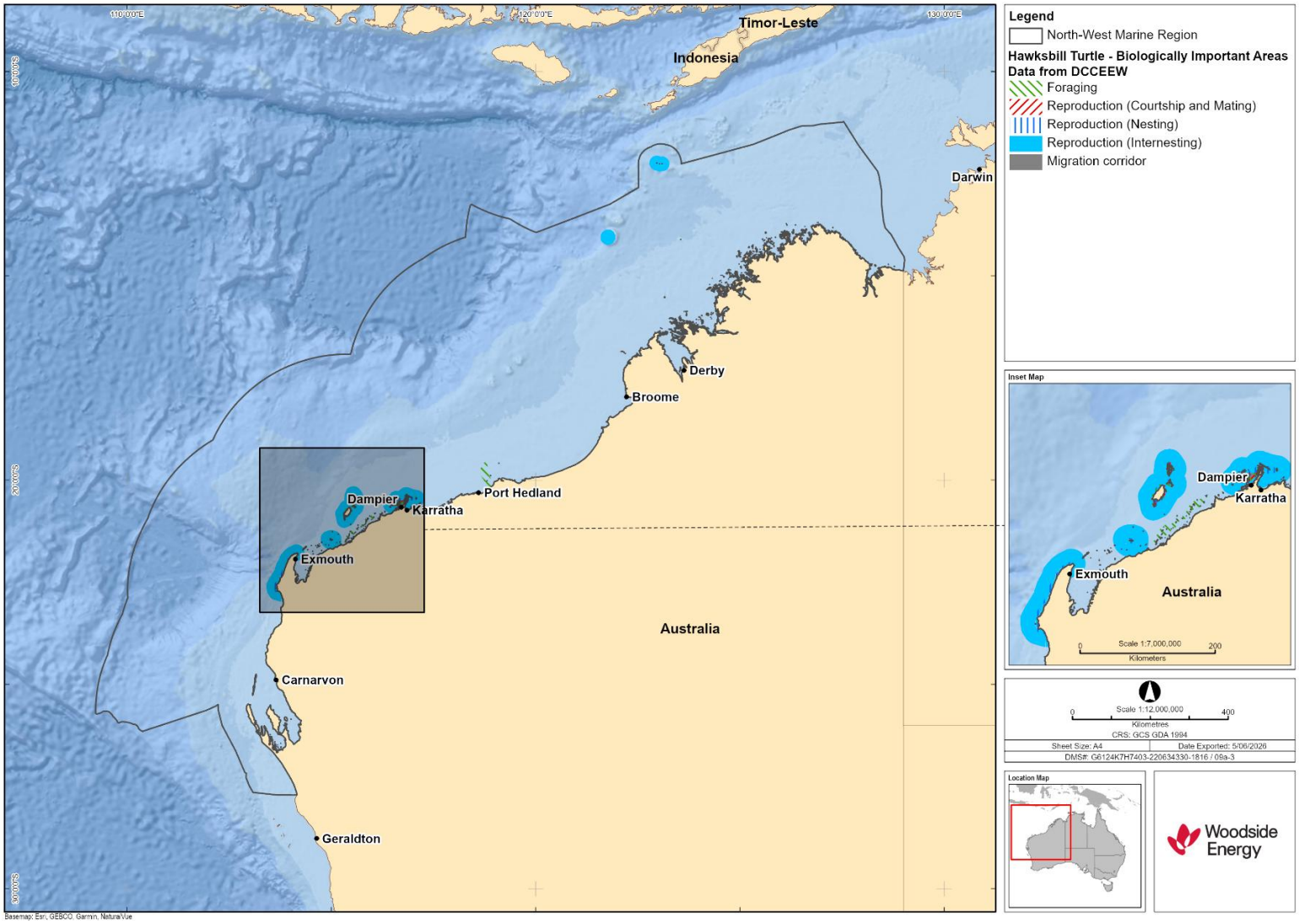


Figure 7-8: Hawksbill turtle BIAs within the NWMR

Source: DCCEEW (2025b)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

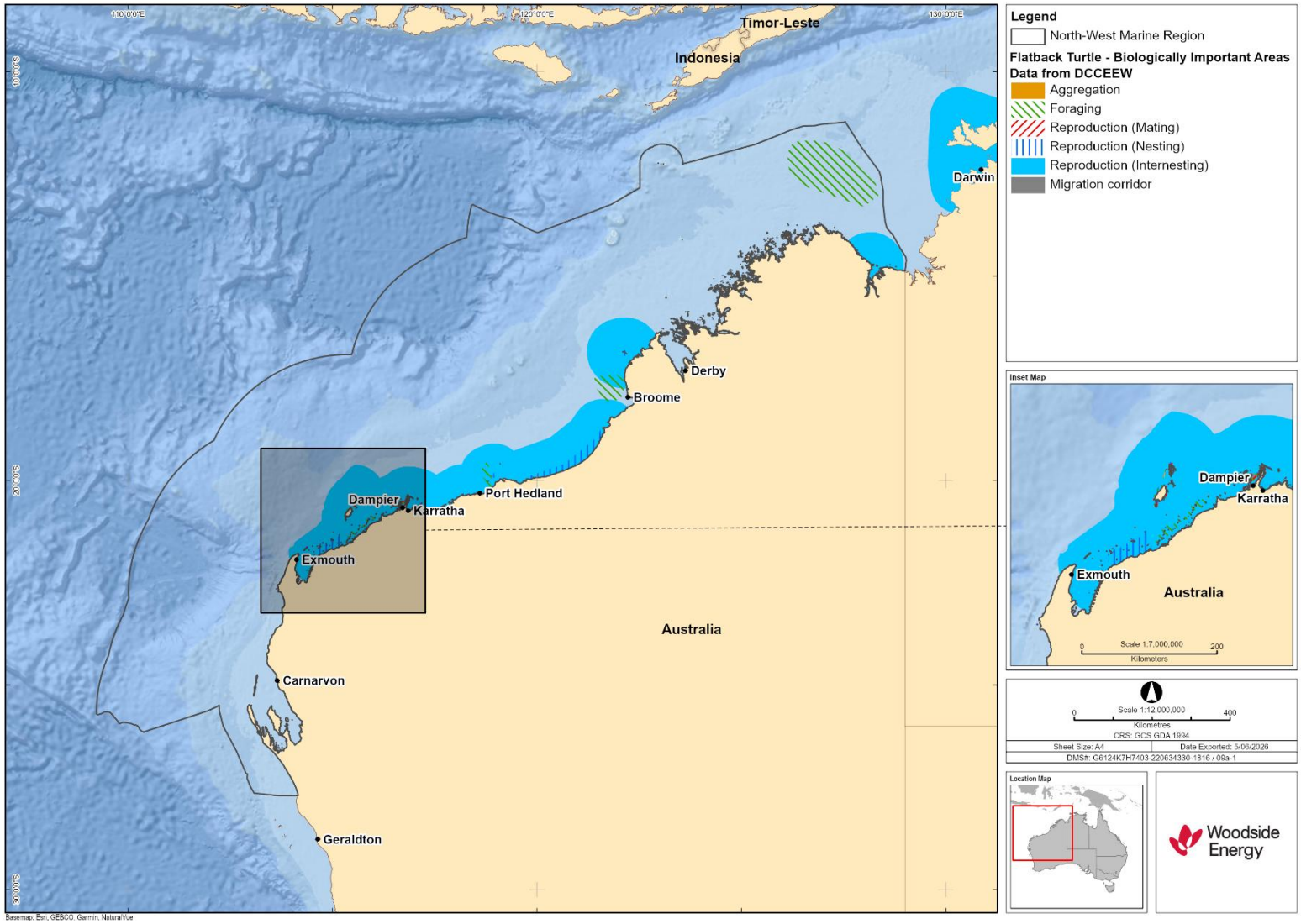


Figure 7-9: Flatback turtle BIAs within the NWMR

Source: DCCEEW (2025b)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

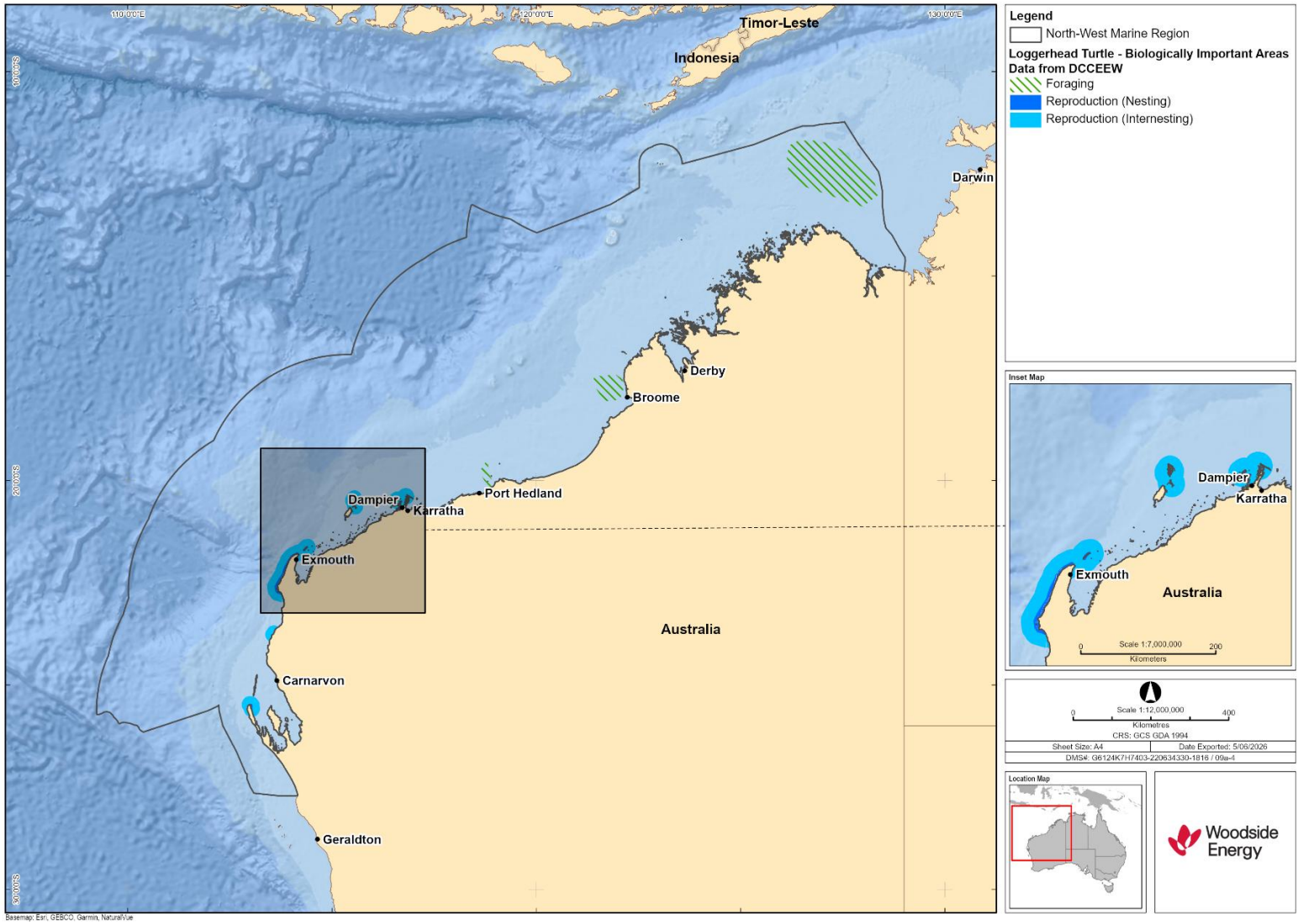


Figure 7-10: Loggerhead turtle BIAs within the NWMR

Source: DCCEEW (2025b)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

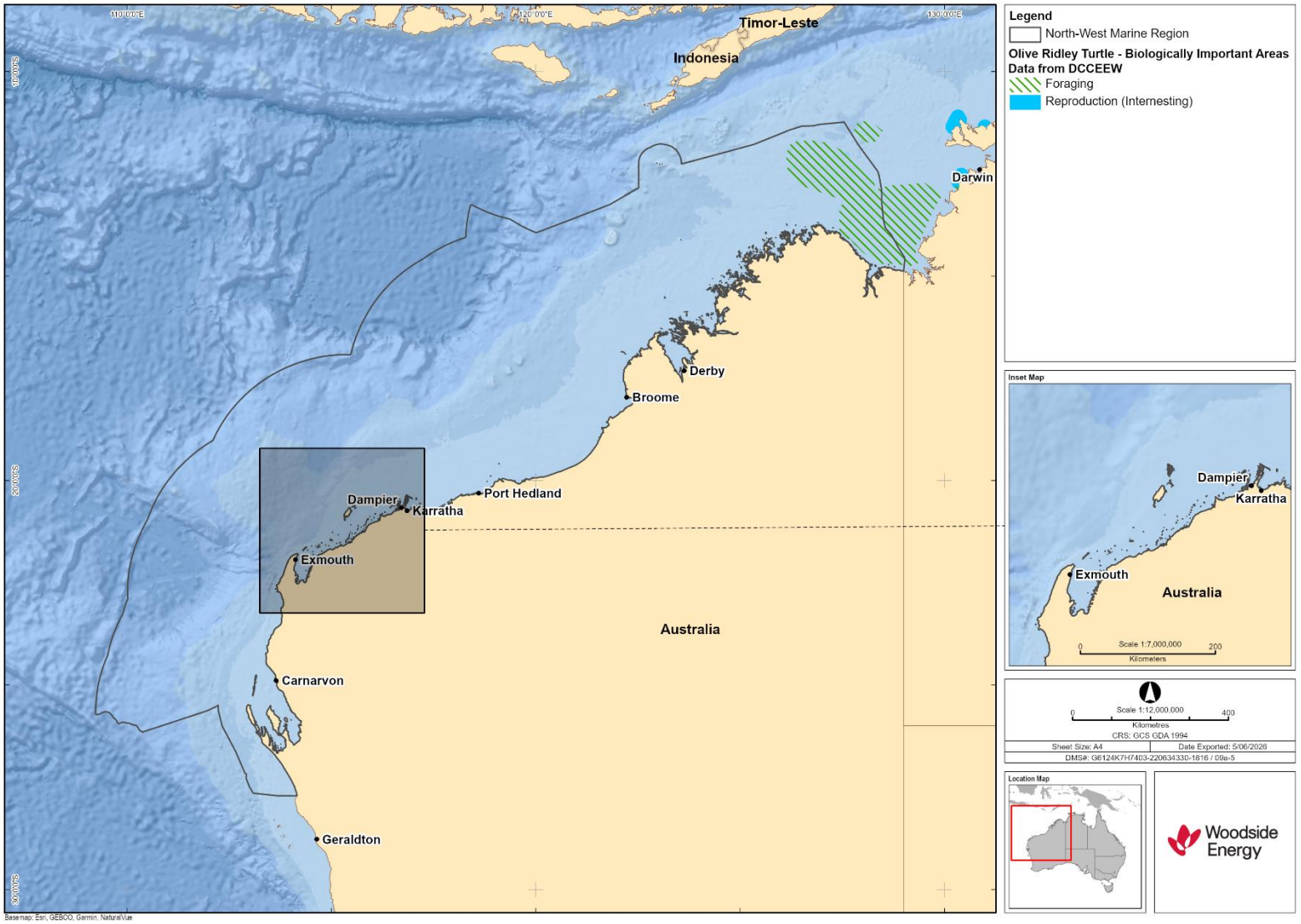


Figure 7-11: Olive ridley turtle BIAs within the NWMR

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

7.2.2 Sea snakes

Sea snakes are widely distributed in the NWMR and NMR, but less common in the SWMR. They occupy three broad habitat types: shallow water coral reef and seagrass habitats, deepwater soft bottom habitats away from reefs, and surface water pelagic habitats (Guinea 2007a).

The PMST report identified a total of three EPBC Act listed threatened sea snakes (Table 7-1) and a further 23 EPBC Act listed marine sea snake species within the NWMR (Appendix A). Of these species, Guinea (2007a) and Udyawer *et al.* (2016) have described four of these species as being endemic to reef habitats in the remote parts of the NWMR. These species include the:

- dusky sea snake (*Aipysurus fuscus*)
- large headed sea snake (*Hydrophis pacificus*)
- short-nosed sea snake (*Aipysurus apraefrontalis*)
- leaf-scaled sea snake (*Aipysurus foliosquama*).

The short-nosed sea snake, the leaf-scaled sea snake and the dusky sea snake are listed threatened species (Critically Endangered or Endangered) under the EPBC Act (see Table 7-1). Table 7-5 presents further information about their preferred habitat, diet and habitat location.

The Kimberley coast has the world's highest diversity of sea snakes, supporting over one third of all known species (Somaweera and Saunders 2015). There is currently limited knowledge about the ranges and distribution patterns of sea snake species in the NWMR, in addition to a lack of understanding about population status and threats. Recent findings of *A. apraefrontalis* and *A. foliosquama* in locations outside of their previously defined ranges have highlighted the lack of information about species distributions in the NWMR (Udyawer *et al.* 2016). Udyawer *et al.* (2020) used a correlative modelling approach to understand habitat associations and identify suitable habitats for five sea snake species (*A. apraefrontalis*, *A. foliosquama*, *A. fuscus*, *A. l. pooleorum* and *A. tenuis*). Species-specific habitat suitability was modelled across 804,244 km² of coastal waters along the NWS, and the resulting habitat suitability maps enabled the identification of key locations of suitable habitat for these five species (see Table 7-5).

No habitat critical to survival or BIAs for sea snake species have been identified in the NWMR. While the Ashmore Reef and Cartier Island AMPs have been recognised for their high diversity and density of sea snakes (DSEWPaC 2012a), surveys have revealed a steep decline in sea snake numbers at Ashmore Reef (Guinea 2007b; Lukoschek *et al.* 2013). Leaf-scaled and short-nosed sea snakes have been absent from surveys at Ashmore Reef since 2001, despite an increase in survey intensity (Guinea, 2006, 2007b; Guinea and Whiting 2005; Lukoschek *et al.* 2013). The reason for the decline is unknown.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 7-5: Information about threatened sea snake species within the NWMR

Species	Preferred habitat and diet	Habitat location
Short-nosed sea snake	Preferred habitat: Primarily on reef flats or in shallow waters of outer reef edges to depths of 10 m (Minton *et al.* 1975). Typically, movement is restricted to within 50 m of reef flat habitat (Guinea and Whiting 2005). Diet: Primarily fishes and eels.	The short-nosed sea snake has been recorded from Exmouth Gulf to the reefs of the Sahul Shelf, although most records come from Ashmore and Hibernia reefs (Guinea and Whiting 2005). Key locations of suitable habitat: Ashmore Reef, Exmouth Gulf and coral habitat fringing the Muiron Islands and the Montebello Islands (Udyawer *et al.* 2020).
Leaf-scaled sea snake	Preferred habitat: The leaf-scaled sea snake occurs in shallow protected areas of reef flats, typically in water depth less than 10 m. Diet: Primarily shallow water coral-associated wrasse, gudgeons, clinids and eels (McCosker 1975; Voris 1972; Voris and Voris 1983).	The leaf-scaled sea snake has only been recorded at Ashmore and Hibernia reefs (Guinea and Whiting 2005), indicating it has a very limited distribution. Key locations of suitable habitat: Ashmore Reef, Shark Bay, Exmouth Gulf, Barrow Island and Montebello Islands (Udyawer *et al.* 2020).
Dusky sea snake	Preferred habitat: The dusky sea snake is a reef specialist that is only known to occur on complex hard coral reefs and shoals, both emergent and subsurface. It has only been recorded at depths of 0 to 20 m but may occur in deeper areas with less survey effort (DCCEEW 2024m). Diet: Stomach content analyses have identified benthic gobies, wrasses and occasionally fish eggs (DCCEEW 2024m).	The dusky sea snake has been recorded sparsely and patchily from reefs and shoals at the outer margin and mid-shelf of the Australian continental shelf, specifically at the Scott Reef complex (Scott Reef, North Scott Reef and Sandy Islet) and nearby Seringapatam Reef, Heywood Shoal, and at Ashmore Reef, Cartier Island and Hibernia Reef. The dusky sea snake has not been detected at Ashmore Reef, Cartier Island or Hibernia Reef since the early 2000s. The species may occur undetected at mid-shelf shoals, which comprise the shallowest of sea mounts and banks that occur along a north-easterly crescent from south of Heywood Shoal, past Cartier Island, to Ashmore Reef (DCCEEW 2024m).

7.2.3 Crocodiles

The PMST report identified the salt-water crocodile (*Crocodylus porosus*) is listed as a migratory species under the EPBC Act within the NWMR (Table 7-1). This species is usually found in Australian coastal waters, including estuaries, lakes, inland swamps and marshes, and have been recorded persisting in freshwater bodies hundreds of kilometres inland. In the NWMR, the species is found in most major river systems of the Kimberley, including the Ord, Patrick, Forrest, Durack, King, Pentecost, Prince Regent, Lawley, Mitchell, Hunter, Roe and Glenelg rivers. The largest populations occur in the rivers draining into the Cambridge Gulf and the Prince Regent River and Roe River systems. There have also been isolated records in rivers of the Pilbara region, around Derby near Broome and as far south as Carnarvon on the mid-west coast (DoE 2026b).

The preferred nesting habitat of the salt-water crocodile includes elevated and isolated freshwater swamps with no tidal movements, with vegetation and floating rafts of vegetation for nesting. Nesting usually occurs between November and May, with a peak between January and February (DoE 2026b). No BIAs for salt-water crocodile have been identified in the NWMR.

7.2.4 Water monitors

The PMST report identified a total of two EPBC Act listed threatened water monitors within the NWMR (Table 7-1) that inhabit coastal areas. Table 7-6 describes these.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 7-6: Water monitors identified within the NWMR

Species	Key information
Mertens' water monitor	Mertens' water monitor (*Varanus mertensi*) is listed as endangered under the EPBC Act. This species occurs sparsely across the tropical areas of the Kimberley extending to the NT, inhabiting coastal areas and near coastal islands. Extensive surveys in the Kimberley found the Mertens' water monitor on 11 of the islands off the coast of the Kimberley and NT. These islands represent <1% of the modelled distribution of this species (DCCEEW 2023i). This species is highly aquatic and seldom ventures more than 5 to 10 m from the water's edge, except when travelling between core aquatic sites. It inhabits swamps, creeks, floodplains, lagoons, swamps and perennial and semi-perennial pools, and is known to bask on structures in and surrounding water bodies (DCCEEW 2023i). Habitat critical to the survival of the species has not been mapped but includes all areas where the species persists after cane toads have established and areas within known distribution where habitat occurs or can be restored (terrestrial) (DCCEEW 2023i). No BIAs for Mertens' water monitor have been identified in the NWMR.
Mitchell's water monitor	Mitchell's water monitor (*Varanus mitchelli*) is listed as critically endangered under the EPBC Act. The species is known to occur in wetlands and coastal floodplains in the northern extent of the NWMR, with distribution from Yampi Sound Training Area, across the Kimberley and into the Top End of the NT and far northwest Queensland (DCCEEW 2023c). The species inhabits freshwater and saline wetlands that range from seasonal gorges in upper catchments to large rivers and coastal floodplains. It has been recorded in rivers, creeks, riffle zones, gorges, springs, lagoons, swamps, mangroves and foreshores (DCCEEW 2023c). Habitat critical to the survival of the species has not been mapped but includes all areas where the species persists after cane toads have established and areas within known distribution where habitat occurs or can be restored (terrestrial) (DCCEEW 2023c). No BIAs for Mitchell's water monitor have been identified in the NWMR.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

8. MARINE MAMMALS

8.1 Regional context

The offshore waters of WA provide important habitat for marine mammals, including areas that support key life stages such as breeding, calving, foraging and migration. As described in the Marine Bioregional Plan for the North-west Marine Region (DSEWPaC 2012a), of the 45 species of cetacean occurring in Australian waters, 21 occur regularly in the waters of the NWMR and a further 12 may occur infrequently. In the waters of the NMR, nine of the 45 cetacean species occur regularly and a further 15 may occur infrequently (DSEWPaC 2012c). In the SWMR, 33 species of cetaceans occur frequently, with a further ten that may occur infrequently in the region (DSEWPaC 2012b).

The NWMR is an important migratory pathway between feeding grounds in the Southern Ocean and breeding grounds in tropical waters of the NWMR for several cetacean species (DSEWPaC 2012a). Numerous large mysticetes (baleen whale) species, particularly the humpback whale, are known to use the region for migration and calving, and the pygmy blue whale is known to use the region for foraging and as a migration pathway between southern feeding and northern breeding and feeding areas north of the equator. The waters of the NWMR and the NMR also support globally significant dugong populations (DSEWPaC 2012a; 2012c).

The SWMR is an important area for numerous marine mammal species, including pinniped species, large, migratory whale species and resident coastal whale and dolphin species (DSEWPaC 2012b).

The NMR and adjacent areas are important for several species of cetaceans, particularly inshore dolphin species. These species, and other marine mammals, rely on the waters of the NMR and adjacent coastal areas for breeding and foraging (DSEWPaC 2012c).

The PMST report (Appendix A) identified a total of 15 EPBC Act listed threatened or migratory marine mammal species, including cetaceans, one dugong and one pinniped, within the NWMR (Table 8-1). An additional 22 EPBC Act listed cetacean species that do not have a threatened or migratory status were recorded within the NWMR. Appendix A provides a full list.

The PMST report identified a total of 12 EPBC Act listed threatened or migratory marine mammal species, including cetaceans and one dugong, within the NMR. An additional 15 EPBC Act listed cetacean species that do not have a threatened or migratory status were recorded within the NMR. Appendix A provides a full list.

The PMST report identified a total of 12 EPBC Act listed threatened or migratory cetaceans and one pinniped species within the SWMR. An additional 29 EPBC Act listed cetacean species, and one pinniped species, that do not have a threatened or migratory status were recorded within the SWMR. Appendix A provides a full list.

8.2 Marine mammals in the NWMR

Table 8-1 outlines the threatened and migratory marine mammal species identified by the PMST that may, are likely or are known to occur within the NWMR, with their conservation status and relevant recovery plans and conservation advice.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 8-1: Threatened and migratory marine mammal species identified by the EPBC Act PMST that may, likely or are known to occur within the NWMR

Species name	Common name	EPBC Act (Commonwealth) (as per PMST report Appendix A)			BC Act (WA)[10]	IUCN Red List (non-statutory)[11]	EPBC Act Part 13 statutory instrument
		Threatened status	*Migratory status*	*Listed*	*Conservation status*	*Global status*	
Cetaceans – Mysticeti							
Balaenoptera borealis	Sei whale	Vulnerable	Migratory	Cetacean	Endangered	Endangered	Conservation Advice *Balaenoptera borealis* sei whale (Threatened Species Scientific Committee 2015a)
Balaenoptera physalus	Fin whale	Vulnerable	Migratory	Cetacean	Endangered	Vulnerable	Conservation Advice *Balaenoptera physalus* fin whale (Threatened Species Scientific Committee 2015c)
Balaenoptera edeni	Bryde's whale	N/A	Migratory	Cetacean	Migratory	Least Concern	N/A
Balaenoptera bonaerensis	Antarctic minke whale	N/A	Migratory	Cetacean	Migratory	Near Threatened	N/A
Balaenoptera musculus	Blue whale	Endangered	Migratory	Cetacean	Endangered	Endangered	Conservation Management Plan for the Blue Whale – A Recovery Plan under the *Environment Protection and Biodiversity Conservation Act 1999* 2015–2025 (Commonwealth of Australia 2015a)
Balaenoptera omurai	Omura's whale	N/A	Migratory	Cetacean	N/A	Data Deficient	N/A

[10] Threatened and Priority Fauna List – July 2025 - https://www.dbca.wa.gov.au/management/threatened-species-and-communities (accessed on 21/05/2026).
[11] IUCN, 2026. The IUCN Red List of Threatened Species. Version 2025-2. https://www.iucnredlist.org (accessed on 21/05/2026).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species name	Common name	EPBC Act (Commonwealth) (as per PMST report Appendix A)			BC Act (WA)[10]	IUCN Red List (non-statutory)[11]	EPBC Act Part 13 statutory instrument
		Threatened status	***Migratory status***	***Listed***	***Conservation status***	***Global status***	
Eubalaena australis	Southern right whale	Endangered	Migratory	Cetacean	Vulnerable	Least Concern	National Recovery Plan for the Southern Right Whale *Eubalaena australis* (DCCEEW 2024a)
Megaptera novaeangliae	Humpback whale	N/A	Migratory	Cetacean	Conservation dependent	Least Concern	Listing Advice *Megaptera novaeangliae* Humpback whale (*DAWE 2022*)
Cetaceans – Odontoceti							
Physeter macrocephalus	Sperm whale	N/A	Migratory	Cetacean	Vulnerable	Vulnerable	N/A
Orcinus orca	Killer whale (orca)	N/A	Migratory	Cetacean	Migratory	Data Deficient	N/A
Orcaella heinsohni	Australian snubfin dolphin	Vulnerable	Migratory	Cetacean	Priority	Vulnerable	Conservation Advice for *Orcaella heinsohni* (Australian snubfin dolphin) (DCCEEW 2025d)
Sousa chinensis	Indo-Pacific humpback dolphin (Australian humpback dolphin)	Vulnerable	Migratory	Cetacean	Priority	Vulnerable	Conservation Advice for *Sousa sahulensis* (Australian humpback dolphin) (DCCEEW 2025e)
Tursiops aduncus	Indo-Pacific/ Indian Ocean spotted bottlenose dolphin (Arafura/ Timor Sea populations)	N/A	Migratory	Cetacean	N/A	N/A	N/A
Sirenians and pinnipeds							
Dugong dugon	Dugong	N/A	Migratory	Marine	Migratory	Vulnerable	N/A

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species name	Common name	EPBC Act (Commonwealth) (as per PMST report Appendix A)			BC Act (WA)[10]	IUCN Red List (non-statutory)[11]	EPBC Act Part 13 statutory instrument
		Threatened status	***Migratory status***	***Listed***	***Conservation status***	***Global status***	
Neophoca cinerea	Australian sea lion	Endangered	N/A	Marine	Endangered	Endangered	Recovery Plan for the Australian Sea Lion (*Neophoca cinerea*) 2013 (DSEWPaC 2013a) Conservation Advice *Neophoca cinerea* Australian Sea Lion (Threatened Species Scientific Committee 2020) (in effect under the EPBC Act from 23 December 2020)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

8.2.1 Cetaceans

Cetaceans are generally widely distributed and highly mobile. In general, distribution patterns reflect seasonal feeding and breeding areas, characterised by high productivity, and migration routes associated with reproductive patterns. The NWMR is an important migratory pathway between feeding grounds in the Southern Ocean and breeding grounds in tropical waters for several cetacean species (DSEWPaC 2012a).

The PMST report identified 35 EPBC Act listed cetacean species as potentially occurring or having habitat within the NWMR (Appendix A). Of those, 13 cetacean species are listed as threatened or migratory (Table 8-1), including baleen whales, toothed whales and dolphins that occur within the NWMR.

Table 8-2: Information about the threatened/migratory cetacean species within the NWMR

Species	Key information
Baleen whales (Mysticeti) – low frequency hearing	
Humpback whale	In Australian waters, two genetically distinct populations of humpback whales migrate annually along the west (Group IV/D) and east (Group V) coasts between May and November (Jenner *et al.* 2001), The population of humpback whales (*Megaptera novaeangliae*) known as Group IV/D migrate annually from Antarctic feeding grounds, passing along the coast of WA to warm tropical waters, including the Kimberley, North West Cape and Exmouth Gulf, for breeding and calving (Russell *et al.* 2024). The biannual migration of humpback whales through the NWMR occurs in winter (June to August) for northbound migrating whales and southbound in early spring (September to November). Population data for the WA subpopulation is considerably variable (DAWE 2022). The population has been increasing in size at a rate of about 10% per annum since whaling ceased in WA waters by 1963 (Thums *et al.* 2018) and population numbers have increased from about 2,000 to 3,000 individuals in 1991 to between 19,200 and 33,850 individuals in 2008 (Bannister and Hedley 2001; Bejder *et al.* 2019; Hedley *et al.* 2011). Aerial surveys off the WA coast between 2000 and 2008 produced a population estimate for Group IV of 26,100 individuals (Salgado Kent *et al.* 2012) and the predicted increasing trend in abundance predicted by modelling (Thums *et al.* 2018). The International Whaling Commission (IWC) estimated that in 2012 the WA subpopulation had recovered to 90% (74 to 98% probability interval) of its pre-whaling levels and projected that by 2020 it would have reached 98% (88 to 100% probability interval) (IWC 2015, cited in DAWE 2022). Due to the unprecedented population recovery, the humpback whale was removed from the EPBC Act threatened species list as it was deemed no longer eligible for inclusion (*DAWE 20*22) after a previous listing as vulnerable for many decades. The Group IV population migrates northward from their Antarctic feeding grounds around May each year, reaching the NWMR around early June. The southward migration subsequently starts in mid-September, after time for breeding and calving (typically within August and September) (Threatened Species Scientific Committee 2015b). Within the NWMR are key calving areas between Broome and the northern end of Camden Sound, and resting areas in the southern Kimberley region, Exmouth Gulf and Shark Bay. High numbers of humpback whales are observed in Camden Sound and Pender Bay from June to September each year (Threatened Species Scientific Committee 2015b) and as far south as Gourdon Bay in the Kimberley (Thums *et al*. 2018). There are reports of neonates present further south, suggesting the calving areas may be poorly defined, expanding or returning to pre-whaling patterns as the population recovers. Aerial photogrammetric surveys in 2013 and 2015 recorded large numbers of humpback whale calves along the North West Cape, with estimated minimum relative calf abundance of 463 to 603 in 2013 and 557 to 725 in 2015 (Irvine *et al.* 2018). Most calves sighted in both years (85% in 2013; 94% in 2015) were neonates, and these observations indicate a minimum of about 20% of the expected number of calves of this population are born near or south of North West Cape. Thus, the calving grounds for the Group IV population extend south from Camden Sound to at least North West Cape, 1,000 km south-west of the currently recognised calving area (Irvine *et al.* 2017) and further south, as reported for Geographe Bay and Flinders Bay (in July and August) in south-west WA (Jolliffe *et al.* 2024). Table 10-1 presents the seasonal presence of humpback whales. Migration, breeding and calving BIAs for the humpback whale within the NWMR are presented in Table 8-3 and Figure 8-2.
Blue whale	There are two recognised subspecies of blue whale in the southern hemisphere, both of which are recorded in Australian waters. These are the southern (or 'true') blue whale (*Balaenoptera musculus*) and the 'pygmy' blue whale (*Balaenoptera musculus brevicauda*) (Commonwealth of Australia 2015a). In general, southern blue whales occur in waters south of 60°S and pygmy blue whales occur in waters north of 55°S (as in, not in Antarctic waters). On this basis, it is reasonably assumed all blue whales sighted in the NWMR are likely to be pygmy blue whales.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species	Key information
	The migratory population, known as the East Indian Ocean pygmy blue whale population, migrates biannually through the NWMR. This population is seasonally distributed from Indonesia (a potential breeding ground) to south-west of Australia and east across the Great Australian Bight and Bonney Upwelling to beyond the Bass Strait (Blue Planet Marine 2020; McCauley *et al.* 2018). Migration seems to be variable, with some individuals appearing as resident to areas of high productivity and others migrating across long distances (Commonwealth of Australia 2015a). McCauley *et al.* (2018) describe three migratory stages around Australia for the East Indian Ocean pygmy blue whale population, based on collated passive acoustic data: a 'southbound migratory stage' where whales travel southwards from Indonesian waters offshore from the WA coastline, mostly from October to December but possibly into January of the next year; a protracted 'southern Australian stage' (January to June) where animals spread across southern waters of the Indian Ocean and south of Australia (with movement as far south as the Southern Subtropical Convergence Zone); and a 'northbound migratory stage' (April to August) where animals travel north back to Indonesia again. Extensive passive acoustic monitoring throughout the NWMR indicates migratory timing and distribution of pygmy blue whales (noting this survey method detects vocalising whales): • Acoustic monitoring by McCauley and Jenner (2010) in the Exmouth and northern Montebello Islands region identified a peak period in the northern migration of pygmy blue whales from April to August, and from November through to late December during the southern migration. • McCauley (2011b) recorded northbound migration between mid-April and early August and southbound migration between October and December and possibly into January for the Scott Reef area from 2006 to 2009, noting the absence of any southbound detection in 2007. • Noise loggers deployed in 2019 for a full year detected pygmy blue whales on their northern and southern migration. The noise loggers were at various locations about 40 to 50 km west of the activity area, and in about 1,300 m water depth. Many pygmy blue whales detected on their northern migration occurred from mid-April to the end of July, then again on their southern migration in November through to early December (Chevron Australia 2019). • Gavrilov *et al.* (2018) analysed acoustic data from an array of ocean bottom seismographs (recorded in December 2014) to detect pygmy blue whales, and showed the southbound migration was over an extended offshore corridor traversing an area up to 400 km northwest of North West Cape. • A targeted passive acoustic monitoring program to detect southbound migratory pygmy blue whales ran from late October 2021 to March 2022 with a deepwater acoustic long-term observatory lander (900 m depth) west of the Montebello Trough and C-lander (190 m depth) at the outer edge of the NWS (Warren *et al.* 2023). Despite vessel noise dominating low frequencies throughout the recording periods at both locations, pygmy blue whale song vocalisations and D-calls were detected from the start of the recording period through November and early December 2021. • An offshore trial of distributed acoustic sensing using fibre optic cables (submarine telecommunications cable) to detect low-frequency whales recorded vocalising pygmy blue whales within 12 km detection range within a 50 km long area on the outer edge of NWS (Debens *et al.* 2024). Pygmy blue whale detections were made from mid-November (start of the trial) through to mid-December 2023 and a couple of detections in early January 2024. The first satellite tracks of pygmy blue whales for this population documented northbound migration between WA and Indonesia (Double *et al.* 2014) and identified areas where whales had highest occupancy, such as Perth Canyon, Naturalist Plateau, North West Cape region and the Banda Sea. Pygmy blue whales tagged in the Bonney Upwelling region of SA in 2015 showed most of the tagged whales remained in SA waters during the tracking period, but one documented the migration to Indonesia via WA waters and a return journey (albeit via intermittent data) of the southbound migration to the southern coast of WA (Möller *et al.* 2020). Thums *et al*. (2022) used passive acoustic monitoring and satellite telemetry data (a combination of existing data and tag tracking data collected for WA between 2019 and 2022) to assess the spatial extent of the distribution, migration and foraging areas for pygmy blue whales in the south-east Indian Ocean associated with the northbound migration. The tag tracking results highlighted extensive use of slope habitat off WA and minimal use of shelf habitat by pygmy blue whales. Additionally, pygmy blue whales off WA were mostly engaged in migration, with short periods of foraging. Whale density was highest in the southern part of the north-west Australian coast and whales were there between April and June and November and December. This study also compared foraging and migration areas to described areas of importance (BIAs); some aligned such as migratory BIA for northbound pygmy blue whales while some had less than 10% overlap (Thums *et al.* 2022). The timing, distribution and behaviour of southbound pygmy blue whales is less well documented with reference to satellite tagging. Limited tagged whale data from Double *et al.* (2014), Möller *et al.* (2020) and Thums *et al.* (2022) indicated connectivity of migrating pygmy blue whales

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species	Key information
	from SA through WA to and back from Indonesia. Mustika *et al.* (2024) satellite tag tracking data for two southbound pygmy blue whales (tagged in Indonesia) suggest varying migratory pathways from the Savu Sea to subantarctic waters, as well as extended time in the Southern Subtropical Convergence Zone. One tagged whale traversed a migratory path through offshore waters of WA towards Heard and McDonalds islands, covering almost 6,000 km and travelling at 100 km per day. In contrast, a second tagged whale took a migratory journey similar to the documented northbound route to the North West Cape before heading out into offshore waters and spending time in the Subantarctic Front before looping back up through the Perth Canyon, North West Cape and towards Savu Sea (Mustika *et al.* 2024). More recent tagging data from Thums *et al.* (2025) observed one whale travelling southwards rather than northwards to forage off the shelf edge in Bremer Bay in an area where another pygmy blue whales were observed to be foraging. This highlights that not all pygmy blue whales migrate northward each year. More recent combined satellite tracking and dive behaviour data provide evidence about the timing and location of pygmy blue whales foraging along their migration pathway (Thums *et al.* 2025). This study showed pygmy blue whales forage intermittently during migration, with foraging and lunge feeding occurring every one to ten days (Thums *et al.* 2025). Foraging behaviour was confirmed in several areas along WA, including Perth Canyon to offshore Jurien Bay, the shelf edge near Geraldton and the Abrolhos region, offshore Ningaloo to the Montebello Islands, and in smaller areas near Shark Bay, offshore Bremer Bay and in the Savu Sea (Indonesian waters). Opportunistic foraging also occurred in offshore waters between these areas during long-distance migration (Thums *et al.* 2025). In southern WA, foraging and lunge feeding dives were typically in deeper waters (>300 m), associated with slower horizontal movement and predominantly foraged during daylight hours. In contrast, whales foraging off Ningaloo, the Kimberley and in Indonesian waters exhibited shallower dives (about 100 m), faster travel rates, and weaker or absent diel patterns, consistent with more opportunistic feeding (Thums *et al.* 2025). There is currently insufficient data to accurately estimate population numbers of the pygmy blue whale in Australian waters (Blue Planet Marine 2020; Commonwealth of Australia 2015a). There are, however, two estimates of population size of the East Indian Ocean pygmy blue whale for WA. McCauley and Jenner (2010) calculated the population to be between 662 and 1,559 individuals in 2004 based on passive acoustics (whale vocalisations), and Jenner *et al.* (2008) (based on photographic mark and recapture) calculated between 712 and 1,754 individuals. Neither estimates accounted for animals travelling further west into the Indian Ocean (McCauley *et al.* 2018). More recent passive acoustic data estimate a 4.3% growth rate that applies to the proportion of East Indian Ocean pygmy blue whales seasonally present in offshore water off south-eastern Australia and may not reflect the full population but does imply an increase (McCauley *et al.* 2018). Thums *et al.* (2022) identified the most important foraging (and resting or breeding) areas from south to north as: (1) the Perth Canyon and vicinity; (2) the shelf edge off Geraldton; (3) the shelf edge from Ningaloo Reef to the Rowley Shoals (not continuous) and including a couple of small areas near the shelf edge off about 25ºS; and (4) the Banda Sea. The foraging BIA off the south-west of WA encompassed 83% of the most important areas in that region (Thums *et al.* 2022). Thums *et al.* (2025) validated these areas using direct dive data and further showed that additional, smaller and more opportunistic foraging areas can occur outside designated BIAs, particularly during migration. The pygmy blue whale is typically in the Perth Canyon from November to June, with an observed peak between March and May (Commonwealth of Australia 2015a; Blue Planet Marine 2020). The pygmy blue whale feeds in the Perth Canyon at depths of 200 to 300 m, which overlaps the typical distribution of krill (200 to 500 m water depth (day) to surface (night)) (McCauley *et al.* 2004; Commonwealth of Australia 2015a). Other possible feeding grounds off the WA coast include the wider area around the Perth Canyon, and possible foraging areas off the Ningaloo Coast and at Scott Reef (Commonwealth of Australia 2015a). Table 10-1 presents the seasonal presence of pygmy blue whales. Table 8-3 and Figure 8-4 present the location and type of BIAs for blue whales in the NWMR. There is a migratory BIA for the pygmy blue whale within WA waters, which extends for most of the length of the NWMR within offshore waters.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species	Key information
Bryde's whale	The Bryde's whale is the least migratory of its genus and is restricted geographically from the equator to about 40°N and S, or the 20° isotherm (Bannister *et al.* 1996). The species is known to exhibit inshore and offshore forms, varying in morphology and migratory behaviours in other international locations (Bannister *et al.* 1996). This appears to also be the case within Australian waters. Bryde's whales have been identified as occurring in oceanic and inshore waters, with the only key localities recognised in WA being in the Houtman Abrolhos Islands and north of Shark Bay (Bannister *et al.* 1996). Data suggest offshore whales migrate seasonally, heading towards warmer tropical waters during the winter, but information about migration within the NWMR is not well known (McCauley and Duncan 2011). McCauley (2011b) detected Bryde's whales using acoustic loggers deployed in and around Scott Reef from 2006 to 2009. Other acoustic logger data of Bryde's whale vocalisations recorded between Ningaloo and north of Darwin showed no apparent trends or seasonality (McCauley 2011a). There are no identified BIAs for this species in the NWMR.
Southern right whale	The southern right whale occurs primarily in waters between about 20°S and 60°S and moves from high-latitude feeding grounds in summer to warmer, low-latitude coastal locations in winter (Bannister *et al.* 1996). Two populations of southern right whale occur in Australian waters: the western and eastern (DCCEEW 2024a). Southern right whales in Australian waters predominantly occur in aggregations in coastal water reproductive areas where they calve and nurse their young from May to October, primarily occupying shallow waters (<10 m depth) within 1 km of the coastline (Charlton *et al.* 2019; Smith *et al.* 2022a, cited in DCCEEW 2024a). Peak period of abundance is late July to August, with seasonal variability. Females accompanied by a calf generally occupy the calving ground for two to three months between June and September (DCCEEW 2024a). Recent long-term monitoring data indicated more than 95% of southern right whales using key calving areas were also found to occur within 1 km of the shore, typically in shallow sheltered environments, such as Head Bight, Fowlers Bay and Encounter Bay in SA (O'Shannessy *et al.* 2025). For the western population, breeding occurs in Exmouth Gulf and in calving areas along the south coast of WA outside of the NWMR (DCCEEW 2024a). A stranding record exists for the far north Kimberley coast (Atlas of Living Australia 2006). Known females have rarely been observed on the Australian coastline in the year before calving, suggesting mating and conception may predominantly occur away from calving grounds, potentially on feeding grounds (Watson *et al*. 2021, cited in DCCEEW 2024a). There is a significant energetic cost to the mother in the late stages of gestation (last trimester) and calf growth rate has been found to depend on the maternal body size and condition of the mother (Christiansen *et al.* 2018 and Christiansen *et al.* 2022, cited in DCCEEW 2024a). Foraging ecology of southern right whales is poorly understood and observations of foraging whales are rare (DCCEEW 2024a). There is evidence of an increase in the western population, whereas there is greater uncertainty of the population status and trends of the eastern population (DCCEEW 2024a). Southern right whale abundance in Australian waters is still far below estimated historic abundance (>20%) (DCCEEW 2024a). Long-term monitoring data from SA indicate population growth has slowed since around 2016, with average annual increases estimated at 3.34% for all individuals and 3.93% for cow–calf pairs. These rates are lower than those recorded in earlier decades (O'Shannessy *et al.* 2025). Abundance and reproductive success in southern right whales are primarily tied to foraging success and body condition, with southern right whales relying on stored energy reserves for reproductive success. A recent study identified declining reproductive performance in the WA southern right whale population, with calving intervals increasing from 3.4 to 4.1 years since, with sustained longer breeding intervals evident since 2015 (*Charlton et al*. 2026). This reproductive decline is associated with climate-driven trophic changes in key southern right whale offshore foraging areas. Since 2013, reduced Antarctic sea ice in high-latitude habitats has altered ecosystem structure and krill-based food webs, while mid-latitude regions have experienced warming, declining chlorophyll-a, and reduced prey availability since 2010 (Charlton *et al.* 2026). Calving intervals began increasing around 2010, with significant population-level shifts evident by 2015. This trend corresponds with a decline in the western population's growth rate from about 2016 onward (Charlton *et al.* 2026). There are a reproduction BIA and habitat critical to survival for the southern right whale within Exmouth Gulf (DCCEEW 2024a). A migration BIA extends 3 nm out from the coastline from Ningaloo and spans down the WA coastline and across the south and south-east coast of Australia (DCCEEW 2024a). Nursing and calving behaviours are known to occur within reproductive BIAs. Habitat critical to survival for the southern right whale has been identified as all reproductive BIAs across the species range (DCCEEW 2024a). See Figure 8-1 and Section 8.2.3 for habitat critical to survival for southern right whales in the NWMR. See Table 8-3 and Figure 8-5 for BIAs for southern right whales in the NWMR

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species	Key information
Antarctic minke whale	The Antarctic minke whale has a circumpolar distribution south of 60°S during summer (Risch *et al.* 2019) and has been recorded off all Australian states (apart from the NT) in winter (see the DCCEEW SPRAT profile). Their seasonal distribution and migration patterns are poorly understood (Risch *et al.* 2019). The species is highly associated with sea ice and feeds in cold Antarctic waters over the summer. It is thought the Antarctic minke whale migrates through offshore waters of WA to about 20°S to feed and possibly breed (Bannister *et al.* 1996). Information about timing and distribution, behaviour (migration and breeding) within the NWMR, however, is presently not known. In the high latitudinal winter breeding grounds in other regions, the species appears to be distributed off the continental shelf edge. No population estimates are available for Antarctic minke whales in Australian waters. Acoustic detection has been recorded for the Perth Canyon and Exmouth Plateau (McCauley 2011b), and more recently acoustic detection indicated presence in offshore waters of NWS in late October and all of November and was absent (based on no vocalisation and detection) in December 2021 to March 2022 (over a monitoring period from October 2021 to March 2022) (Warren *et al.* 2023). There are no identified BIAs for this species in the NWMR.
Sei whale	The sei whale is a baleen whale with a worldwide oceanic distribution, expected to seasonally migrate between low latitude wintering areas and high latitude summer feeding grounds (Bannister *et al.* 1996; Prieto *et al.* 2012). There are no known mating or calving areas in Australian waters. The species prefers deep waters, typically occurs in oceanic basins and continental slopes (Prieto *et al.* 2012), and exhibits a migration pathway influenced by seasonal feeding and breeding patterns. Sei whales have been infrequently recorded in Australian waters (Bannister *et al.* 1996). Reliable estimates of the sei whale population size in Australian waters are currently not possible due to a lack of dedicated surveys and their elusive characteristics. Similarly, the extent of occurrence and area of occupancy of sei whales in Australian waters cannot be calculated due to the rarity of sighting records. They will typically travel in small pods of three to five individuals, with some segregation by age, sex and reproductive status. Calving grounds are presumed to exist in low latitudes with mating and calving potentially occurring during winter months (Threatened Species Scientific Committee 2015a). There are no known mating or calving areas in Australian waters, and no identified BIAs for this species in the NWMR.
Fin whale	The fin whale is a large baleen whale distributed worldwide. Fin whales migrate annually between high latitude summer feeding grounds and lower latitude overwintering areas (Bannister *et al.* 1996) and follow oceanic migration paths. The species is uncommonly encountered in coastal or continental shelf waters. Australian Antarctic waters are important feeding grounds for fin whales but there are no known mating or calving areas in Australian waters (Morrice *et al.* 2004). The species has been observed in groups of six to ten individuals, as well as in pairs and alone (Threatened Species Scientific Committee 2015c). Accurate distribution patterns are not known within Australian waters and most data are from stranding events. Fin whales have been recorded vocalising off the Perth Canyon, WA, between January and April 2000 (McCauley *et al.* 2000). It is currently not possible to accurately estimate the population size of fin whales in Australian waters predominantly due to the species' behaviour and local ecology, as the proportion of time they spend at the surface varies greatly depending on these factors. In addition, natural fluctuations of fin whales in Australian waters are unknown, but long-range movements do appear to be prey related (Aulich *et al.* 2022). A recent study by Aulich *et al.* (2022) used passive acoustic monitoring as a tool to identify the migratory movements of fin whales in Australian waters. On the west coast, the earliest arrival of these animals from Antarctica occurred at Cape Leeuwin in April, and between May and October they migrated along the WA coastline to the Perth Canyon, which likely acts as a feeding zone for migratory whales (Aulich *et al.* 2022). Some whales were found to continue migrating northwards along the WA coastline, with vocalisation presence recorded as far north as Dampier between August and late October (Aulich *et al.* 2022). There are no identified BIAs for this species in the NWMR.
Omura's whale	Omura's whale is a species of baleen whale that was first described in 2003. Previously specimens of Omura's whale were identified as pygmy/dwarf Bryde's whales, but morphological and molecular evidence identified Omura's whale as a distinct species not closely related to Bryde's whale in 2003 (Ottewell *et al.* 2016). It was believed the range of Omura's whale was restricted to the eastern Indo-Pacific, but recent discoveries suggest the species may have a more widespread distribution (Ottewell *et al.* 2016; Cerchio *et al.* 2019). In Australia, presence of this species was confirmed in 2015 when, what was later determined to be an Omura's whale, was stranded on the northwest coast of Australia, near Exmouth (Ottewell *et al.* 2016). An in-depth review by Cerchio *et al.* (2019) concluded Omura's whale can primarily be found in tropical and warm-temperate waters and is currently known from all

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species	Key information
	ocean basins, excluding the central and eastern Pacific. Further, a strong tendency toward a coastal and neritic water distribution was found, although there were several pelagic water records, most of which were on the continental shelf and within shallow seas throughout the documented range (Cerchio *et al.* 2019). Passive acoustic monitoring indicates Omura's whales are present across multiple regions of northern Australian waters, with vocal detections extending from northwest Australia (Timor Sea, Kimberley, Pilbara and Gascoyne) to the Great Barrier Reef. Vocalisations were recorded repeatedly over extended periods (hours), indicating extended vocal activity and consistent species presence within the monitoring locations (Browne *et al.* 2025). While detections occurred across all surveyed regions, differences in call occurrence were observed (Browne *et al*. 2025). The Warren *et al.* (2023) targeted passive acoustic monitoring program to detect southbound migratory pygmy blue whales ran from late October 2021 to March 2022, with a deepwater acoustic long-term observatory lander (900 m depth) to the west of the Montebello Trough and C-lander (190 m depth) at the outer edge of the NWS. Calls of the Omura's whales were detected at both locations throughout the recording period. Detections were, however, more common at the deeper water location, in terms of both number of detection days and number of detection hours per day (Warren *et al.* 2023). The shelf edge location showed Omura's whale present primarily in December, but this lander malfunctioned and stopped recording in mid-January 2022. An offshore trial of distributed acoustic sensing using fibre optic cables (submarine telecommunications cable) to detect low-frequency whales recorded vocalising Omura's whales within a 12 km detection range along a 50 km long area on the outer edge of the NWS (Debens *et al.* 2024). Omura's whale detections were made from the beginning of December 2023 through to mid-January 2024 (and the end of the trial). Currently little is known about the ecology and life history characteristics of Omura's whale, resulting in an IUCN listing of Data Deficient. There are no identified BIAs for this species in the NWMR.
Toothed whales (Odontoceti) – high frequency hearing	
Sperm whale	Sperm whales are the largest of the toothed whales and are distributed worldwide in deep waters (greater than 200 m) off continental shelves and sometimes near shelf edges (Bannister *et al.* 1996). The species tends to inhabit offshore areas at depths of 600 m or more and is uncommon in waters less than 300 m deep (Ceccarelli *et al.* 2011). There is limited information about sperm whale distribution in Australian waters, but they are usually found in deep offshore waters, with more dense populations near continental shelves and canyons. In the open ocean, there is a generalised movement of sperm whales southwards in summer, and corresponding movement northwards in winter, particularly for males. Detailed information about the distribution and migration patterns of sperm whales off the WA coast is not available. Females with young may reside within the NWMR all year, males may migrate through the region, and the species may be associated with canyon habitats (Ceccarelli *et al.* 2011).Sperm whales have been recorded in deep waters off North West Cape and appear to occasionally venture into shallower waters in other areas. Twenty-three sightings of sperm whales (variable pod sizes, ranging from one to six animals) were recorded by marine mammal observers during the North West Cape multi-client 3D marine seismic survey (December 2016 to April 2017) (Woodside 2020). These animals were observed in deep, continental slope waters of the Montebello Saddle (maximum distance of about 90 km from North West Cape), and the waters overlying the canyons linking the Cuvier Abyssal Plain and the Cape Range Peninsula KEF. The deep waters above the gully/saddle on the inner edge of the plateau (the Montebello Saddle) are thought to be important for sperm whales that may feed in the region (based on 19th century whaling records; Townsend 1935). Recent studies such as acoustic detection indicated sperm whale presence in deep, offshore waters but not at the edge of the NWS (over a monitoring period of October 2021 to March 2022, for the deepwater location). However, while sperm whales were detected every month, occurring in bouts, there was no evidence for lasting use of the area around this recording location (Warren *et al.* 2023), Ferriera *et al.* (2024) reported sperm whale sightings off North West Cape in May 2023. A total of 26 individual sperm whales were sighted about 30 km offshore in groups up to ten individuals. The sperm whales were observed displaying surface logging behaviour, with frequent and numerous blows before flukes-up dives (indicative of deep feeding behaviour). Such aggregations appear to be an annual occurrence and at the same time as migratory pygmy blue whale feed and move through the same area, to the west and offshore of Ningaloo and North West Cape. Sperm whales produce foraging sounds during deep dives, but their echolocation clicks have much lower peak frequencies (about 15 kHz) than the detection bandwidth that high-frequency acoustic monitoring systems use on the NWS. As a result, sperm whales are unlikely to be detected by recorders, despite being one of several deep-diving toothed whale species that regularly forages in the region (Madhusudhana *et al.* 2026).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species	Key information
	There are no identified BIAs for this species in the NWMR.
Orca (killer whale)	The preferred habitat of killer whales (*Orcinus orca*) includes oceanic, pelagic and neritic (relatively shallow waters over the continental shelf) regions, in both warm and cold waters. Killer whales appear to be more common in cold, deep waters, but have been observed along the continental slope and shelf, particularly near seal colonies, and in shallow coastal areas of WA (Bannister *et al.* 1996; Thiele and Gill 1999). The total number of killer whales in Australian waters is unknown, but the total number of mature animals within waters around the continent may be less than 10,000. Killer whales are known to make seasonal movements, and probably follow regular migratory routes, but no information is available for the species in Australian waters. There is thought to be at least three distinct groups of killer whales in Australian waters, with key groups in the South-east Marine Region, the SWMR and NWMR. These groups appear to vary depending on broader tropical and temperate environmental conditions that influence prey choices, habitat preferences and phenotypic traits (Hutchings *et al.* 2025). Recent species distribution modelling of killer whales in Australian waters has provided a large-scale assessment of potential habitat suitability of these regional populations. The modelling identified areas of higher habitat suitability in WA, including nearshore and reef-associated waters of the Ningaloo Reef region during the astral winter, and in the SWMR during February and March, consistent with sighting records. Suitable habitat in the NWMR was concentrated in nearshore and reef environments, particularly along Ningaloo Reef, extending north to offshore reefs and islands in the Kimberley, and southwards along the coast to Carnarvon and Geraldton. These areas are characterised by oceanographic conditions and enhanced productivity that support prey aggregations, including migratory baleen whales, which killer whales are known to target in the region. Environmental predictors demonstrated clear ecological differentiation between killer whale groups, with the northwest population showing a preference for warm tropical waters in contrast to temperate-associated groups in southern regions (Hutchings *et al.* 2025). Killer whales are top-level carnivores. There are reports from around Australia of attacks on dolphins, juvenile humpback whales, blue whales, sperm whales, dugongs and Australian sea lions (Bannister *et al.* 1996). Killer whales target humpback whales, particularly calves, off Ningaloo Reef during the humpback southern migration season (Pitman *et al.* 2015). Overall, observations suggest humpback calves are a predictable, plentiful and readily taken prey source for killer whales off Ningaloo Reef for at least five months of the year. There are also records of killer whales attacking dugongs in Shark Bay (Anderson and Prince 1985). However, attacks appear opportunistic as there are no recognised key localities or important habitats for killer whales within the NWMR (DSEWPaC 2012a). There are no identified BIAs for this species in the NWMR.
Australian snubfin dolphin	Stranding and museum specimen records indicate Australian snubfin dolphins occur only in waters off northern Australia, from around Broome on the west coast to the Brisbane River on the east coast (Parra *et al.* 2002). Aerial and boat-based surveys indicate Australian snubfin dolphins occur mostly in protected shallow waters near the coast, and near river and creek mouths (Parra 2006; Parra *et al.* 2006; Parra *et al.* 2002). Within the NWMR, this species has been found in the shallow coastal waters and estuaries along the Kimberley coast. Beagle and Pender bays on the Dampier Peninsula, and tidal creeks around Yampi Sound and between Kuri Bay and Cape Londonderry, are important areas for Australian snubfin dolphins (DEWHA 2008a). Roebuck Bay has generally been considered the south-western limit of snubfin dolphin distribution across northern Australia, but the species has been recorded in Port Hedland harbour, Dampier Archipelago, Montebello Islands, Exmouth Gulf and off North West Cape (Allen *et al.* 2012). Roebuck Bay supports one of the largest known populations of Australian snubfin dolphins (D'Cruz *et al.* 2022). A first comprehensive catalogue of snubfin dolphin sightings has been compiled for the Kimberley, north-west WA (Bouchet *et al.* 2021) and documented that snubfin dolphins are consistently encountered in shallow water (<21 m depth) near (<15 km) freshwater inputs, with high detection rates in known hotspots such as Roebuck Bay and Cygnet Bay and suitable coastal habitat in the wider Kimberley region. Table 8-3 and Figure 8-6 present the location and type of BIAs for Australian snubfin dolphins in the NWMR.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species	Key information
Indo-Pacific humpback dolphin (Australian humpback dolphin)	Previously included with *Sousa chinensis*, the Australian humpback dolphin (*S. sahulensis*) was elevated to a species in 2014. *S. chinensis* is now applied for humpback dolphins in the eastern Indian and western Pacific oceans and *S. sahulensis* for humpback dolphins in the waters of the Sahul Shelf from northern Australia to southern New Guinea (Jefferson and Rosenbaum 2014). The Australian humpback dolphin is listed as *S. chinensis* under the EPBC Act. The Australian humpback dolphin (referred to as 'humpback dolphin' hereafter) inhabits the tropical/subtropical waters of the Sahul Shelf across northern Australia and southern Papua New Guinea (Jefferson and Rosenbaum 2014). Based on historical stranding data, museum specimens and opportunistic sightings collected during aerial and boat-based surveys for other fauna, it has been inferred that humpback dolphins occur from the WA/NT border to the south-west to Shark Bay (Hanf *et al.* 2016). Allen *et al.* (2012) suggested humpback dolphins use a range of inshore habitats, including clear and turbid coastal waters across northern WA. The waters surrounding North West Cape are an important area for the species. Boat-based surveys up to 5 km from the coast (Brown *et al.* 2012) recorded humpback dolphins from 0.3 to 4.5 km away from shore and in depths ranging from 1.2 to 20 m, with a mean of about 8 m. Other studies around North West Cape, surveying waters up to 5 km from the coast, recorded humpback dolphins in water depths of up to 40 m (Hanf *et al.* 2016). Based on density, site fidelity and residence patterns, the North West Cape has been identified as an important habitat at the southwestern limit of this species' range (Hunt *et al.* 2017). Additionally, Brown *et al.* (2014) reported evidence of hybridisation between the Australian snubfin and humpback dolphin populations in north-western Australia. Aerial line-transect surveys across the Pilbara between 2015 and 2017 produced modelled abundance estimates for Australian humpback dolphins of 1,546 (2016) and 2,690 (2017) (Raudino *et al.* 2023). Densities were highest in nearshore waters, with hotspots in Exmouth Gulf, Dampier Archipelago and the Great Sandy Islands. However, aerial surveys targeting other marine species over the western Pilbara have recorded humpback dolphins more than 50 km from the mainland in shallow shelf waters (<30 m deep) near Barrow Island and the western Lowendal Islands (Hanf 2015). The species has also been recorded in fringing coral reef and shallow, sheltered sandy lagoons at the Montebello Islands (Raudino *et al.* 2018). Humpback dolphins do not appear to undergo large-scale seasonal migrations, although seasonal shifts in abundance have been observed (Parra and Cagnazzi 2016, cited in DCCEEW 2023a). Table 8-3 and Figure 8-7 provide the location and type of BIAs for Australian humpback dolphins in the NWMR.
Indo-Pacific bottlenose dolphin (spotted bottlenose dolphin)	There are four known subpopulations of spotted bottlenose dolphins, of which the Arafura/Timor Sea populations were identified as potentially occurring within the NWMR. The species is restricted to inshore areas such as bays and estuaries, nearshore waters, open coast environments, and shallow offshore waters, including coastal areas around oceanic islands, from Shark Bay to the western edge of the Gulf of Carpentaria. The species forages in a range of habitats but is generally restricted to water depths of less than 200 m (DSEWPaC 2012a). Important foraging and breeding areas include the shallow coastal waters and estuaries along the Kimberley coast and Roebuck Bay. A study at North West Cape found spotted bottlenose dolphins were more likely to occur in coastal lagoons west of North West Cape during winter months than other seasons. In spring, the probability of occurrence was higher outside of the Ningaloo Marine Park, although summer data was not included in this study (Haughey *et al.* 2021). Aerial transect surveys in the Kimberley region showed the abundance for bottlenose dolphins has been declining, with estimated abundance of 3,713 individuals in 2015, 2,638 in 2016 and 1,635 in 2017. Spotted bottlenose dolphins off North West Cape exhibit a highly fluid spatial and temporal structure, characterised by loose, non-random associations with low temporal stability and frequent turnover of individuals. The absence of distinct social clusters indicates an open, fission–fusion population, with space use and associations varying over short timeframes rather than reflecting stable, long-term groupings (Edwards *et al.* 2025). Spatial data collected in Ningaloo Marine Park between 2013 and 2019 showed the distribution of foraging groups was related to distance from the nearest boat ramp and seabed slope, with the foraging dolphins more likely to occur 3,000 to 5,000 m from the nearest boat ramp and in areas of moderate seabed slope. Resting dolphins were localised and most likely to occur in shallow waters (5 to 10 m deep) within designated Sanctuary Zones of the Ningaloo Marine Park. Dolphins travelling were more likely to occur 1,000 to 2,000 m from the coast and in water depths of 7 to 12 m, but were observed to reach depths of 20 m (Haughey *et al.* 2025). Table 8-3 and Figure 8-8 provide the location and type of BIAs for spotted bottlenose dolphins in the NWMR.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

8.2.2 Dugongs

The dugong is listed as migratory under the EPBC Act (DSEWPaC 2012a).

Seagrass meadows in coastal waters, estuarine creeks and streams within and adjacent to the NWMR support significant populations of dugongs, including Shark Bay, Exmouth Gulf, Ningaloo Reef, Broome and the Kimberley coast, as well as offshore seagrass meadows at Ashmore Reef (DSEWPaC 2012a). Dugongs are distributed along the WA coast throughout the Gascoyne, Pilbara and Kimberley regions. Specific areas supporting dugong populations include Shark Bay, Ningaloo Reef, Exmouth Gulf, the Pilbara coast (Exmouth Gulf to De Grey River [Marsh *et al.* 2002]), Eighty Mile Beach, and the Kimberley coast, including Roebuck Bay (Bayliss and Hutton 2017). Dugong distribution is correlated with the seagrass habitats upon which it feeds, although water temperature has also been correlated with dugong movements and distribution (Preen *et al.* 1997; Preen 2004). Even areas with sparse seagrass coverage (e.g. 2 to 10% in the Pilbara) can serve as a key driver of dugong presence and abundance (Said *et al.* 2025).

Dugongs are highly migratory and have been observed moving large distances (DSEWPaC 2012a). Although the patterns of dugong movement in WA are not well understood, it is suggested dugong movements are influenced by water temperatures (Holley *et al.* 2006; Marsh *et al.* 2011) and the availability of seagrass foraging habitats (Marsh *et al.* 1994; Preen *et al.* 1997; Said *et al.* 2025). Dugongs are typically associated with shallow waters (<100 m), which support the growth of subtropical and tropical seagrass meadows (Marsh *et al.* 2025). Dugongs are known to migrate between seagrass habitats (hundreds of kilometres) (Sheppard *et al.* 2006), and in Shark Bay they exhibit seasonal movements as a behavioural thermoregulatory response to winter water temperatures (Holley *et al.* 2006; Marsh *et al.* 2011).

Cleguer and Marsh (2023) present the most contemporary data for dugongs and population estimates via an inventory of dugong aerial surveys of Australia, including north-west Australia (Shark Bay, Ningaloo, Exmouth Gulf and Pilbara, the Kimberley region). The first standardised dugong aerial abundance surveys in Australia were conducted in the early 1980s. In regions including Shark Bay and the Ningaloo-Exmouth area, repeated surveys over several decades provide long-term datasets that suggest dugong populations are relatively stable or fluctuate over time, rather than showing clear long-term declines. In contrast, the Kimberley region has only been comprehensively surveyed in 2015 and 2017, meaning only baseline information is currently available for that region, and long-term population trends cannot yet be assessed (Cleguer and Marsh 2023).

There are BIAs for dugongs within and adjacent to waters of the NWMR (refer Section 7.2.3). Table 8-3 and Figure 8-9 provide the location and type of BIAs for dugongs in the NWMR.

8.2.3 Pinnipeds

The Australian sea lion is listed as a species that may occur or may have habitat within the NWMR (Appendix A).

The Australian sea lion's breeding range is only in SA and WA waters in the SWMR, extending from the Houtman Abrolhos Islands in WA to The Pages Islands, east of Kangaroo Island, in SA (DSEWPaC 2013a). The Australian sea lion is the only pinniped endemic to Australia (Strahan 1983) and has also been recorded within the southern extent of the NWMR in Shark Bay, WA (Kirkwood *et al.* 1992). All known breeding colonies occurring in WA and SA are considered as habitat critical to the survival of the species under the Recovery Plan for the Australian Sea Lion (DSEWPaC 2013a), noting subsequent work by Goldsworthy *et al.* (2021) has identified additional breeding sites, reflecting updated knowledge since 2013. Of these breeding sites, four are in the SWMR along the west coast of WA, including the Houtman Abrolhos Islands (Easter Group), Beagle Island, North Fisherman Island and Buller Island. There are also foraging BIAs for males and females along the west coast, extending from the Abrolhos Islands south to Rockingham. The Australian sea lion is unique among pinnipeds in being the only species that has a non-annual breeding cycle that is also temporally asynchronous across its range (DSEWPaC 2013a; Threatened Species Scientific Committee 2020). This means breeding periods (copulation and birthing) differ between colonies and can occur at various times of the year. The birth interval in Australian sea lions is about 17 to 18 months, and breeding seasons are protracted, lasting between four and nine months (Threatened Species Scientific Committee 2020).

The Australian sea lion is a specialised benthic forager, feeding primarily on the sea floor. Studies have shown the species will eat a range of prey, including fish, cephalopods (squid, cuttlefish and octopus), sharks, rays, rock lobsters and penguins (DSEWPaC 2013a; Threatened Species Scientific Committee 2020). The Australian sea lion forages predominantly on the continental shelf, with most dives occurring in

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

depths of 20 to 100 m. Individuals typically travel up to about 60 km from their colony on each foraging trip, with a maximum distance of around 190 km from their colony over shelf waters.

The Australian sea lion is a member of the Otariidae (eared seals) family. It was listed as endangered in 2020 (Threatened Species Scientific Committee 2020). An assessment of the status and trends in abundance of this endemic, coastal pinniped species (Goldsworthy *et al.* 2021) documented an overall reduction in pup abundance over three generations, providing strong evidence the species meets IUCN endangered criteria.

There is no designated habitat critical to survival or identified BIAs for the Australian sea lion in the NWMR.

8.2.4 Habitat critical to survival for marine mammals

The southern right whale is the only marine mammal that has habitat critical to survival of a species defined.

The National Recovery Plan for the Southern Right Whale (DCCEEW 2024a) identifies habitat critical to survival under the EPBC Act.

Habitat critical to survival for the southern right whale has been identified as all reproductive BIAs across the southern right whale range (Figure 8-1). The identification of habitat critical to survival reflects that southern right whales display strong site fidelity to calving areas in Australian coastal waters, within and between years, over decades (Bannister 2001; Charlton *et al.* 2021; Watson *et al.* 2021, cited in DCCEEW 2024a). Reproductive areas have been identified as habitat critical to survival for the species because:

- they meet the species' essential life cycle requirements for reproduction, such as mating, calving and nursing, and reproduction is known to occur at that location
- there is a level of occupancy by individual breeding females at these locations of multiple days in any given year, and across multiple years, for long-term maintenance of the species
- they are critical for recovery of the southern right whale in terms of expanding habitat occupancy and contributing to the maintenance of genetic diversity as site fidelity may lead to small-scale genetic differences.

No 'Critical Habitat' as defined under section 207A of the EPBC Act has been identified for the southern right whale. 'Critical Habitat' is different from habitat critical to survival and only applies to Commonwealth land and sea. There are also no important cetacean habitat areas identified in the Australian Whale Sanctuary as defined under section 228A of the EPBC Act for southern right whales (DCCEEW 2024a).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

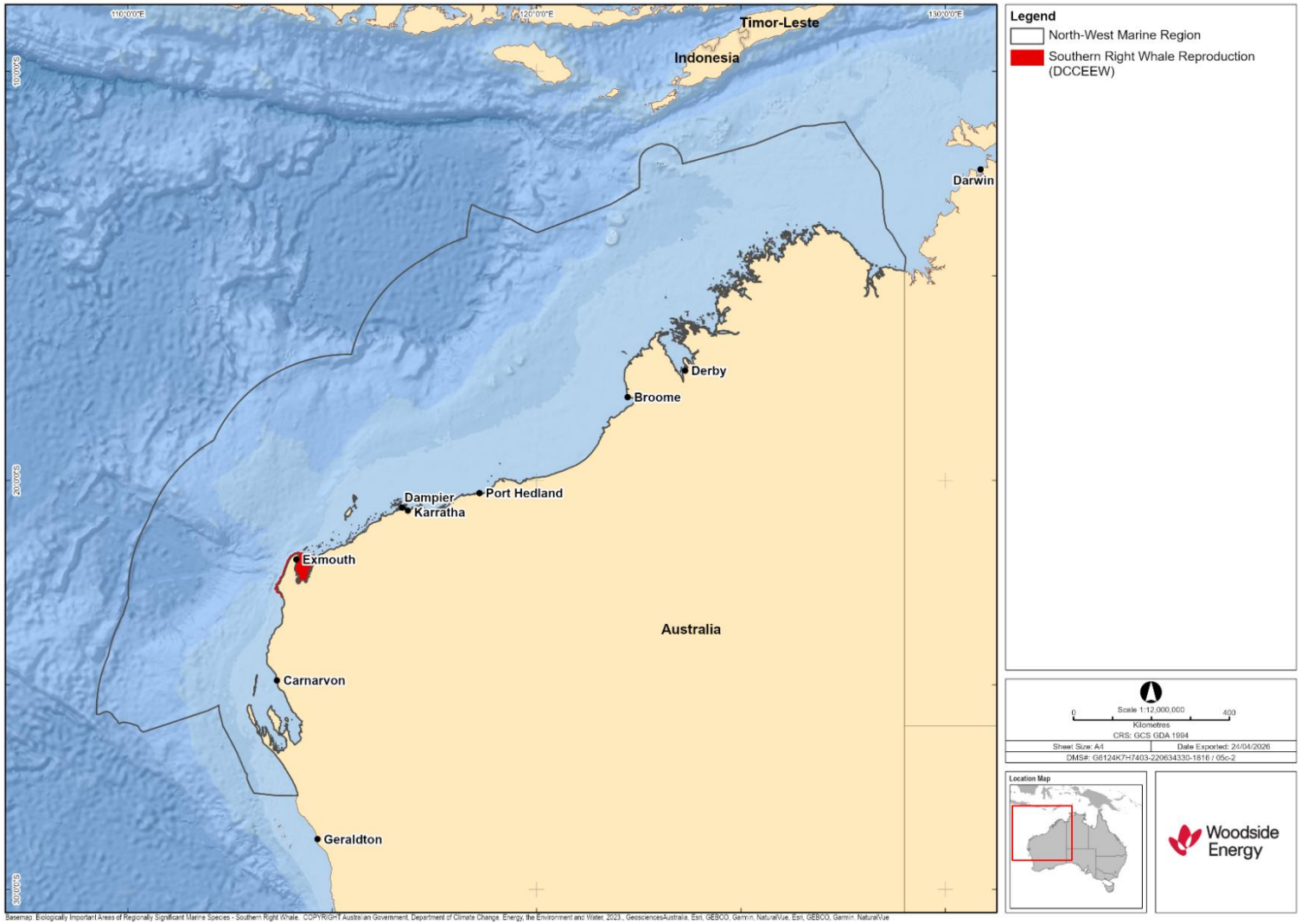


Figure 8-1: Habitat critical to the survival for the southern right whale in the NWMR

Source: DCCEEW (2024a)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

8.2.5 Marine mammal biologically important areas

A review of the Australian Marine Spatial Information System (Geoscience Australia 2026) identified BIAs representing important life cycle stages and behaviours for six species of marine mammals in the NWMR, presented in Table 8-3:

- Australian snubfin dolphin
- Indo-Pacific humpback dolphin (Australian humpback dolphin)
- Indo-Pacific/Indian Ocean spotted bottlenose dolphin
- dugong
- humpback whale
- pygmy blue whale, blue whale
- southern right whale.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 8-3: Marine mammal BIAs within the NWMR

Species	Woodside activity area			BIAs				
	Browse	*NWS/ Scarborough*	*North West Cape*	*Resting*	*Foraging*[12]	*Reproduction*		*Migration*
						Breeding	*Calving*	
Australian snubfin dolphin	✓	✓	-	Cambridge Gulf Camden Sound area Prince Regent River Admiralty Gulf Parry Harbour Bougainville Peninsula Vansittart Bay Anjo Peninsula Napier Broome Bay Deep Bay King George River Cape Londonderry Ord River	Roebuck Bay Cambridge Gulf Camden Sound area Carnot and Eagle Bay King Sound (south) King Sound (north) Yampi Sound Talbot Bay Maret Islands Bigge Island Admiralty Gulf Parry Harbour Pender Bay Bougainville Peninsula Vansittart Bay, Anjo Peninsula Napier Broome Bay, Deep Bay Port Nelson, York Sound, Prince Frederick Harbour Prince Regent River King George River Cape Londonderry Ord River Willie Creek	Roebuck Bay Cambridge Gulf Camden Sound area King Sound (south) King Sound (north) Yampi Sound Talbot Bay Maret Islands Bigge Island Admiralty Gulf Parry Harbour Bougainville Peninsula Vansittart Bay, Anjo Peninsula Napier Broome Bay Deep Bay Prince Regent River King George River Cape Londonderry Ord River	Roebuck Bay Cambridge Gulf Camden Sound area King Sound (south) King Sound (north) Yampi Sound Talbot Bay Maret Islands Bigge Island Admiralty Gulf Parry Harbour Bougainville Peninsula Vansittart Bay, Anjo Peninsula Napier Broome Bay Deep Bay Port Nelson, York Sound, Prince Frederick Harbour Prince Regent River King George River Cape Londonderry Ord River Willie Creek	No migration BIA identified within the NWMR

[12] Includes areas defined as 'foraging', 'foraging likely' and 'foraging (high density prey) as per Australian Marine Spatial Information System (Geoscience Australia, 2026). These areas are shown in the BIA figures.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species	Woodside activity area			BIAs				
	Browse	NWS/ Scarborough	North West Cape	Resting	Foraging[12]	Reproduction		Migration
						Breeding	Calving	
Indo-Pacific humpback dolphin (Australian humpback dolphin)	✓	✓	-	No resting BIA identified within the NWMR	Roebuck Bay Willie Creek Admiralty Gulf Parry Harbour Camden Sound Area Carnot and Beagle Bay Prince Regent River Port Nelson, York Sound, Prince Frederick Harbour King Sound (south) King Sound (north) Maret Islands Bigge Island Bougainville Peninsula Pender Bay Vansittart Bay, Anjo Peninsula	Camden Sound Area Roebuck Bay Willie Creek Prince Regent River King Sound (north) Yampi Sound Talbot Bay	Biggie Island Camden Sound Area King Sound (north) Maret Island Port Nelson, York Sound, Prince Frederick Harbour Talbot Bay Roebuck Bay Willie Creek Prince Regent River Yampi Sound	No migration BIA identified within the NWMR
Indo-Pacific/ Indian Ocean spotted bottlenose dolphin	✓	✓	✓	No resting BIA identified within the NWMR	Roebuck Bay, Willie Bay Camden Sound area King Sound (south) King Sound (north) Pender Bay Yampi Sound	Roebuck Bay, Willie Bay King Sound (south) King Sound (north) Yampi Sound	Roebuck Bay, Willie Bay Camden Sound area King Sound (south) King Sound (north) Yampi Sound	Pender Bay

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species	Woodside activity area			BIAs				
	Browse	*NWS/ Scarborough*	*North West Cape*	*Resting*	*Foraging*[12]	*Reproduction*		*Migration*
						Breeding	*Calving*	
Dugong	✓	✓	✓	No resting BIA identified within the NWMR	Ashmore Reef (April/May) Exmouth Gulf Middle Island Ningaloo Reef Pilbara and Kimberley coast Shark Bay Roebuck Bay Dampier Peninsula	Ashmore Reef – far west (April/May) Eastern side of Dirk Hartog Island (Shark Bay) May to September Exmouth Gulf and Ningaloo year-round	Ashmore Reef – far west (April/May) Exmouth Gulf year round	Within Shark Bay June to November Roebuck Bay year-round
Humpback whale	✓	✓	✓	Kimberley/Coastal North Lacepede Island, Camden Sound (winter) Exmouth Gulf (north migration – early June) (south migration – late Aug to Oct) Shark Bay	No foraging BIA identified within the NWMR	Nursing Kimberley coast from the Lacepede Islands to north of Camden Sound (mid-Aug to early Sep)	Core calving in waters off the Kimberley coast from the Lacepede Islands to north of Camden Sound (mid-Aug to early Sep)	The migration corridor extends from the coast to out to about 100 km offshore in the Kimberley region (arriving in June) extending south to North West Cape From North West Cape to south of Shark Bay the migration corridor reduces to about 50 km

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species	Woodside activity area			BIAs				
	Browse	*NWS/ Scarborough*	*North West Cape*	*Resting*	*Foraging*[12]	*Reproduction*		*Migration*
						Breeding	*Calving*	
Pygmy blue whale, blue whale	✓	✓	✓	No resting BIA identified within the NWMR	Ningaloo Scott Reef	No breeding BIA identified within the NWMR	No calving BIA identified within the NWMR	Augusta to Derby Along the shelf edge at depths of 500 m to 1,000 m; appear near Ningaloo Coast Montebello Islands area on southern migration (north: April to Aug; south: Oct to late Dec); potentially still present January (McCauley *et al.* 2018)
Southern right whale	-	-	✓	No resting BIA identified within the NWMR	No foraging BIA identified within the NWMR	Exmouth Gulf (May to September)	No calving BIA identified within the NWMR	Migration along Australian coastline between April to October extending up to the Exmouth Gulf breeding BIA

Source: Geoscience Australia (2026)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

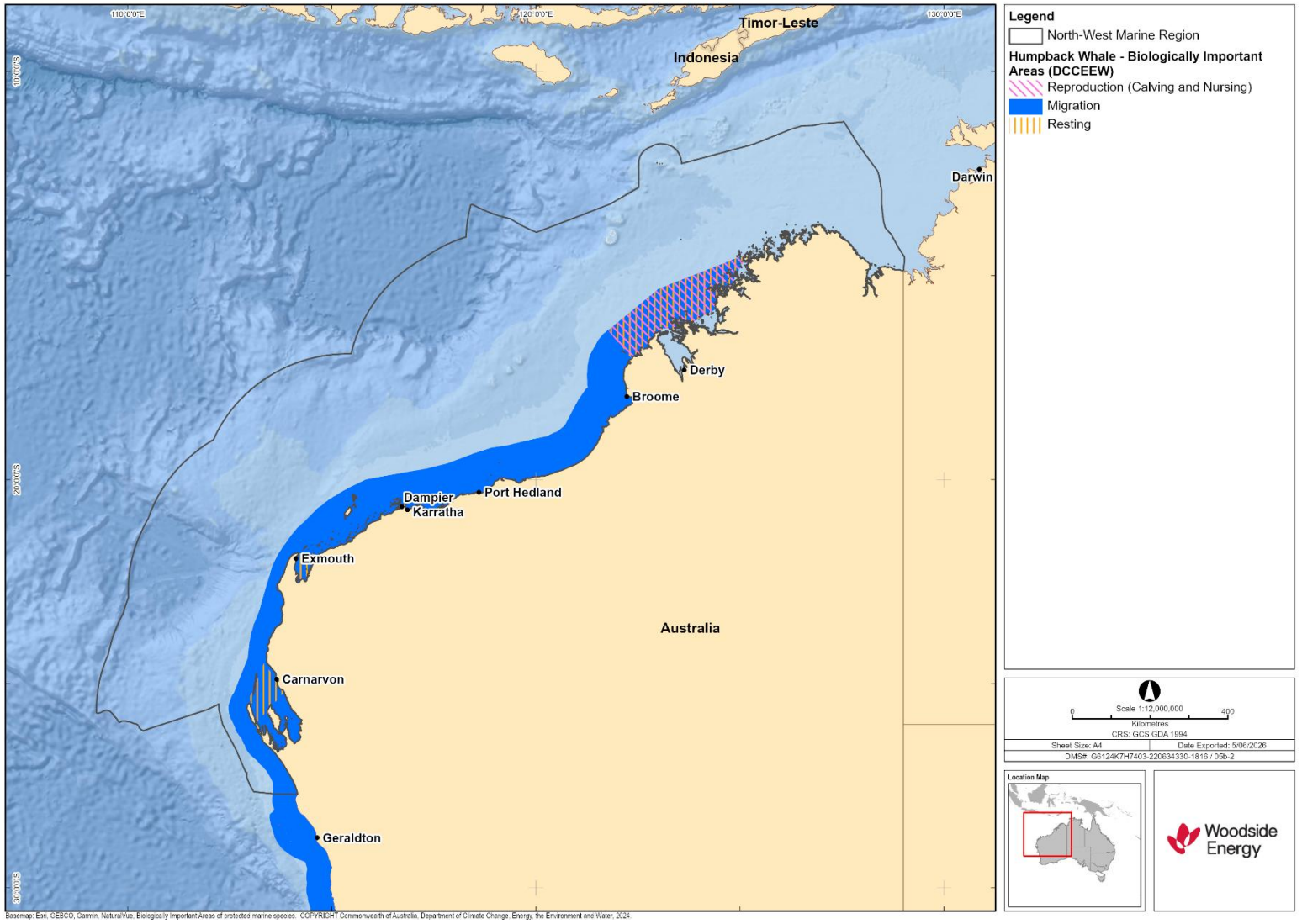


Figure 8-2: Humpback whale BIAs for the NWMR

Source: DCCEEW (2025b)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

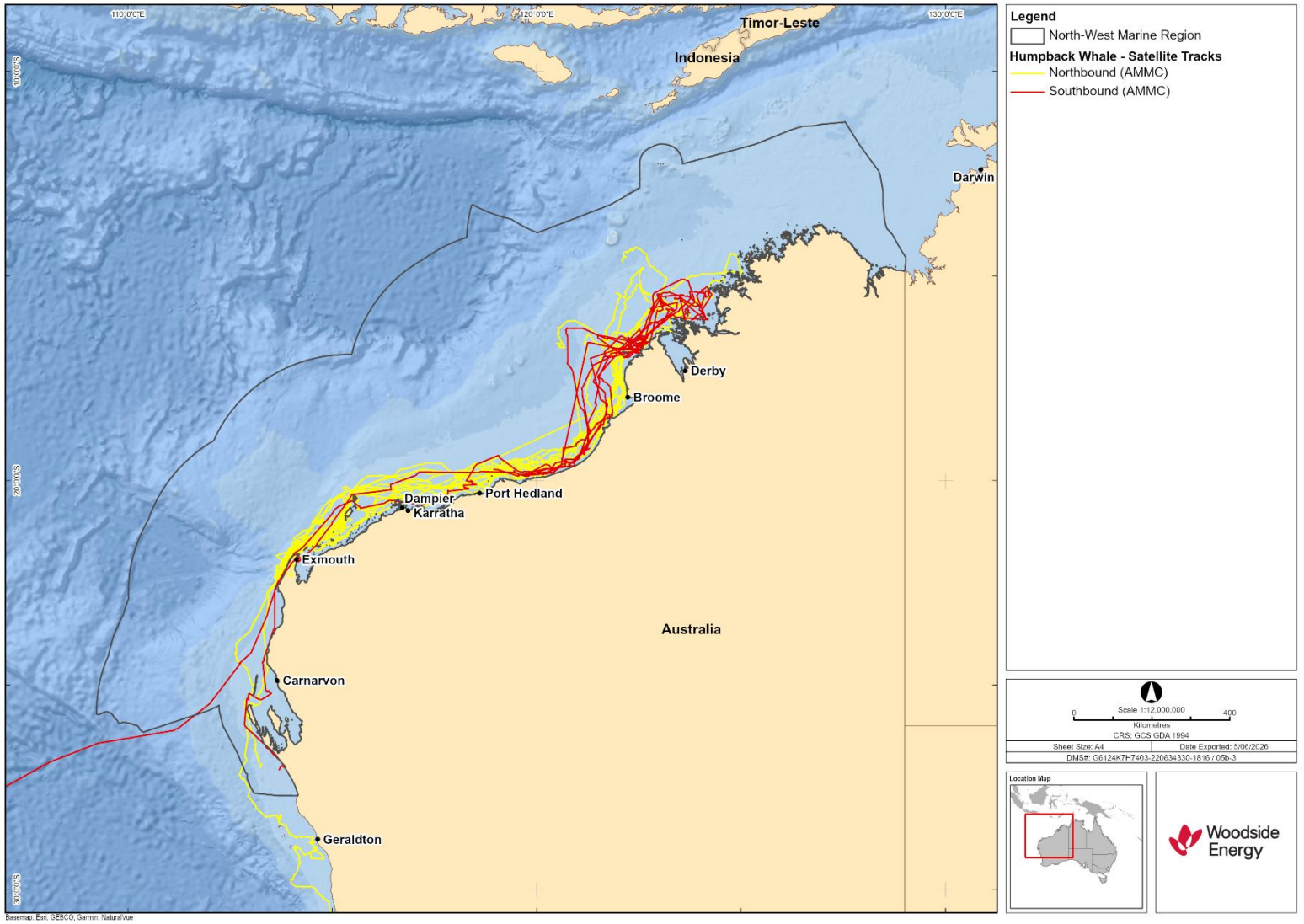


Figure 8-3: Humpback whale tagged tracks for northbound and southbound migrations

Source: Australian Marine Mammal Centre, as published in Double et al. (2010; 2012)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

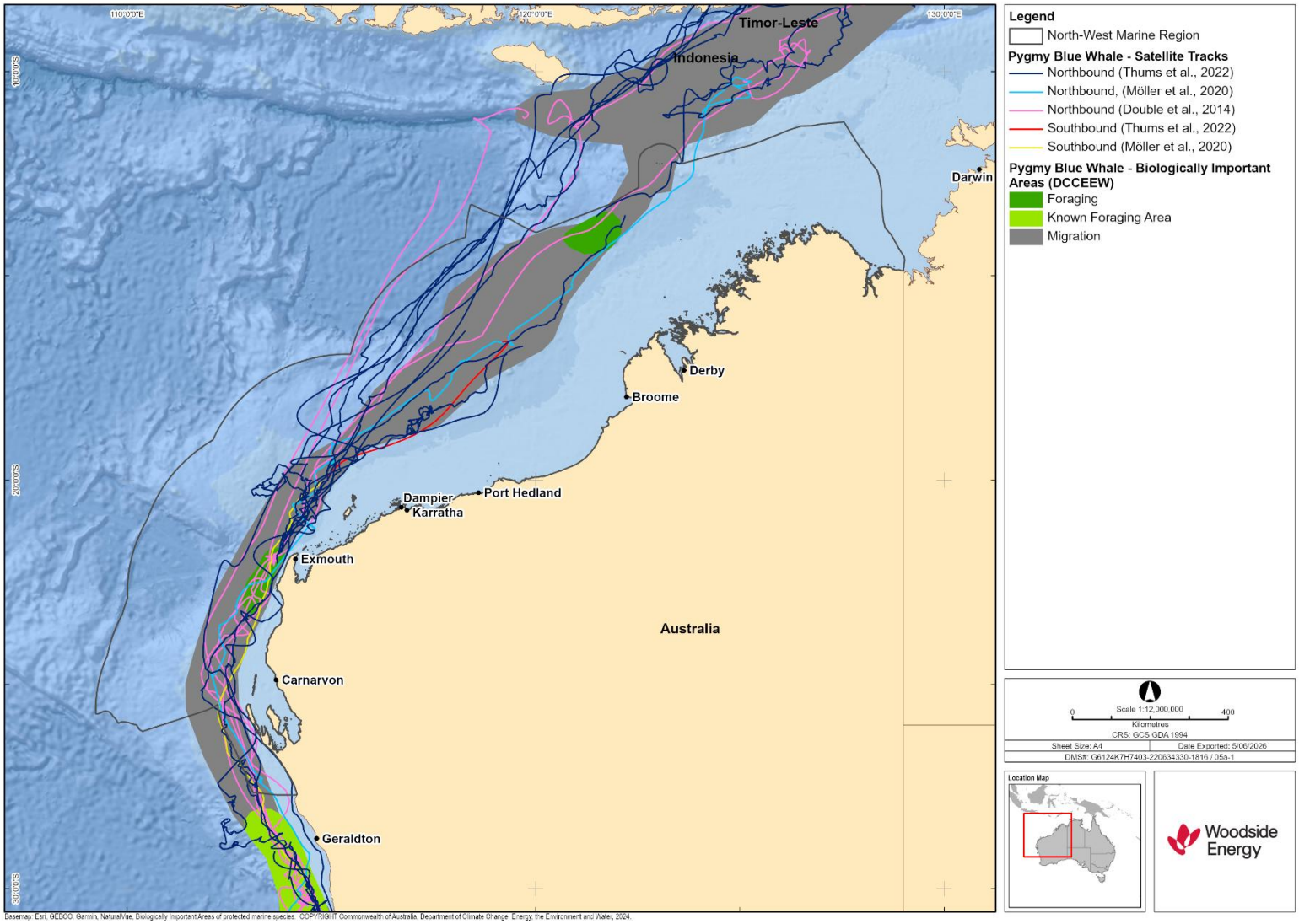


Figure 8-4: Pygmy blue whale BIAs for the NWMR and tagged whale tracks for northbound migration

Source for BIAs: DCCEEW (2025b)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

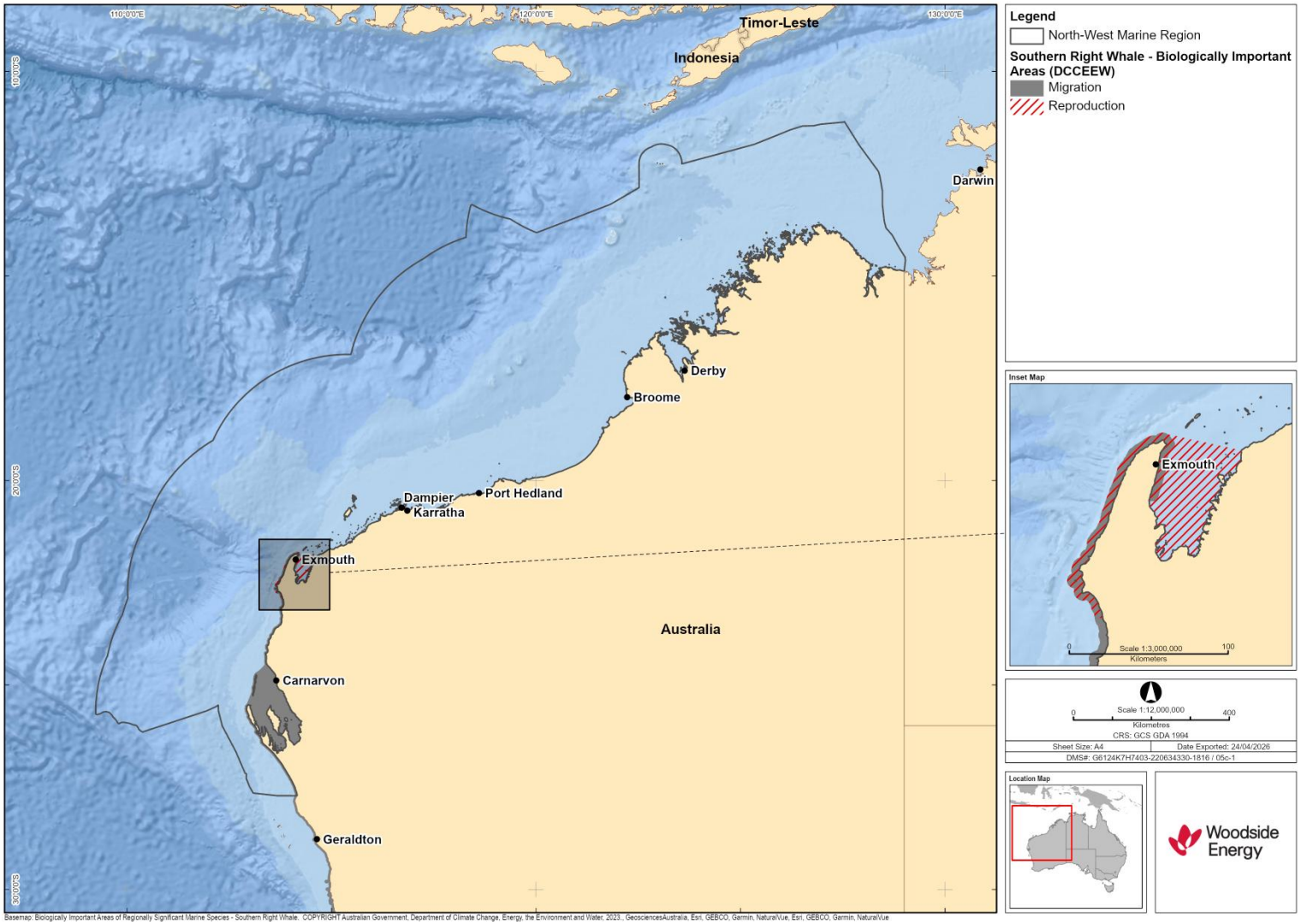


Figure 8-5: Southern right whale BIAs for the NWMR; migration and reproduction BIAs along the coast extend to 3 nm

Source: DCCEEW (2025b)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

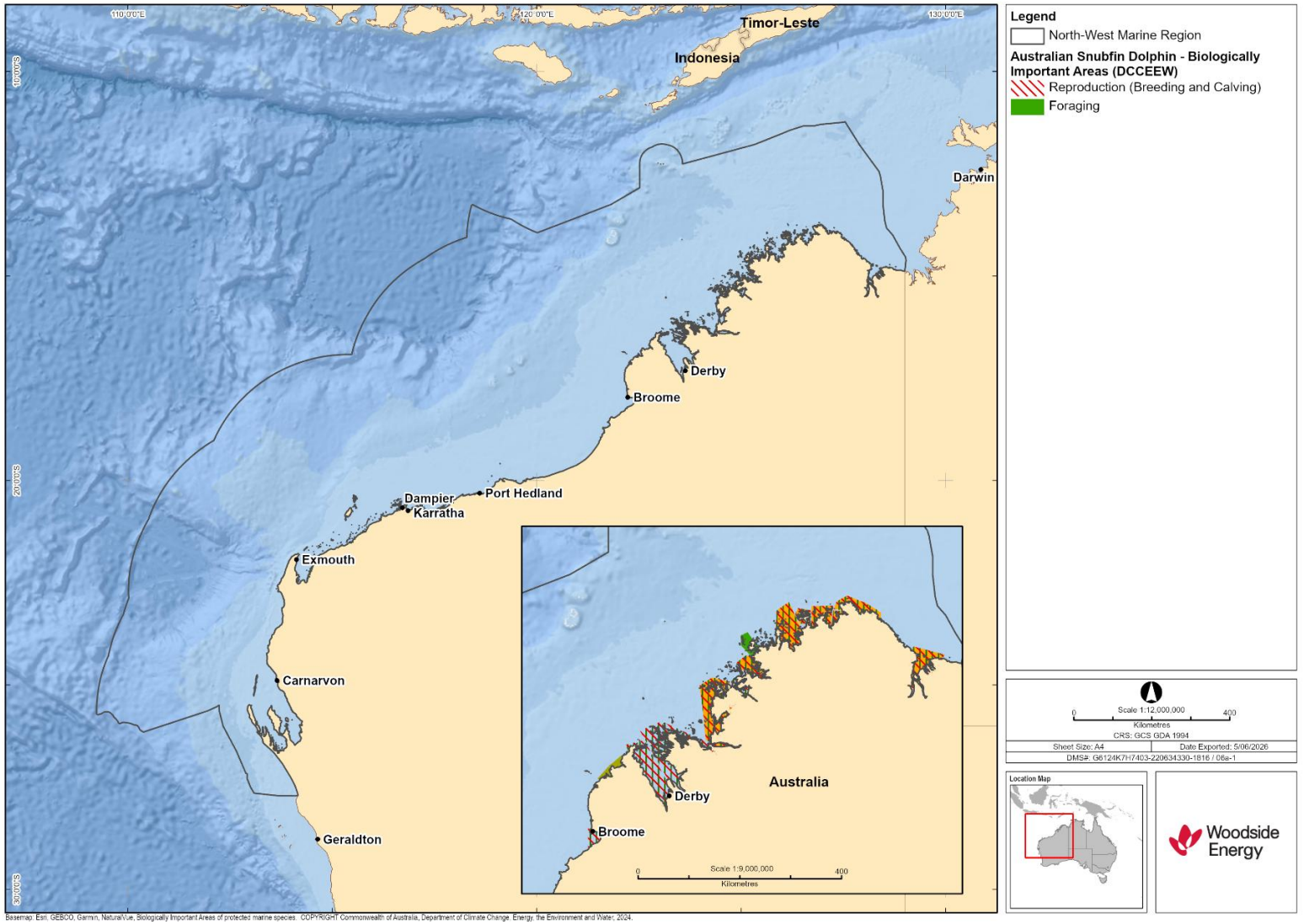


Figure 8-6: Australian snubfin dolphin BIAs for the NWMR

Source: DCCEEW (2025b)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

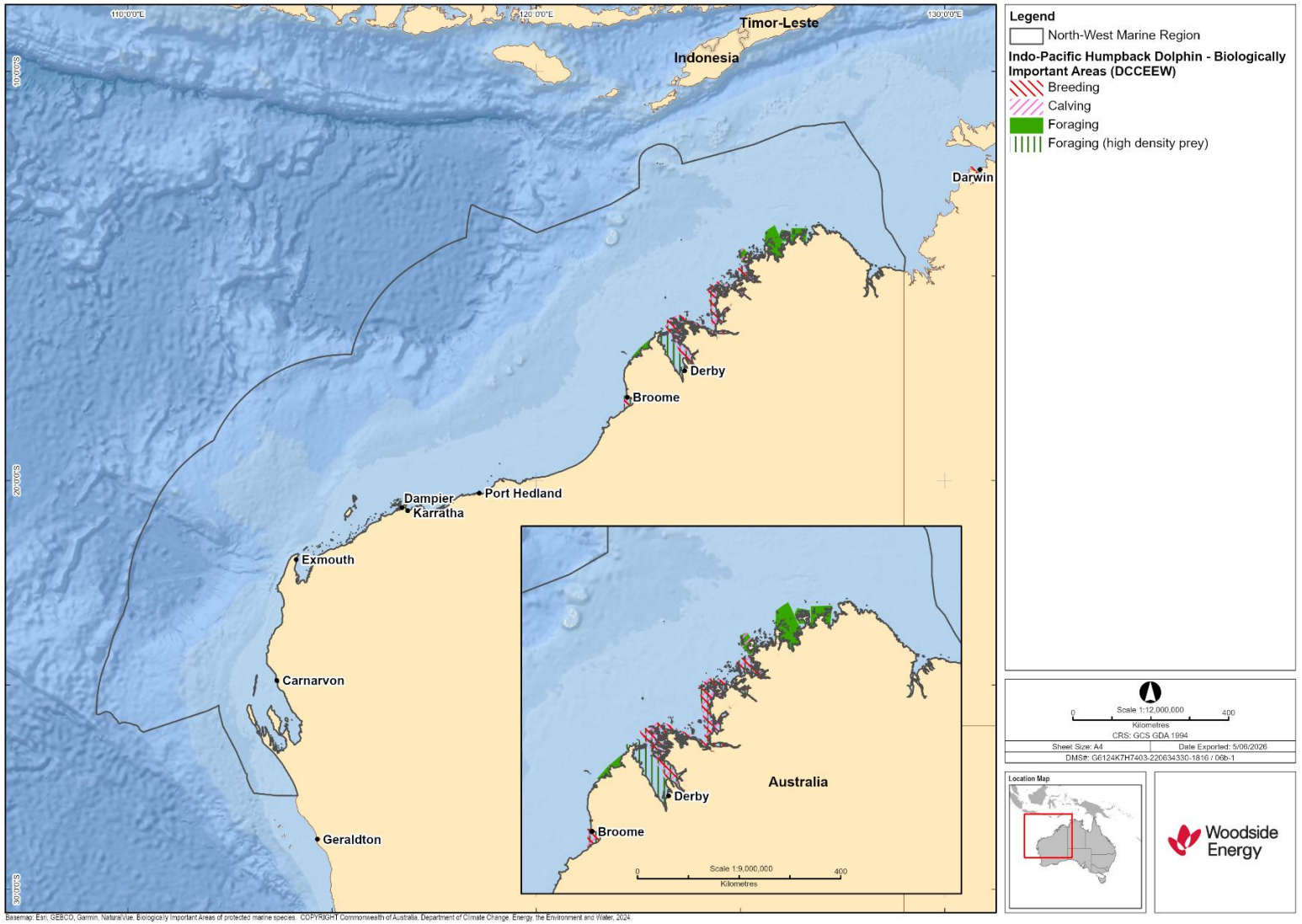


Figure 8-7: Indo-Pacific humpback dolphin BIAs for the NWMR

Source: DCCEEW (2025b)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

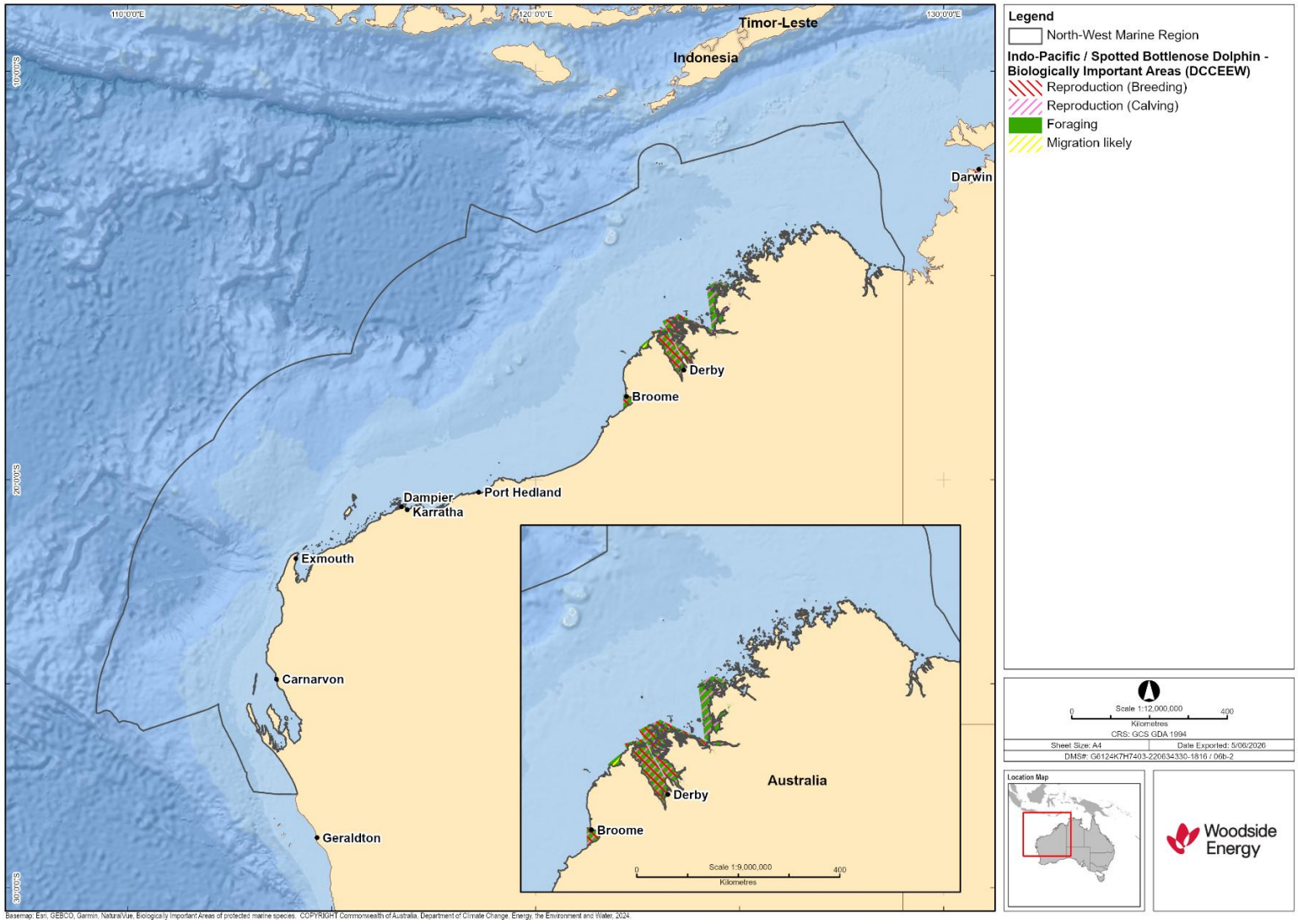


Figure 8-8: Indo-Pacific/Indian Ocean spotted bottlenose dolphin BIAs for the NWMR

Source: DCCEEW (2025b)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

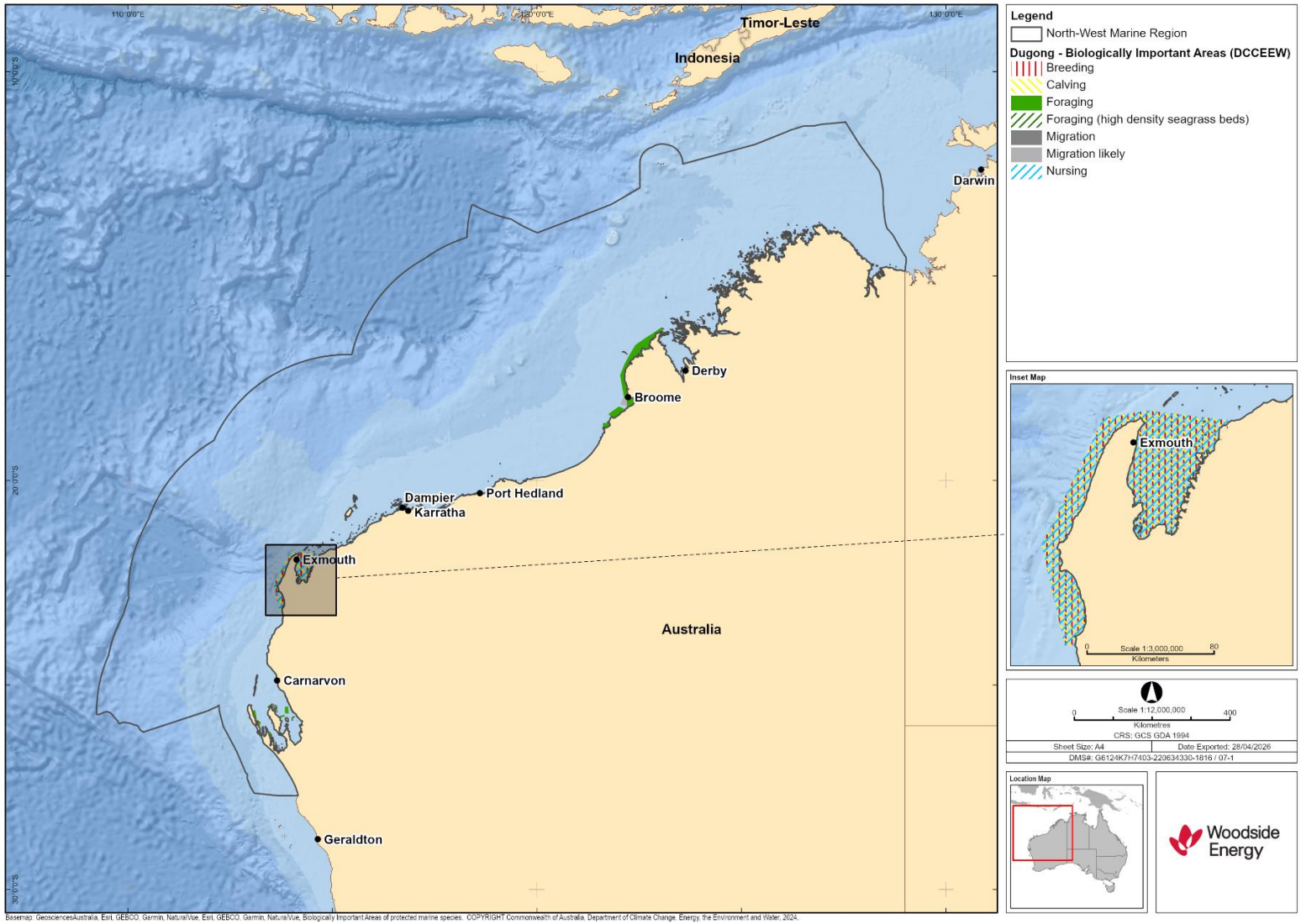


Figure 8-9: Dugong BIAs for the NWMR

Source: DCCEEW (2025b)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

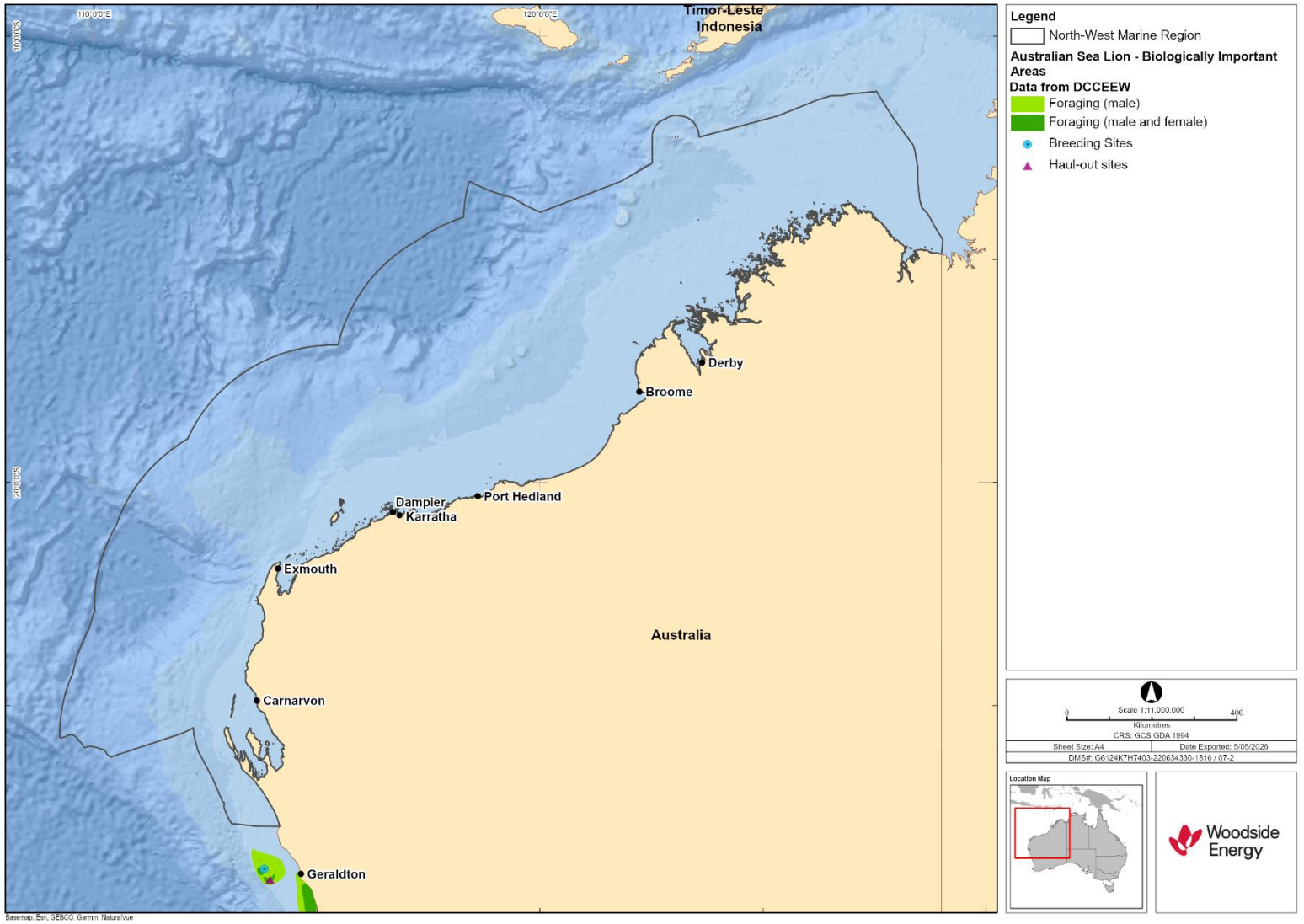


Figure 8-10: Australian sea lion BIAs in the northern extent of the SWMR closest to the NWMR

Source: DCCEEW (2024b)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

9. SEABIRDS AND MIGRATORY SHOREBIRDS OF THE NWMR

9.1 Regional context

The NWMR supports high numbers and species diversity of seabirds and migratory shorebirds, including many that are EPBC Act listed as threatened and migratory. The NWMR Marine Bioregional Plan reported 34 seabird species (listed as threatened, migratory or marine) that are known to occur, and 30 of 37 species of migratory shorebird species that regularly occur in Australia, are recorded at Ashmore Reef in the NWMR (DSEWPaC 2012d). The NWMR Marine Bioregional Plan also noted that Roebuck Bay and Eighty Mile Beach are internationally significant and recognised migratory shorebird locations.

A 'Seabird and Shorebird Existing Knowledge and Threats' report was prepared (2022) and updated in 2024 (Worley 2024) to identify key bird species (categorised: pelagic seabirds, nearshore seabirds, shorebirds and others) and their threats in the NWMR (Worley 2024). The high and moderate occurrence species for the NWMR were informed from this report and PMST results. The report identified 92 species.

Each species was assigned to one of three 'frequency of occurrence' levels:

- high – breeding and foraging aggregations known to occur
- moderate – known or likely presence
- low – may occur, or at limits of species range.

Table 9-1 includes those considered key species, with high or moderate occurrence (Worley 2024), and listed threatened or migratory under the EPBC Act, with a total of 63 key species identified within the NWMR, comprising 27 seabirds, 34 shorebirds and two other marine birds.

The PMST report identified a total of nine EPBC Act listed threatened or migratory bird species within the NMR. An additional 15 EPBC Act listed marine bird species that do not have a threatened or migratory status were recorded within the NMR. Appendix A provides a full list.

The PMST report identified a total of 46 EPBC Act listed threatened or migratory bird species within the SWMR. Appendix A provides a full list.

Many migratory seabirds and shorebirds are protected through bilateral agreements between Australia and Japan, China and the Republic of Korea, recognising the migratory route and important stopover and resting habitats of the East Asian–Australasian Flyway (EAAF). Important migratory bird habitats are also recognised as part of protected wetlands of international significance under the Ramsar Convention. Important bird areas for the NWMR, which are also recognised as global key biodiversity areas (KBAs) (BirdLife Australia[13]), include:

- Roebuck Bay KBA (and Ramsar site): internationally significant migratory shorebird species
- Mandora Marsh and Anna Plains KBA (adjacent to Eighty Mile Beach, Ramsar site) – internationally significant migratory shorebird species
- Dampier Saltworks KBA – internationally significant migratory shorebird species
- Montebello Islands KBA – shorebird and seabird species
- Barrow Island KBA – shorebird and seabird species
- Exmouth Gulf Mangroves KBA – internationally significant migratory shorebird species.

Table 9-1 lists the high and moderate occurrence threatened and migratory seabird and shorebird species (as per subject matter expert review (Worley 2024)) that occur within the NWMR, with their conservation/protected status, relevant recovery plans and conservation advice.

[13] https://www.birdlife.org.au/projects/KBA#:~:text=The%20Key%20Biodiversity%20Areas%20(KBAs,of%20advocacy%20for%20protected%20areas [Accessed 19 May 2026]

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 9-1: High and moderate occurrence seabird and migratory shorebird species (threatened/migratory/marine) identified by the EPBC Act PMST and NWMR Seabird and Shorebird Existing Knowledge and Threats report as potentially occurring within the NWMR

Species name	Common name	EPBC Act (Commonwealth) (as per PMST report Appendix A)			BC Act (WA)[14]	IUCN Red List (non-statutory)[15]	EPBC Act Part 13 statutory instrument
		Threatened status	***Migratory status***	***Listed***	***Conservation status***	***Global status***	
Seabirds							
Diomedea amsterdamensis	Amsterdam albatross	Endangered	Migratory	Marine	Critically Endangered	Endangered	National Recovery Plan for albatrosses and petrels (DCCEEW 2022) EPBC Act Threat Abatement Plan for the incidental catch (or bycatch) of seabirds during oceanic longline fishing operations (Commonwealth of Australia 2018).
Sternula nereis nereis	Australian fairy tern	Vulnerable	N/A	N/A	Vulnerable	Vulnerable	National Recovery Plan for the Australian Fairy Tern *Sternula nereis nereis* (Commonwealth of Australia 2020b) EPBC Act Threat Abatement Plan for the impacts of marine debris on the vertebrate wildlife of Australia's coasts and oceans (DoEE 2018)
Anous tenuirostris melanops	Australian lesser noddy	Vulnerable	N/A	Marine	Endangered	Least Concern	Conservation Advice *Anous tenuirostris melanops* Australian lesser noddy (Threatened Species Scientific Committee 2015e) EPBC Act Threat Abatement Plan to reduce the impacts of exotic rodents on biodiversity on Australian offshore islands of less than 100,000 ha (DEWHA 2009)
Pterodroma mollis	Soft-plumaged petrel	Vulnerable	N/A	Marine	N/A	Least Concern	Conservation Advice *Pterodroma mollis* soft-plumaged petrel (Threatened Species Scientific Committee 2015f)
Sternula albifrons	Little tern	Vulnerable	Migratory	Marine	Migratory	Least Concern	Conservation Advice for *Sternula albifrons* (little tern) (DCCEEW 2025c)

[14] Threatened and Priority Fauna List – July 2025 - https://www.dbca.wa.gov.au/management/threatened-species-and-communities (accessed on 21/05/2026).
[15] IUCN, 2026. The IUCN Red List of Threatened Species. Version 2025-2. https://www.iucnredlist.org (accessed on 21/05/2026).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species name	Common name	EPBC Act (Commonwealth) (as per PMST report Appendix A)			BC Act (WA)[14]	IUCN Red List (non-statutory)[15]	EPBC Act Part 13 statutory instrument
		Threatened status	***Migratory status***	***Listed***	***Conservation status***	***Global status***	
Onychoprion fuscatus	Sooty tern	N/A	N/A	N/A	N/A	Least Concern	EPBC Act Threat Abatement Plan to reduce the impacts of exotic rodents on biodiversity on Australian offshore islands of less than 100,000 ha (DEWHA 2009)
Sula dactylatra	Masked booby	N/A	Migratory	Marine	Migratory	Least Concern	
Ardenna pacifica	Wedge-tailed shearwater	N/A	Migratory	Marine	Migratory	Least Concern	EPBC Act Threat Abatement Plan for the incidental catch (or bycatch) of seabirds during oceanic longline fishing operations (Commonwealth of Australia 2018). EPBC Act Threat Abatement Plan for predation by feral cats (DoE 2024) EPBC Act Threat Abatement Plan for predation by the European red fox (DEWHA 2008b) EPBC Act Threat Abatement Plan for the impacts of marine debris on the vertebrate wildlife of Australia's coasts and oceans (DoEE 2018)
Ardenna carneipes	Flesh-footed shearwater	N/A	Migratory	Marine	Vulnerable	Near Threatened	EPBC Act Threat Abatement Plan for the incidental catch (or bycatch) of seabirds during oceanic longline fishing operations (Commonwealth of Australia 2018). EPBC Act Threat Abatement Plan for predation by feral cats (DoE 2024) EPBC Act Threat Abatement Plan for predation by the European red fox (DEWHA 2008b) EPBC Act Threat Abatement Plan for the impacts of marine debris on the vertebrate wildlife of Australia's coasts and oceans (DoEE 2018) EPBC Act Threat Abatement Plan for the impacts of marine debris on the vertebrate wildlife of Australia's coasts and oceans (DoEE 2018)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species name	Common name	EPBC Act (Commonwealth) (as per PMST report Appendix A)			BC Act (WA)[14]	IUCN Red List (non-statutory)[15]	EPBC Act Part 13 statutory instrument
		Threatened status	***Migratory status***	***Listed***	***Conservation status***	***Global status***	
Sula leucogaster	Brown booby	N/A	Migratory	Marine	Migratory	Least Concern	EPBC Act Threat Abatement Plan for the impacts of marine debris on the vertebrate wildlife of Australia's coasts and oceans (DoEE 2018)
Oceanites oceanicus	Wilson's storm petrel	N/A	Migratory	Marine	Migratory	Least Concern	EPBC Act Threat Abatement Plan for predation by feral cats (DoE 2024) EPBC Act Threat Abatement Plan for the impacts of marine debris on the vertebrate wildlife of Australia's coasts and oceans (DoEE 2018) EPBC Act Threat Abatement Plan to reduce the impacts of exotic rodents on biodiversity on Australian offshore islands of less than 100,000 ha (DEWHA 2009)
Onychiprion anaethetus (listed as *Sterna anaethetus)*	Bridled tern	N/A	Migratory	Marine	Migratory	Least Concern	EPBC Act Threat abatement plan for predation by the European red fox (DEWHA 2008b)
Fregata minor	Great frigatebird	N/A	Migratory	Marine	Migratory	Least Concern	N/A
Sula sula	Red-footed booby	N/A	Migratory	Marine	Migratory	Least Concern	N/A
Thalasseus bengalensis	Lesser crested tern	N/A	N/A	Marine	N/A	Least Concern	N/A
Sterna dougallii	Roseate tern	N/A	Migratory	Marine	Migratory	Least Concern	N/A
Sterna hirundo	Common tern	N/A	Migratory	Marine	Migratory	Least Concern	N/A

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species name	Common name	EPBC Act (Commonwealth) (as per PMST report Appendix A)			BC Act (WA)[14]	IUCN Red List (non-statutory)[15]	EPBC Act Part 13 statutory instrument
		Threatened status	***Migratory status***	***Listed***	***Conservation status***	***Global status***	
Puffinus assimilis	Little shearwater	N/A	N/A	N/A	N/A	Least Concern	EPBC Act Threat Abatement Plan for the impacts of marine debris on the vertebrate wildlife of Australia's coasts and oceans (DoEE 2018) EPBC Act Threat Abatement Plan to reduce the impacts of exotic rodents on biodiversity on Australian offshore islands of less than 100,000 ha (DEWHA 2009)
Anous stolidus	Common noddy	N/A	Migratory	Marine	Migratory	Least Concern	EPBC Act Threat Abatement Plan for predation by feral cats (DoE 2024)
Fregata ariel	Lesser frigatebird	N/A	Migratory	Marine	Migratory	Least Concern	
Phaethon rubricauda	Red-tailed tropicbird	N/A	Migratory	Marine	Migratory	Least Concern	
Thalasseus bergii	Greater crested tern	N/A	Migratory	Marine	Migratory	Least Concern	
Hydroprogne caspia	Caspian tern	N/A	Migratory	Marine	Migratory	Least Concern	
Calonectris leucomelas	Streaked shearwater	N/A	Migratory	Marine	Migratory	Near Threatened	
Phaethon lepturus	White-tailed tropicbird	N/A	Migratory	Marine	Migratory	Least Concern	
Phaethon lepturus fulvus	Christmas Island white-tailed tropic bird	Endangered	N/A	N/A	N/A	Data Deficient	Conservation Advice for *Phaethon lepturus fulvus* (golden bosun) (DCCEEW 2026f)
Phaethon rubricauda westralis	Red-tailed tropicbird (Indian Ocean)	Endangered	N/A	N/A	N/A	Data Deficient	Conservation Advice for *Phaethon rubricauda westralis* (Indian Ocean red-tailed tropicbird) (DCCEEW 2023h)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species name	Common name	EPBC Act (Commonwealth) (as per PMST report Appendix A)			BC Act (WA)[14]	IUCN Red List (non-statutory)[15]	EPBC Act Part 13 statutory instrument
		Threatened status	*Migratory status*	*Listed*	*Conservation status*	*Global status*	
All seabird species							Wildlife Conservation Plan for Seabirds (Commonwealth of Australia 2020a) National Light Pollution Guidelines for Wildlife (DCCEEW 2023j)
Migratory shorebirds							
Numenius madagascariensis	Eastern curlew, far eastern curlew	Critically Endangered	Migratory	Marine	Critically Endangered	Endangered	Conservation Advice *Numenius madagascariensis* Far eastern curlew (DCCEW 2023d)
Calidris ferruginea	Curlew sandpiper	Critically Endangered	Migratory	Marine	Critically Endangered	Vulnerable	Conservation Advice *Calidris ferruginea* Curlew sandpiper (DCCEEW 2023e)
Limosa lapponica menzbieri	Bar-tailed godwit (menzbieri)	Endangered	Migratory	Marine	Critically Endangered	Near Threatened	Conservation Advice *Limosa lapponica menzbieri* Yakutian bar-tailed godwit (northern Siberia) (DCCEEW 2024c)
Charadrius mongolus	Lesser sand plover	Endangered	Migratory	Marine	Endangered	Endangered	Conservation Advice *Charadrius mongolus* Lesser sand plover (Threated Species Scientific Committee 2016)
Rostratula australis	Australian painted snipe	Endangered	N/A	Marine	Endangered	Endangered	Conservation Advice *Rostratula australis* Australian painted snipe (Threatened Species Scientific Committee 2013b)
Calidris canutus	Red knot	Vulnerable	Migratory	Marine	Endangered	Near Threatened	Conservation Advice *Calidris canutus* Red knot (DCCEEW 2024d)
Calidris tenuirostris	Great knot	Vulnerable	Migratory	Marine	Critically Endangered	Endangered	Conservation Advice *Calidris tenuirostris* Great knot (DCCEEW 2024e)
Charadrius leschenaultii	Greater sand plover	Vulnerable	Migratory	Marine	Vulnerable	Least Concern	Conservation Advice *Charadrius leschenaultia* Greater sand plover (DCCEEW 2023f)
Limosa limosa	Black-tailed godwit	Endangered	Migratory	Marine	Migratory	Near Threatened	Conservation Advice for *Limosa limosa* Black-tailed godwit (DCCEEW 2024f)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species name	Common name	EPBC Act (Commonwealth) (as per PMST report Appendix A)			BC Act (WA)[14]	IUCN Red List (non-statutory)[15]	EPBC Act Part 13 statutory instrument
		Threatened status	***Migratory status***	***Listed***	***Conservation status***	***Global status***	
Limnodromus semipalmatus	Asian dowitcher	Vulnerable	Migratory	Marine	Migratory	Near Threatened	Conservation Advice for *Limnodromus semipalmatus* Asian dowitcher (DCCEEW 2024h)
Tringa nebularia	Common greenshank	Endangered	Migratory	Marine	Migratory	Least Concern	Conservation Advice for *Tringa nebularia* Common greenshank (DCCEEW 2024g)
Arenaria interpres	Ruddy turnstone	Vulnerable	Migratory	Marine	Migratory	Near Threatened	Conservation Advice for *Arenaria interpres* Ruddy turnstone (DCCEEW 2024i)
Calidris acuminata	Sharp-tailed sandpiper	Vulnerable	Migratory	Marine	Migratory	Vulnerable	Conservation Advice for *Calidris acuminata* Sharp-tailed sandpiper (DCCEEW 2024j)
Xenus cinereus	Terek sandpiper	Vulnerable	Migratory	Marine	Migratory	Least Concern	Conservation Advice for *Xenus cinereus* Terek sandpiper (DCCEEW 2024k)
Pluvialis squatarola	Grey plover	Vulnerable	Migratory	Marine	Migratory	Vulnerable	Conservation Advice for *Pluvialis squatarola* Grey plover (DCCEEW 2024l)
Pluvialis fulva	Pacific golden plover	N/A	Migratory	Marine	Migratory	Least Concern	EPBC Act Threat Abatement Plan for predation by feral cats (DoE 2024)
Calidris ruficollis	Red-necked stint	N/A	Migratory	Marine	Migratory	Near Threatened	
Numenius minutus	Little curlew	N/A	Migratory	Marine	Migratory	Least Concern	EPBC Act Threat Abatement Plan for predation by the European red fox (DEWHA 2008b)
Tringa totanus	Common redshank	N/A	Migratory	Marine	Migratory	Least Concern	N/A
Actitis hypoleucos	Common sandpiper	N/A	Migratory	Marine	Migratory	Least Concern	
Tringa stagnatilis	Marsh sandpiper	N/A	Migratory	Marine	Migratory	Least Concern	
Calidris melanotos	Pectoral sandpiper	N/A	Migratory	Marine	Migratory	Least Concern	

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species name	Common name	EPBC Act (Commonwealth) (as per PMST report Appendix A)			BC Act (WA)[14]	IUCN Red List (non-statutory)[15]	EPBC Act Part 13 statutory instrument
		Threatened status	***Migratory status***	***Listed***	***Conservation status***	***Global status***	
Tringa glareola	Wood sandpiper	N/A	Migratory	Marine	Migratory	Least Concern	
Limicola falcinellus	Broad billed sand piper	N/A	Migratory	Marine	Migratory	Vulnerable	
Limosa lapponica	Bar-tailed godwit	N/A	Migratory	Marine	Migratory	Near Threatened	
Calidris pugnax	Ruff	N/A	Migratory	Marine	Migratory	Least Concern	
Numenius phaeopus	Whimbrel	N/A	Migratory	Marine	Migratory	Least Concern	
Calidris alba	Sanderling	N/A	Migratory	Marine	Migratory	Least Concern	
Calidris subminuta	Long-toed stint	N/A	Migratory	Marine	Migratory	Least Concern	
Gallinago stenura	Pin-tailed snipe	N/A	Migratory	Marine	Migratory	Least Concern	
Gallinago megala	Swinhoe's snipe	N/A	Migratory	Marine	Migratory	Least Concern	
Glareola maldivarum	Oriental pratincole	N/A	Migratory	Marine	Migratory	Least Concern	
Charadrius veredus	Oriental plover	N/A	Migratory	Marine	Migratory	Least Concern	
Tringa brevipes	Grey-tailed tattler	N/A	Migratory	Marine	Migratory and Priority species	Near Threatened	
All migratory shorebird species							Wildlife Conservation Plan for Migratory Shorebirds (Commonwealth of Australia 2015c) EPBC Act Policy Statement 3.21 – Industry guidelines for avoiding, assessing and mitigating impacts on EPBC Act listed migratory shorebird species (DoEE 2017) National Light Pollution Guidelines for Wildlife (DCCEEW 2023j)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species name	Common name	EPBC Act (Commonwealth) (as per PMST report Appendix A)			BC Act (WA)[14]	IUCN Red List (non-statutory)[15]	EPBC Act Part 13 statutory instrument
		Threatened status	*Migratory status*	*Listed*	*Conservation status*	*Global status*	
Other marine birds							
Apus pacificus	Fork-tailed swift	N/A	Migratory	Marine	N/A	Least Concern	None
Pandion haliaetus	Osprey	N/A	Migratory	Marine	N/A	Least Concern	None

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

9.2 Seabirds in the NWMR

Seabirds are birds that are adapted to life within the marine environment (oceanic and coastal). They are generally long-lived, have delayed breeding and have fewer young than other bird species (Commonwealth of Australia 2020a).

At least 27 key seabird species (high and moderate occurrence as per Worley (2024), or listed as threatened or migratory under the EPBC Act as identified in the PMST reports in Appendix A) are known to occur in the NWMR. These include various species of terns, noddies, petrels, shearwaters, frigatebirds and boobies.

Seabird species can be grouped into pelagic and nearshore seabirds, based on life cycle behaviour, distributions and key habitats (Worley 2024). Pelagic species spend most of their life at sea, ranging over large distances to forage. These pelagic species only come onshore to breed and raise chicks at natal or high-fidelity breeding colonies. These colonies are often on remote, offshore island locations in and adjacent to the NWMR. Many species are ecologically significant to the NWMR as they are endemic to the region, can be present in large numbers in breeding seasons and non-breeding seasons, and many exhibit extensive annual migrations that include marine areas outside the Australian EEZ (DSEWPaC 2012d). Nearshore seabirds are confined to nearshore areas (unless migrating), have shorter foraging trips during breeding, and may rest on land or shoreline habitats outside of breeding periods (Worley 2024).

The presence of seabirds within the NWMR is influenced by seabird species that migrate and forage in the area during the non-breeding season, including many seabird species that breed on the Houtman Abrolhos Islands in the SWMR. Pelagic seabirds have been documented foraging at current boundaries and seasonal upwellings within the NWMR (Sutton *et al*. 2019). The Houtman Abrolhos Islands National Park in the SWMR is one of the most significant seabird breeding locations in the eastern Indian Ocean. Sixteen species of seabirds breed there; 80% of common (brown) noddies, 40% of sooty terns and all the lesser noddies found in Australia nest at the Houtman Abrolhos (Surman 2019). Important seabird areas in the NWMR are as identified by the KBAs (see Section 9.1), EPBC Act Bioregional BIAs and subject matter expert review, as presented in Worley (2024).

9.2.1 High-occurrence key seabird species

Species descriptions for high occurrence key seabird species are provided in the next subsections. High occurrence seabird species were defined as those with breeding and foraging aggregations known to occur within the NWMR (Worley 2024).

9.2.1.1 Australian fairy tern (nearshore seabird)

The Australian fairy tern (*Sternula nereis nereis*) is listed as vulnerable under the EPBC Act. The WA breeding population (about 5,000 to 6,000 mature individuals) is dispersed over about 2,500 km of coastline (Greenwell 2021). Within WA, the subspecies comprises a sedentary Pilbara population and a partially migratory population extending from Exmouth to Point Malcolm. Individuals of the partially migratory population may occasionally migrate into the southern region of the NWMR during winter months.

Within the NWMR breeding occurs in small colonies between June and September on offshore islands, including Simpson Island, Barrow Island, the Montebello Islands, the Lowendal Islands, Thevenard Island, Serrurier Island, the islands in the Dampier Archipelago, Maryanne Shoals and Egret Island (Dunlop 2018; Johnstone *et al*. 2013; Surman pers obs.). Colonies tend to occupy areas rather than fixed sites, and nest sites can be abandoned after one or more years, even if they have been successful (Saunders and de Rebeira 1985).

While information regarding foraging ecology of this species within the NWMR is lacking, the Australian fairy tern has been studied in SA. Here, the species typically forages in inshore waters and has been reported to rarely travel beyond 2 km during the breeding season in SA (Paton and Rogers 2009).

Australian fairy terns are diurnal plunge diving seabirds, feeding exclusively on small (<60 mm) surface-schooling bait fishes throughout their range. Prey includes species of sprats, hardy heads and larval prey of some demersal fish species. Unlike many other terns, fairy terns do not depend on large pelagic fishes to drive their prey to the surface.

Breeding BIAs are identified for the fairy tern in the NWMR, as presented in Figure 9-1.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

9.2.1.2 Australian lesser noddy (pelagic seabird)

The Australian lesser noddy (*Anous tenuirostris melanops*), which is endemic to Australia, is listed as vulnerable under the EBPC Act and endangered under the BC Act. The largest breeding colonies are found on the Houtman Abrolhos Islands, with fewer records of breeding on Ashmore Reef (Clark *et al.* 2011; Cannell and Surman 2021). Possible colonisation of Cocos (Keeling) Island is reported, but it is unconfirmed if this is the Australian subspecies (Stokes and Hinchey 1990).

At the Houtman Abrolhos Islands, the breeding population has been estimated at about 50,000 breeding pairs (Surman *et al.* 2016). At this location, studies indicate breeding is not highly synchronised; the single egg clutches were laid over a 102-day period from late August to early December, peaking in September (Surman and Wooller 1995). The incubation period averaged 34 days and the fledging period 40 days (Surman and Wooller 1995).

Studies of foraging ecology of breeding Australian lesser noddies at the Houtman Abrolhos Islands found they are largely diurnal, foraging between 4 am and 8:40 pm and returning to their colony at night (Surman *et al.* 2017). From this study, the global positioning system tracks of 17 adults during incubation or chick provisioning revealed most foraging trips lasted between two and four hours with a total trip distance of less than 40 km. However, some trips lasted up to 16 hours covering distances of up to 112 km (Surman *et al.* 2017). During non-breeding, birds appear to remain near the breeding islands year-round (Higgins and Davies 1996).

Due to differences in climate and seasonality experienced at the Houtman Abrolhos Islands and Ashmore Reef, timing of breeding differs. The Ashmore Reef population has been recorded breeding in the Austral autumn/winter (Clarke and Herrod 2016), while the Houtman Abrolhos Islands population breeds during the Austral spring/summer (Surman and Wooller 1995).

No BIAs for the Australian lesser noddy overlap the NWMR and tracking data suggest individuals breeding at the Houtman Abrolhos Islands foraged predominantly in a south-westerly direction, remaining within waters of the SWMR (Surman *et al.* 2017). Several individuals were observed roosting with common noddies on Bernier Island, near Carnarvon in 2022 (Nicholson pers obs.). However, it is unlikely waters of the NWMR provide significant habitat for individuals breeding at the Houtman Abrolhos Islands. The small population of this subspecies breeding on Ashmore Reef may show similar foraging ecology during breeding and remain in the vicinity of the islands, using habitats of the NWMR.

9.2.1.3 Bridled tern (pelagic seabird)

The bridled tern (*Onychiprion anaethetus*, listed as *Sterna anaethetus*) is listed as migratory under the EPBC Act and BC Act. It is a common summer breeding visitor to the NWMR between September and April, especially around Dampier Archipelago and the Montebello Islands (Johnstone *et al.* 2013). Breeding has also been reported on the Lowendal Islands (Nicholson 2002), Passage Islands and islands off Onslow from November to March (Johnstone *et al.* 2013). Small breeding populations have also been recorded on East Island at Ashmore Reef between April and November and the Lacapede Islands (Clarke and Herrod 2016; Johnstone and Storr 1998).

The migration and local movements of breeding birds within the NWMR are poorly defined; two individuals were tracked departing the Houtman Abrolhos islands in April/May, transiting along the continental shelf waters before departing Australian waters and migrating towards the Western Celebes Sea, east of Borneo (Surman *et al.* 2018). These individuals departed the Western Celebes Sea in August/September, returning to the Houtman Abrolhos islands around 14 days later (Surman *et al.* 2018). This species has been regularly recorded on the continental shelf up to 70 km away from breeding locations during oceanic surveys (Surman and Nicholson 2011; Dunlop *et al.* 2001).

Bridled terns feed diurnally on a range of species of fish, crustaceans, cephalopods and insects. In Australia, they feed almost entirely on fish, though they also take crustaceans and aquatic insects. They often feed on schools of fish forced to the surface by other predators (Dunlop 1997). Bridled terns forage mainly by contact dipping, with birds hovering or gliding near the surface of the sea and swooping down and immersing only the head and breast when attacking prey, which are usually taken from the top few centimetres of the sea surface (<20 cm) (Dunlop 1997).

During breeding at Penguin Island, WA, individuals foraged most commonly between 20 km and 40 km from the nearest breeding colony, though some were observed at distances up to 80 km (Dunlop 1997). This species has also been recorded within 70 km of its breeding colonies within the NWMR, on outer continental shelf waters (Nicholson 2002; Dunlop *et al.* 2001).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Although foraging may be concentrated around breeding colonies during the breeding season, no BIAs in the NWMR have been identified for this species.

9.2.1.4 Brown booby (pelagic seabird)

The brown booby (*Sula leucogaster*) is listed as migratory under the EPBC Act and BC Act. It is a cosmopolitan species with a pan-tropical distribution. Within the NWMR, large colonies occur at offshore islands, including the Lacepede Islands (17,000 pairs, Mustoe and Edmunds 2008), Ashmore Reef (5,000 pairs at Middle Island and 3,000 pairs at East Island in 2007, Swann 2005a; Swann 2005b; Swann 2005c; Milton 2005; Clarke 2010), Bedout Island (1,000 pairs) and Adele Island (7,500 pairs, Burbidge *et al*. 1987). Small colonies of up to ten pairs have been recorded at Overhanging Rock, within the Lowendal Islands (Nicholson pers obs.). The total breeding population in the Australian region in 1996–97 was estimated at 59,940 to 73,900 pairs (WBM Oceanics and Claridge 1997).

Brown boobies do not migrate far from their breeding islands, rarely dispersing more than 240 km from their natal colony (Dunlop *et al.* 2001). Brown boobies forage within 50 km of their colony where they plunge dive, reaching up to 15 m depth and pursuing their prey when ascending after the dive (Austin *et al.* 2021). Brown booby diet is principally medium to large surface schooling prey (northern pilchard, Indian anchovy, flying fish and cephalopods), often associated with feeding tunas and mackerels (Cannell *et al.* 2022; Austin *et al.* 2021).

Brown boobies are not prone to waterlogging and will roost on the sea surface, and are known to form large aggregations on oil and gas platforms throughout the NWMR (Surman pers obs.), including Woodside facilities, indicating wider distribution of non-breeding individuals across the NWMR.

Breeding BIAs for the brown booby in the NWMR are associated with breeding colonies on Ashmore Reef, Adele Island, White Island, Lacepede Islands and Bedout Island (Figure 9-2). Breeding is reported as occurring between January and March, but this becomes protracted through to October at Ashmore Reef (Clarke *et al.* 2016). Brown boobies are resident in the NWMR throughout the year, although they may forage long distances over the open ocean (Surman and Nicholson 2011).

9.2.1.5 Caspian tern (nearshore seabird)

The Caspian tern (*Hydroprogne caspia*) is listed as migratory under the EPBC Act and BC Act. It is moderately common across coastlines of the NWMR and offshore islands (Johnstone *et al.* 2013).

Breeding occurs as solitary nests or in colonies of up to 52 breeding pairs, mainly on islands, including North Turtle Island, Dampier Archipelago including Enderby Island, and Frazer Island, and occasionally on mainland coasts, such as Cape Preston and North West Cape, from late March to early November (Johnstone *et al.* 2013).

During breeding, adults can forage up to 60 km from the colony to catch fish and meet their elevated energetic requirements at this time (Burger *et al.* 1996; Balance *et al.* 2008). The Caspian tern is a diurnal forager, with the length and frequency of foraging trips, as well as relative time spent foraging or attending chicks, changing with food resource availability (Dunlop and McNeill 2017).

Caspian terns usually forage in shallow, sheltered waters by plunge-diving for various prey species (Serventy *et al.* 1971).

Although foraging BIAs occur in the SWMR, no BIAs for this species have been identified in the NWMR.

9.2.1.6 Common noddy (pelagic seabird)

The common (or brown) noddy (*Anous stolidus*) is listed as migratory under the EPBC Act and BC Act. The species is widespread in tropical and subtropical areas within and beyond Australia. This seabird species is gregarious and normally occurs in flocks, up to hundreds of individuals, when feeding or roosting.

The Houtman Abrolhos is the primary breeding habitat for the common noddy in the eastern Indian Ocean, although breeding occurs across offshore islands of the NWMR, albeit in fewer numbers, including Bedout Island, Montebello Islands and Frazer Island (Johnstone *et al.* 2013), and Ashmore Reef (Clark and Herrod 2016). Breeding at Ashmore Reef has been recorded as occurring between April and November (Clark and Herrod 2016).

During breeding, individuals nesting on Lancelin Island in the SWMR were found to forage diurnally (Shephard *et al.* 2018). Tracked individuals travelled an average of 97 km from the colony, with an average

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

round-trip distance of 141 km, with significantly longer trips during chick rearing compared to incubation (Shephard *et al.* 2018).

The species is highly pelagic outside breeding (March to August), with breeding individuals of the Houtman Abrolhos Islands travelling about 950 km north to the NWMR (Surman *et al.* 2017). The species is often reported roosting on uncrewed oil and gas platforms within the NWS and Timor Sea (Surman pers obs. 2021).

Although widespread across the NWMR during breeding and non-breeding, no BIAs for this species are in the NWMR.

9.2.1.7 Frigate birds (pelagic seabirds)

The lesser (*Fregata ariel*) and great frigatebirds (*Fregata minor*) are both listed as migratory under the EBPC Act and BC Act. They are the most widely distributed of the frigatebirds, with a pan-tropical distribution.

In the NWMR the great frigatebird nests at Ashmore Reef and Adele Island. At Ashmore Reef they are found to breed year-round (Clark and Herrod 2016). In addition to Ashmore Reef and Adele Island, the lesser frigatebird also nests at Cartier Island, the Lacepede Islands and Bedout Island, which is thought to support more than 1% of the world's breeding population (BirdLife International 2021). On Ashmore Reef the species breeds in the Austral winter (Clark and Herrod 2016).

Great frigatebirds breeding in the South China Sea on average foraged 75 km (maximum 150 km) from their breeding colony and lesser frigatebirds 123 km (maximum 300 km) (Mott *et al.* 2017).

Outside of breeding, frigatebirds may disperse significant distances from their breeding colonies (Mott *et al.* 2017). Great frigatebirds are wide ranging, being recorded between 900 and 1,400 km from their natal colonies (Dunlop *et al.* 2001). Tracking studies of non-breeding lesser and great frigatebirds roosting on Ashmore Reef and Adele Island demonstrated that individuals have large distributions, including Australian coastal waters and the South China, Java and Sulu Seas and the Gulf of Thailand (Mott *et al.* 2021). During the wet season particularly, Australian waters provided optimal habitat for non-breeding individuals of both species (Mott *et al.* 2021).

Both frigatebirds forage by snatching prey from the surface waters, or when prey break the surface. They also rely heavily upon kleptoparasitism, harrying other seabirds returning to their colonies with food until it is regurgitated. Frigatebirds are susceptible to waterlogging, so do not plunge or splash dive for prey nor do they roost on the seas surface. Across the NWMR they forage on flying fish, cephalopods, anchovies, northern pilchards and other medium sized prey (8 to 30 cm, Surman pers obs.).

Breeding BIAs for the great frigatebird in the NWMR are associated with breeding colonies on Ashmore Reef and Adele Island (Figure 9-3). For the lesser frigatebird, breeding BIAs are associated with breeding colonies on Ashmore Reef, Adele Island, White Island, Lacepede Islands and Bedout Island (Figure 9-4).

9.2.1.8 Greater crested tern (nearshore seabird)

The greater crested tern (*Thalasseus bergii*) is listed as migratory under the EPBC Act and BC Act. The species is widespread along coastlines of the NWMR and offshore islands (Johnstone *et al.* 2013).

Many populations remain sedentary in their breeding areas or disperse locally (del Hoyo *et al*. 1996), although some are more migratory (Urban *et al*. 1986). The species breeds in large, dense colonies, or in small groups of fewer than ten pairs amid colonies of other species, such as silver gull (del Hoyo *et al.* 1996). Colonies are on islands, including those as far offshore as Bedout, Legendre and the Montebello and Lowendal islands (Johnstone *et al.* 2013). Adult breeders have shown both high site fidelity and flexibility in their breeding localities, depending upon the spatial and temporal reliability of food resources (Crawford *et al.* 2002).

Breeding occurs from late March to May (Johnstone *et al.* 2013). During breeding, greater crested terns conduct short, diurnal foraging trips near (<40 km) the colony (Surman and Wooller 2003; Rock *et al.* 2007; McLeay *et al.* 2010), with most foraging behaviour displayed by individuals at distances >5 km (McLeay *et al.* 2010). Further, crested terns require limited nesting material, thus forage near breeding sites for such materials (Surman *et al.* 2025).

The chicks are predominantly fed pelagic fish, a diet that varies among colonies and years (Chiaradia *et al.* 2002; McLeay *et al.* 2009). Adults may forage more widely on inshore reef fish (Surman and Wooller 2003), crustaceans and cephalopods using a plunge diving method (Commonwealth of Australia 2020a).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Although there is known habitat use in the NWMR, there are no designated BIAs for the greater crested tern in the NWMR.

9.2.1.9 Lesser crested tern (nearshore seabird)

The lesser crested tern (*Thalasseus bengalensis*) is listed as marine under the EPBC Act and is known to breed on islands in the NWMR. This species inhabits sandy and coral coasts and estuaries and breeds on low-lying offshore islands. It forages for small pelagic fish and shrimps in the surf and offshore waters Commonwealth of Australia 2020.

This species has been recorded nesting regularly at the Lowendal Islands, with up to 200 pairs recorded among larger colonies of crested terns. The lesser crested tern has also been recorded nesting on Stena Island in the Kimberley region, Bedout Island in the Pilbara region, and may nest at the Montebello Islands. There are also breeding records for Ashmore Reef and Low Rocks and Adele Islands in the Kimberley (DSEWPaC 2012d).

Breeding BIAs across the NWMR are associated with known breeding colonies on islands (Figure 9-5).

9.2.1.10 Little shearwater (pelagic seabird)

The little shearwater (*Puffinus assimilis*) is listed as marine under the EPBC Act. This bird is typically sedentary and recluse and prefers feeding further offshore than similar birds. Breeding occurs in islands off southern WA, between Recherche Archipelago and the Houtman Abrolhos group. During the Australian summer, the little shearwater nests on grassy slopes and forests in self-excavated burrows or rock crevices among boulders (Kirwan *et al.* 2020).

A foraging BIA for this species is in the southern extent of the NWMR (Figure 9-6).

9.2.1.11 Little tern (nearshore seabird)

The little tern (*Sternula albifrons*) is listed as migratory under the EPBC Act and BC Act. There are three subpopulations of little tern in Australia and two of these are in the NWMR – the northern Australian breeding subpopulation occurring around Broome and extending across the NWMR to Cape York, and an east Asian breeding subpopulation, with the terns present from Shark Bay to south-eastern Queensland during the Austral summer.

Recent surveys have found little terns breed across the NWMR in small colonies (Surman pers obs.). However, identification between subpopulations is difficult, and population estimates have high error due to the overlapping range and remote breeding sites of the northern populations. A southwards movement of breeding distribution has been noted at three key locations: Lowendal Islands (Surman pers comm.), Burrup Peninsula (Nicholson pers comm.) and North West Cape (Greenwell and Dunlop 2021). Little terns usually forage near their breeding colonies, typically within 5 km (Bertolero *et al.* 2005) mainly on small fish (<10 cm in length), but they also eat crustaceans, insects, annelids and molluscs.

Little is known about the breeding and foraging ecology of little terns, but BIAs for foraging and resting have been identified across the NWMR (Figure 9-7), with a peak in breeding activity between June and October.

9.2.1.12 Masked booby (pelagic seabird)

The masked booby (*Sula dactylatra*) is listed as migratory under the EBPC Act. Within the NWMR, the subspecies *Sula dactylatra bedouti* ranges from the Dampier Archipelago, along the entire coast into the NMR and across to Queensland (Merchant and Higgins 1990). Individuals have also been recorded at Barrow Island.

Within the NWMR, Bedout and Adele islands represent the main breeding locations, with 400 and 320 breeding pairs estimated at each, respectively (Marchant and Higgins 1990; Swann *et al.* 2002). Breeding is also reported at the Ashmore Reef group, with up to 30 breeding pairs recorded on Middle Island and 15 pairs on East Island (Burbidge and Fuller 1996; Hassell *et al.* 2003; Swann 2005a; Swann, 2005b; Swann 2005c; Milton, 2005; Clarke 2010; Clarke *et al.* 2016). Up to two pairs have also been recorded breeding in the Lacepede group (Hassell *et al.* 2003).

A recent study of individuals from Bedout Island indicated low genetic exchanges (mitochondrial genes) with other masked booby colonies currently studied, suggesting a dependence on local recruitment for population persistence (Kingsley *et al.* 2019). Further, the low exchange of mitochondrial genes may reflect high breeding site fidelity and limited foraging distances during the breeding season. Due to the concentration in a

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

relatively small number of areas to breed, any catastrophe at these sites (such as oil spills, or disturbance and vandalism of nests) could have a substantial impact on the population (Birds Australia 2005).

Studies of foraging behaviour of individuals breeding within the NWMR are lacking, but studies at other locations indicate foraging is diurnal and ranges vary between 100 and 200 km of the breeding colony (Weimerskirch *et al.* 2008).

There are no BIAs for this species in the NWMR.

9.2.1.13 Red-footed booby (pelagic seabird)

The red-footed booby (*Sula sula*) is listed as migratory under the EPBC Act and BC Act. Compared to brown boobies, the red-footed booby occurs in fewer numbers across the NWMR. Within the NWMR they breed at Ashmore Reef (up to 100 pairs, Clarke and Herrod 2016) and Adele Island (14 pairs, Botle et al. 2004). At Ashmore Reef they have been recorded breeding year round (Clarke and Herrod 2016).

The red-footed booby is one of the most widely distributed of the boobies across oceanic waters in the tropical Indian Ocean; during non-breeding, individuals have been observed up to 800 km from their natal colony (Dunlop *et al.* 2001). However, individuals are limited to a range of 150 km from the breeding colony when breeding (Wiemerskirsch et al. 2005). In the Ashmore area, adults have been detected up to 125 km from the nearest breeding islands during October (unpubl. data, referenced in Clarke and Herrod 2016).

Red-footed boobies are diurnal foragers, plunge diving for flying fishes (predominantly) across their range (Commonwealth of Australia 2020a). Breeding BIAs for the red-footed booby are associated with breeding colonies at Ashmore Reef and Adele Island (Figure 9-8).

9.2.1.14 Red-tailed tropicbird (pelagic seabird)

The red-tailed tropic bird is listed as endangered (since December 2023) under the EPBC Act and 'Priority 4' under the BC Act.

Across the NWMR, the largest population breeds on Christmas Island (1,400 to 2,000 pairs, references within Sommerfeld *et al.* 2015) with additional key breeding locations on Cocos (Keeling) group and islands of Ashmore Reef Marine Park (17 to 24 breeding pairs, Clarke *et al.* 2011; Clarke and Herrod 2016). At Ashmore Reef, breeding pairs were observed year-round, with no discernible peak in breeding activity (Clarke *et al.* 2011). The species nests on islands, stacks, atolls, cays or coastal cliffs (DCCEEW 2023h).

The red-tailed tropicbird is a shallow diving species typically foraging diurnally within the first 4 m of the water column (LeCorre 1997). There is limited information about foraging range when breeding in Australia, but observations at sea in the Ashmore Reef region demonstrate they can forage considerable distances from land (unpubl. data, Clarke 2010). This corroborates data from elsewhere in their global range, which reported foraging distances of 240 km during incubation, 109 km during chick rearing and maximum distances of 380 km (Fayat *et al.* 2023). This species has been observed during boat surveys of the outer shelf of the NWMR year round (Surman and Nicholson 2011).

There are no BIAs for this species within the NWMR.

9.2.1.15 Roseate tern (nearshore seabird)

The roseate tern (*Sterna dougallii*) is listed as migratory under the EPBC Act and BC Act. This species is generally subtropical in distribution and there are many breeding populations in the NWMR, including Ashmore Reef, Bonaparte Archipelago, Lacepede Islands, Dampier Archipelago and the Lowendal Islands.

The largest roseate tern breeding colony in WA is in the Houtman Abrolhos Islands (Surman and Nicholson 2009), with roseate terns requiring limited nesting material, thus foraging near breeding sites for nesting materials (Surman *et al.* 2025). Large colonies breed within the Lowendal Islands and Montebello Islands region where there is a stronghold for this species (Higgins and Davies 1996). A large breeding colony has also been recorded on Goodwyn Island on the Dampier Archipelago (Higgins and Davies 1996). Peak breeding times across the NWMR are between May and August.

Birds are known to usually move away from breeding colonies after breeding, but their non-breeding range is not well defined (Higgins and Davies 1996). Many non-breeding roseate terns have been observed at several remote locations in the Kimberley, high numbers are also recorded at the Eighty Mile Beach Ramsar site (Surman pers obs.).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Roseate terns will forage diurnally, up to 60 km from their colonies and always over deeper shelf waters rather than shallow coastal areas (Surman and Wooller 2003). Roseate terns will also readily raft (roost in flocks on the sea surface) after foraging episodes (Commonwealth of Australia 2020).

Roseate terns predominantly eat small pelagic fish taken by plunge diving or surface dipping, typically foraging in dense flocks overflying predatory fishes that push their prey to the surface. Roseate terns may plunge to 20 cm depth.

Breeding BIAs across the NWMR are associated with known breeding colonies on islands, while a resting BIA encompasses Eighty Mile Beach (Figure 9-9).

9.2.1.16 Sooty tern (nearshore seabird)

The sooty tern (*Onychoprion fuscatus*) inhabits tropical and subtropical oceans around the world and nests on remote islands that have limited human interaction. This species lives on the wing and remains airborne for years at a time between fledging and its first breeding, never returning to land during the nonbreeding seasons nor observed resting on the water. Sooty tern breeding colonies are dense, with pairs generally nesting on the ground in sandy substrate or sparse vegetation. In contrast to most terns who feed by plunge diving, the sooty tern forages by 'dipping' or merely brushing the surface of the water or by snatching small fish in midair as they escape from predators (Schreiber *et al.* 2020).

The sooty tern has a foraging BIA overlapping the southern extent of the NWMR (Figure 9-10).

9.2.1.17 Wedge-tailed shearwater (pelagic seabird)

The wedge-tailed shearwater (*Ardenna pacifica*) is listed as migratory under the EPBC Act and BC Act. It is a pelagic, marine seabird known from tropical and subtropical waters. Its distribution is widespread across the Indian and Pacific oceans, with a global population of 2.6 million pairs. Of this, about one million pairs breed in Australia, most of which do so on islands in WA between Rottnest Island in the south to Ashmore Reef in the north. The largest breeding populations are at the Houtman Abrolhos (600,000 pairs – Surman and Nicholson 2009), and throughout the NWS region of the NWMR, where large populations exist on Muiron Islands (300,000 pairs) and Serrurier Island (60,000 pairs) (Surman and Nicholson 2009; 2015).

Adults are absent from their breeding colonies during the interbreeding period and return from their tropical Indian Ocean overwintering grounds from late-June onwards to re-excavate their burrows. This species is highly synchronous in timing of breeding; all eggs within a colony are laid within a ten-day period. They lay their single egg during early-November, which is then incubated until the chick hatches (after 53 days) in early-January. Once hatched, adults leave the burrows to forage locally during the day, returning at night to feed chicks until they are ready to fledge (Nicholson 2002). Due to the high synchronicity in egg laying, fledging is restricted to the first two weeks of April (Nicholson 2002).

Breeding behaviours are nocturnal in wedge-tailed shearwaters. Adults return to and depart the colony at night and fledglings depart the colony at night. In the lead-up to fledging, chicks also leave their burrows to exercise their wings. Adults may not return to feed chicks each night; wedge-tailed shearwaters breeding on Muiron Island (north) undertook extensive foraging trips during the incubation period (1,200 to 1,400 km) and shorter trips during chick rearing (<300 km, Cannell *et al.* 2019). Longer foraging trips took individuals in a north-west direction offshore towards oceanic seamounts. Conversely, the shorter trips tended to include waters to the west and north-west of the Muiron Islands (Cannell *et al.* 2019). In addition to the Muiron Islands, this dual foraging strategy, whereby parents alternate or mix short and long trips, have been recorded in wedge-tailed shearwaters breeding at Heron Island in Queensland, Lord Howe Island in Tasmania (Peck and Congdon 2005), and New Caledonia (Weimerskirch *et al.* 2020). However, divergent foraging strategies have been detected between colonies, which is linked to the proximity of colonies to high-productivity waters (Peck and Congdon 2005; Weimerskirch *et al.* 2020).

While the presence of squid and lanternfish in their diet (Surman and Nicholson 2009) suggests nocturnal foraging occurs in this species, global positioning system tracking studies found foraging activities at sea were more frequent during the day compared with at night (Weimerskirch *et al.* 2020; Catry *et al.* 2009). During the day, resting periods on the sea surface were short whereas at night individuals spent a large proportion of their time resting at the surface (Weimerskirch *et al.* 2020). Other prey species include schooling bait fishes and cephalopods, often feeding in association with other pelagic seabird species such as sooty terns and common noddies, and pelagic fishes such as tunas and mackerels. Diet composition is likely to vary between colonies, depending upon the prey available, and thus determining both the foraging strategy, as described above, and the division of nocturnal and diurnal foraging. Wedge-tailed shearwaters

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

dive between 3 and 66 m, actively pursuing prey by feeding at the surface or by actively swimming below bait schools.

Post-breeding, wedge-tailed shearwaters breeding on the Houtman Abrolhos Islands and Varanus Island migrated 4,500 km north-west to equatorial waters of the Indian Ocean around 90°E (Surman *et al.* 2018), traversing the NWMR, and those from the Great Barrier Reef migrated to the northern hemisphere, about 6,000 km northwards to Micronesia (McDuie and Congdon 2016).

Wedge-tailed shearwaters are observed during breeding across all shelf waters and are the most frequently encountered seabird at sea. Large numbers of wedge-tailed shearwaters have been observed foraging off the NWS between May and August (Surman pers obs.).

Breeding BIAs are located for the wedge-tailed shearwater across the NWMR (Figure 9-11). It is noted both breeding and foraging BIAs represent foraging habitat used by adult (chick-rearing) wedge-tailed shearwaters during the breeding season.

9.2.1.18 White-tailed tropicbird (pelagic seabird)

The white-tailed tropicbird (*Phaethon lepturus*) is listed as migratory under the EPBC Act and BC Act. The species breeds across many sites, but in low numbers (Commonwealth of Australia 2020). In Australia, between 6,000 and 12,000 pairs nest on Christmas Island, with smaller fragmented populations at North Keeling Island (40 pairs). These individuals are expected to be members of the Christmas Island white-tailed tropicbird subspecies *Phaethon lepturus fulvus*. While individuals of this subspecies can forage at great distances from colonies (see below), the numbers occurring in the NWMR are expected to be low.

In the NWMR, the white-tailed tropicbird is known to nest on Ashmore Reef and the Rowley Shoals (ten breeding pairs and up to three nesting pairs; Clark 2010; Burbidge *et al.* 1996, respectively). Breeding can occur year round (Clarke and Herrod 2016).

Pennycuick *et al.* (1990) demonstrated that the white-tailed tropicbirds breeding in Puerto Rico foraged up to 89 km from the nest site when breeding and moved considerably larger distances when not breeding. Dunlop *et al.* (2001) observed birds from Christmas Island foraging singly between 1,400 and 1,600 km south-east of Christmas Island.

This species regularly roosts on the sea surface between bouts of foraging. It is a solitary forager, rarely feeding in association with other seabird species and always in waters favourable for its principal prey, flying fish (Santos *et al.* 2018). The species is a surface forager that occasionally undertakes shallow dives (Marchant and Higgins 1990).

There are breeding BIAs associated with nesting occurring at the Rowley Shoals and Ashmore Reef within the NWMR (Figure 9-12).

9.2.2 Moderate-occurrence key seabird species

Table 9-2 summarises descriptions for moderate occurrence key pelagic and nearshore seabird species.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 9-2: Species summary for moderate occurrence pelagic and nearshore seabird species within the NWMR

Species	NWMR presence	Predominant feeding behaviour	Diet
Amsterdam albatross	Year-round low-density presence associated with foraging breeding and non-breeding individuals	Diurnal and nocturnal Dipping, surface-seizing, diving to depths ≥2 m	Squid, fish and crustaceans
Flesh-footed shearwater	Non-breeding, migration: Jun to Aug	Diurnal and nocturnal Pursuit-plunging, surface-seizing	Fish, cephalopods
Soft-plumaged petrel	Non-breeding, migration: Jan to Jun	Diurnal and nocturnal Dipping, surface-seizing	Crustaceans, fish
Streaked shearwater	Non-breeding: Dec to Apr	Diurnal and nocturnal Surface-seizing	Fish, squid, crustacean
Wilson's storm petrel	Non-breeding: Jun to Dec	Diurnal and nocturnal Dipping, surface-seizing	Crustaceans, fish
Common tern	Non-breeding: Aug to Mar	Diurnal Surface-plunging, dipping	Fish
Christmas Island white-tailed tropicbird	Year-round low-density presence associated with foraging breeding and non-breeding individuals	Diurnal Surface-plunging, dipping; aerial foraging over open ocean	Fish, squid, crustaceans

9.2.3 Biologically important areas for seabirds

A review of the Australian Marine Spatial Information System (Geoscience Australia 2026) identified BIAs representing important life cycle stages and behaviours for nine species of seabird in the NWMR. These are presented in Table 9-3.

The NWMR is important for multiple oceangoing and nearshore seabird species, as described in the preceding sections. DCCEEW is actively updating BIAs, with revisions to the datasets occurring in June 2024, January 2025 and December 2025 (DCCEEW 2025b) for a range of these seabird species. These BIA revisions have removed all foraging BIAs for seabirds throughout the NWMR. It is noted many of the listed seabird species do forage in the region. Refer to the detailed species descriptions, particularly with note to the pelagic (oceangoing) wedge-tailed shearwater (Section 9.2.1.1) and nearshore, residential tern species that have foraging BIAs listed in the SWMR (Section 9.2.1.1).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 9-3: Seabird BIAs within the NWMR

Seabird species	Woodside activity area			BIAs		
	Browse	***NWS/ Scarborough***	***North West Cape***	***Foraging***	***Breeding***	***Resting***
Australia fairy tern	-	✓	✓	No foraging BIAs in the NWMR Foraging in high numbers: the BIA is in the SWMR, including the Houtman Abrolhos Islands	Pilbara and Gascoyne coasts and islands, including Dampier Archipelago, Montebello, Lowendal and Barrow island groups, south Ningaloo and Bernier Island of Shark Bay	-
Brown booby	✓	✓	-	-	Kimberley and northern Pilbara coasts and islands, including Ashmore Reef, Eighty Mile Beach, Lacepedes, Adele Island and North Kimberley	-
Greater frigatebird	✓	-	-	-	Kimberley coast, including Ashmore Reef and Adele Island	-
Lesser frigatebird	✓	✓	-	-	Kimberley and northern Pilbara coasts and islands, including Ashmore Reef, Eighty Mile Beach, Lacepedes and Adele Island	-
Lesser crested tern	✓	✓	✓	-	Islands off the north and west Kimberley, and Bedout Island, Lowendal Islands, Thevenard Island and island off Dirk Hartog	-
Little shearwater	-	-	✓	From Kalbarri to Eucla, including offshore waters	-	-
Little tern	✓	✓	-	-	Kimberley and northern Pilbara coasts and islands, including Ashmore Reef, Scott Reef, Roebuck Bay, Rowley Shoals and Adele Island	Adele Island, Ashmore Reef, Scott Reef and Roebuck Bay
Red-footed booby	✓	-	-	-	Ashmore Reef and Adele Island	-

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Seabird species	Woodside activity area			BIAs		
	Browse	***NWS/ Scarborough***	***North West Cape***	***Foraging***	***Breeding***	***Resting***
Roseate tern	✓	✓	✓	No foraging BIAs in the NWMR Foraging (provisioning young) and foraging BIAs located in the SWMR – Houtman Abrolhos Islands, the nearest BIA to the NWMR	Kimberley, Pilbara and Gascoyne coasts and islands, including Ashmore Reef, Dampier Archipelago, Montebello, Lowendal and Barrow island groups, south Ningaloo and barrier island of Shark Bay	Eighty Mile Beach
Sooty tern	-	-	✓	Foraging – Timor Sea out to 14º30, off north-west coast from Lacepede Island south-west to 117ºE. including the Abrolhos, Fisherman and Lancelin islands, unexpected on lower west coast to Hamelin Bay. Breeding visitor (late Aug to early May) Abrolhos and Lancelin islands; casual winter (Nov to Apr) to Fisherman Island	-	-
Wedge-tailed shearwater	✓	✓	✓	No foraging BIAs in the NWMR Foraging in high numbers: the BIA is in the SWMR, including the Houtman Abrolhos Islands	Kimberley, Pilbara and Gascoyne coasts and islands, including Ashmore Reef	-
White-tailed tropicbird	✓	✓	-	-	Rowley Shoals and Ashmore Reef	-

Source: Geoscience Australia 2026

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

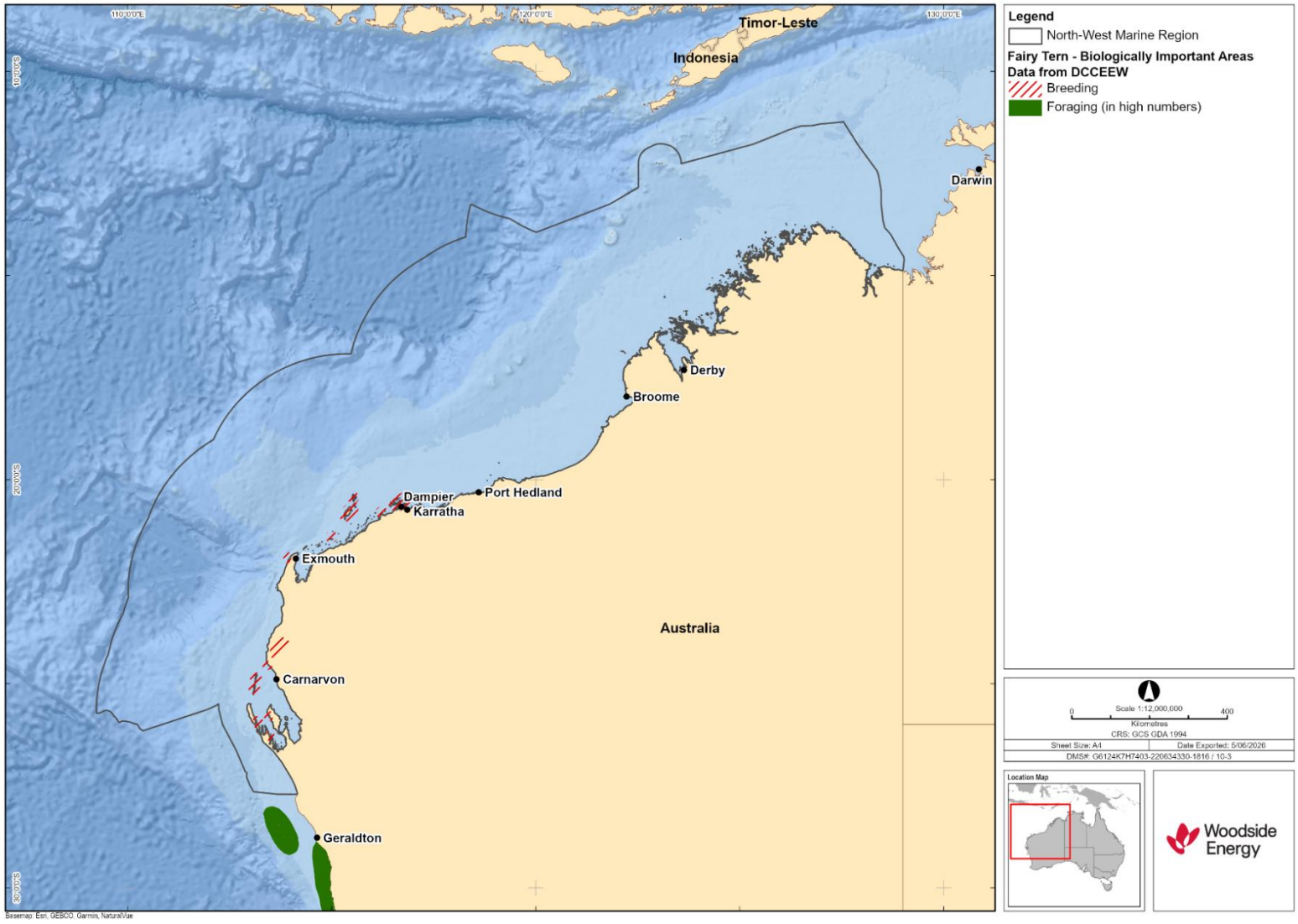


Figure 9-1: Australian fairy tern BIAs for the NWMR

Source: DCCEEW (2025b)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

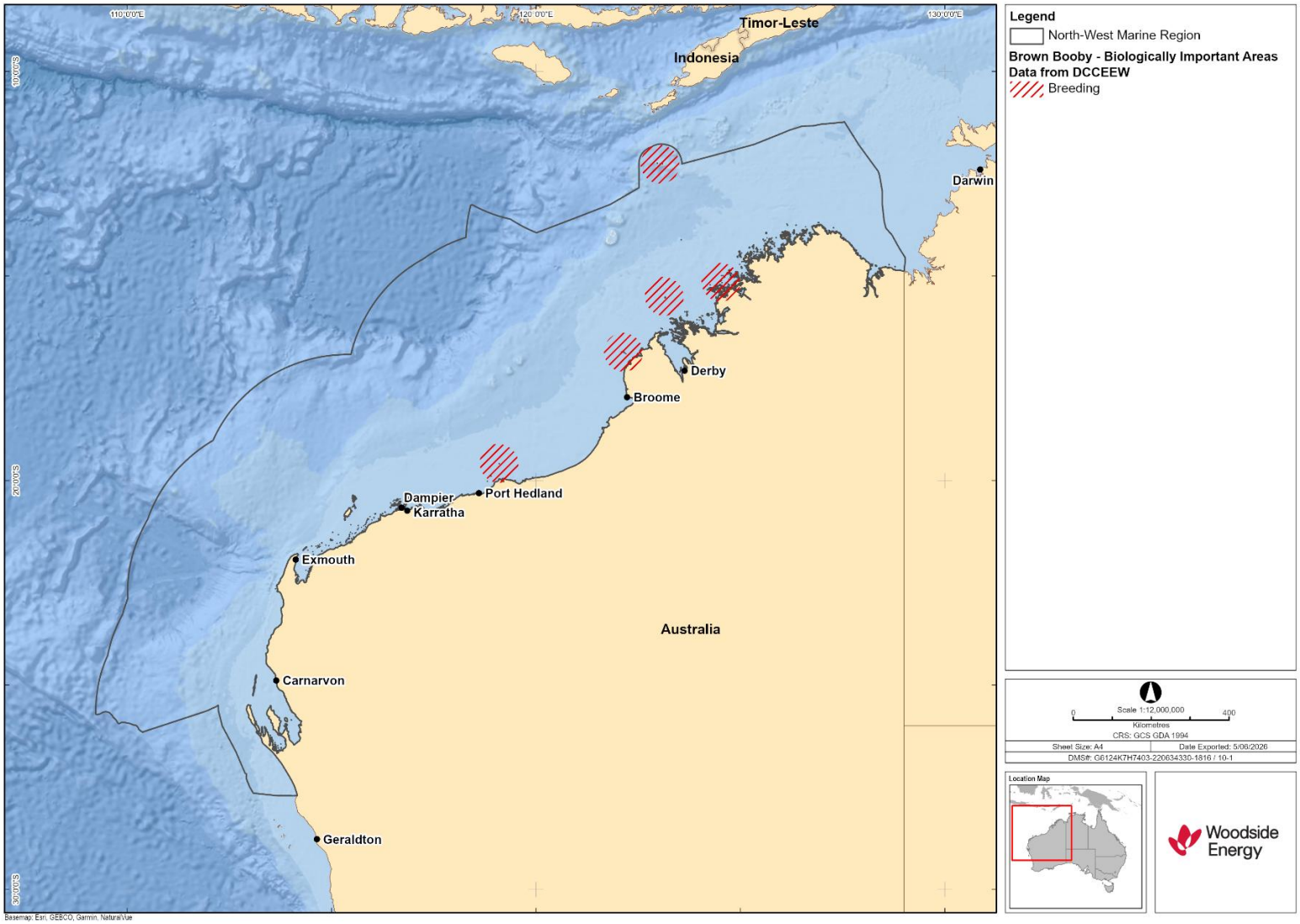


Figure 9-2: Brown booby BIAs for the NWMR

Source: DCCEEW (2025b)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

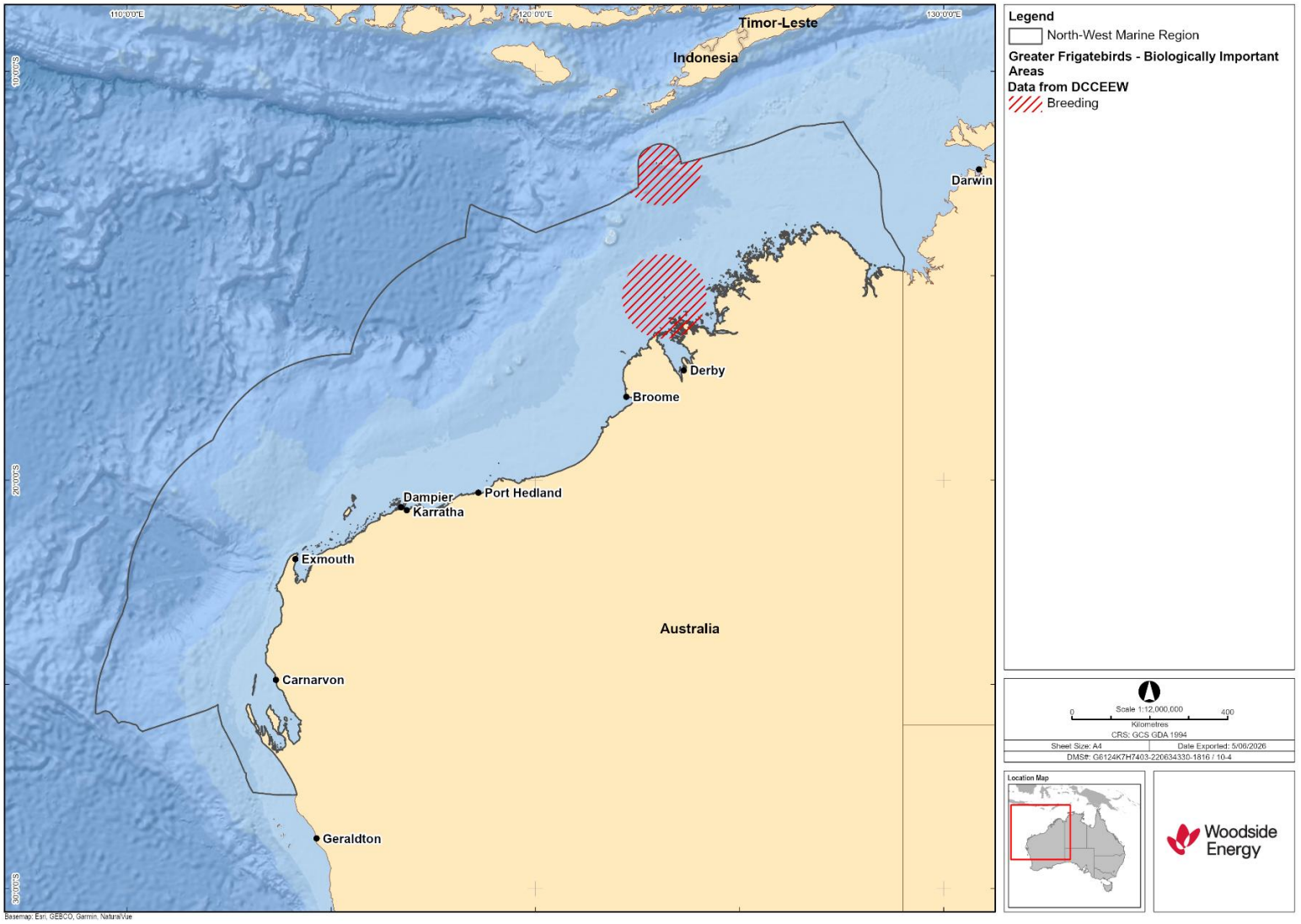


Figure 9-3: Greater frigatebird BIAs for the NWMR

Source: DCCEEW (2025b)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

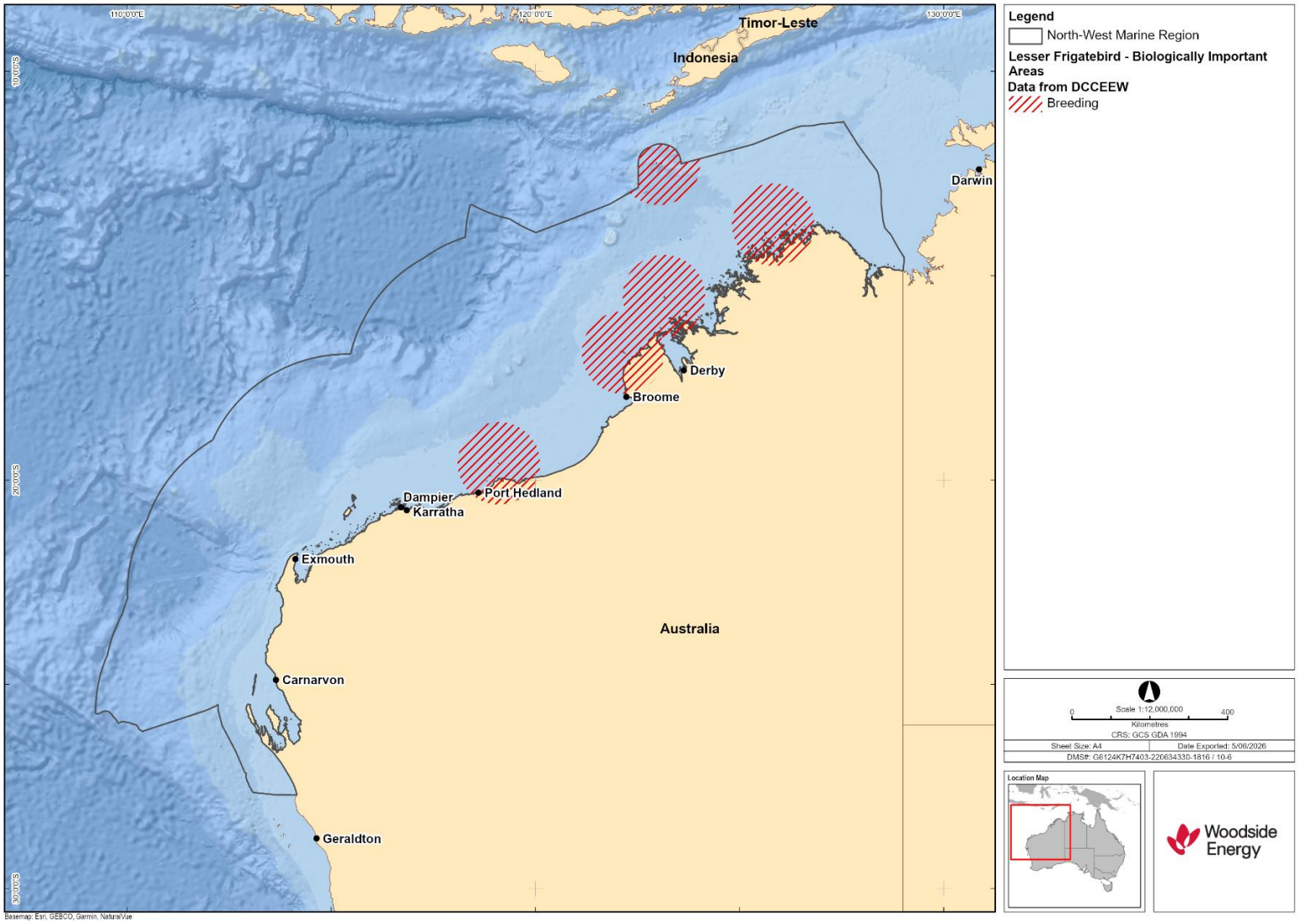


Figure 9-4: Lesser frigatebird BIAs for the NWMR

Source: DCCEEW (2025b)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

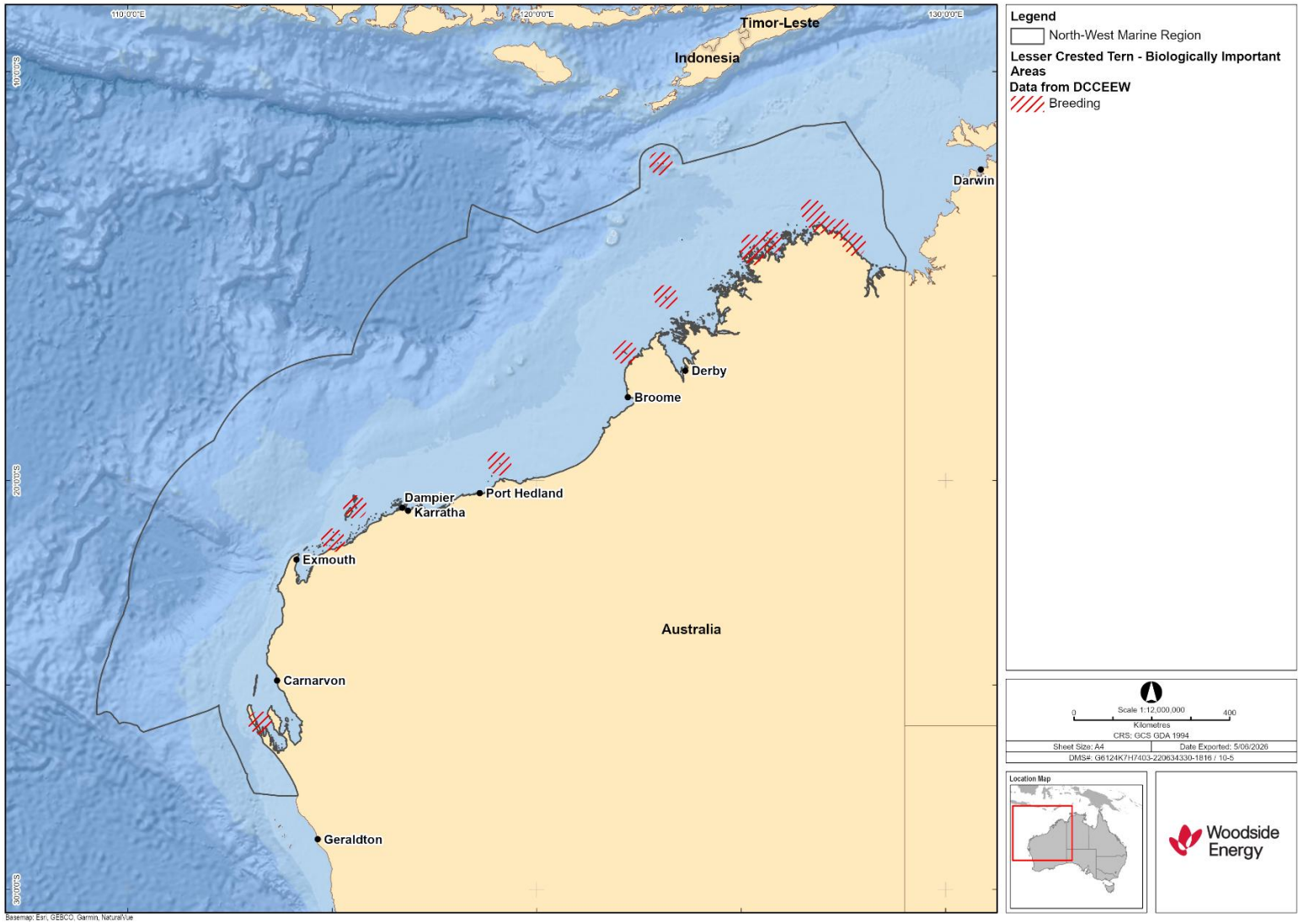


Figure 9-5: Lesser crested tern BIAs for the NWMR

Source: DCCEEW (2025b)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

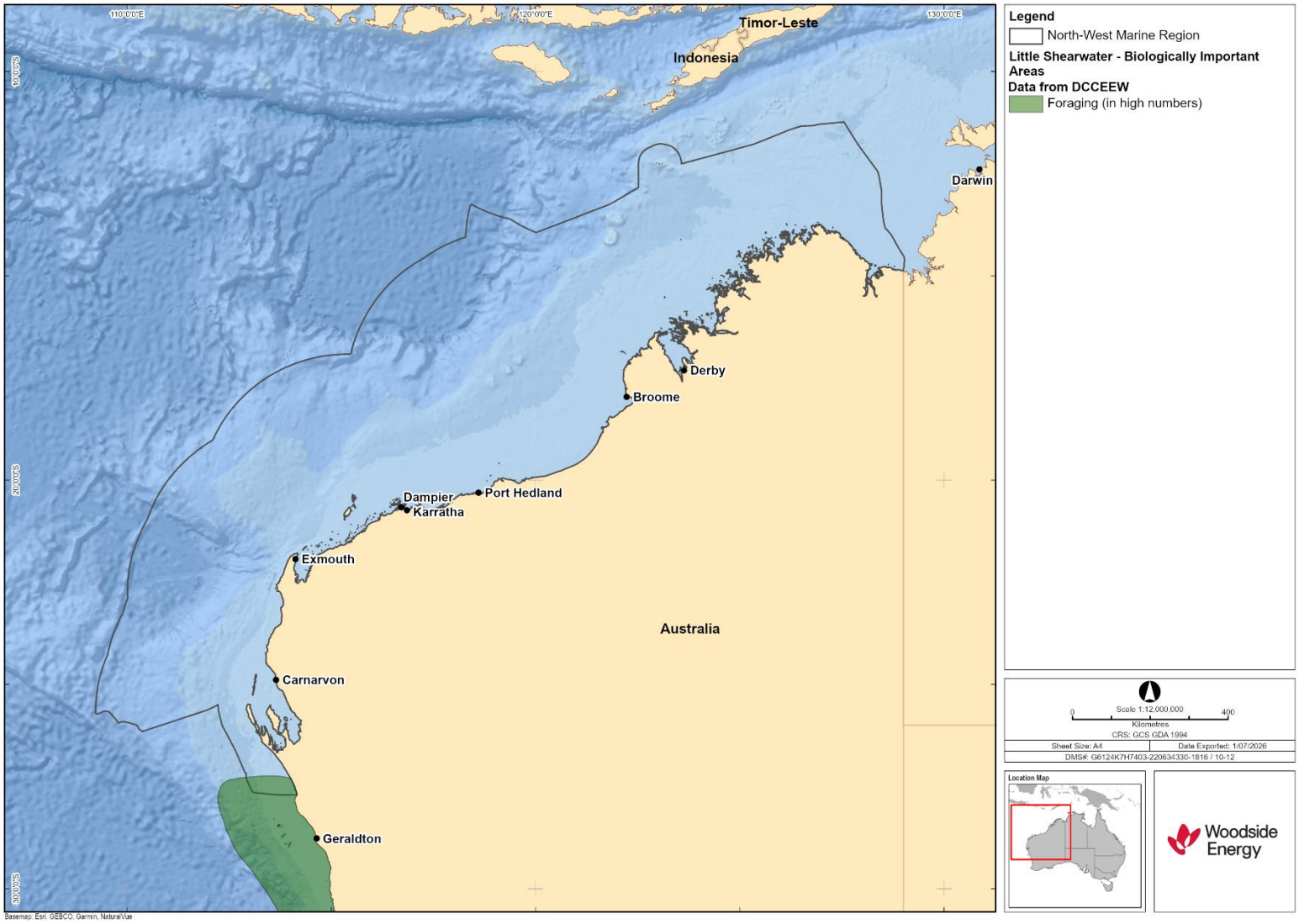


Figure 9-6: Little shearwater BIAs for the NWMR

Source: DCCEEW (2025b)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

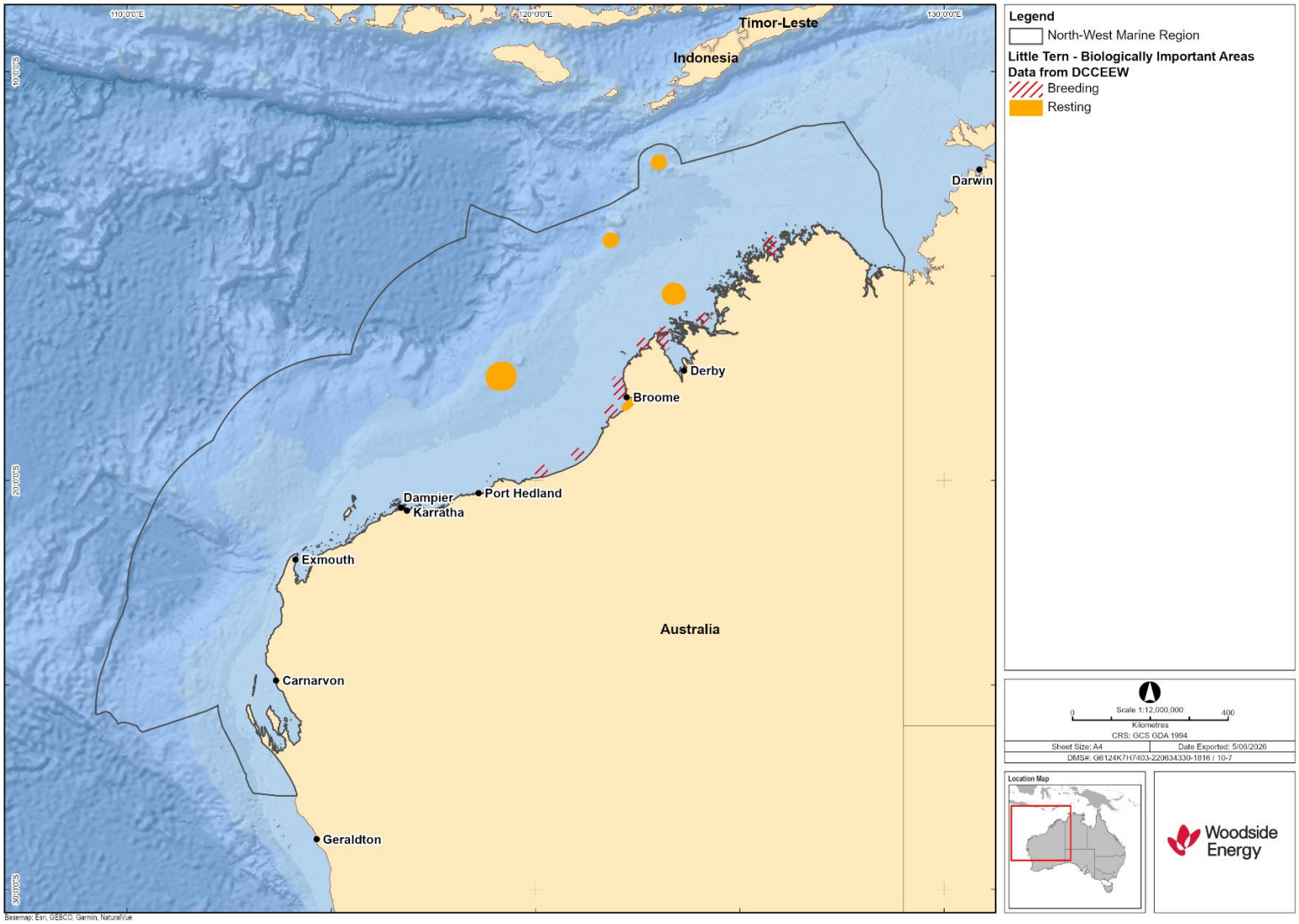


Figure 9-7: Little tern BIAs for the NWMR

Source: DCCEEW (2025b)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

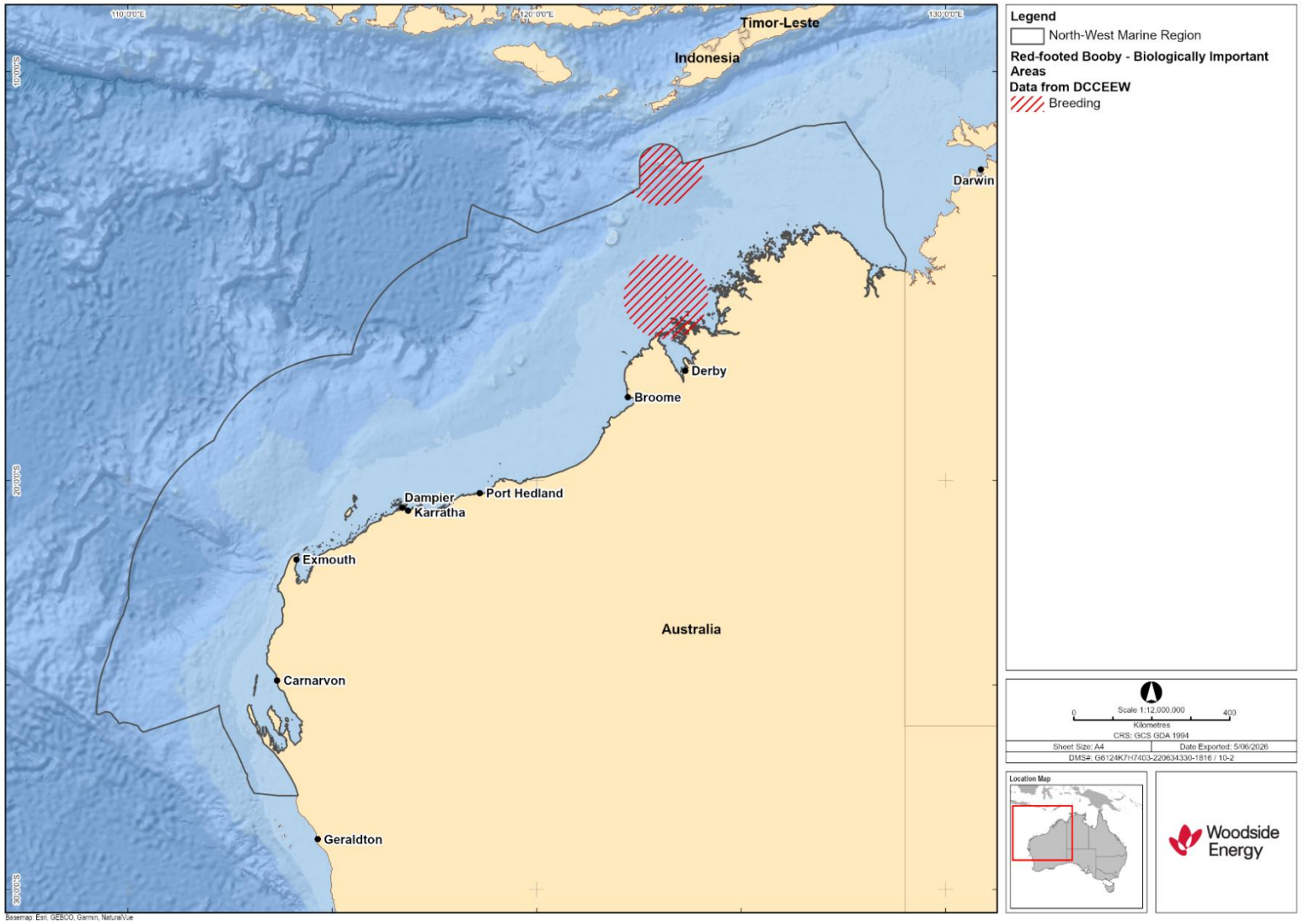


Figure 9-8: Red-footed booby BIAs for the NWMR

Source: DCCEEW (2025b)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

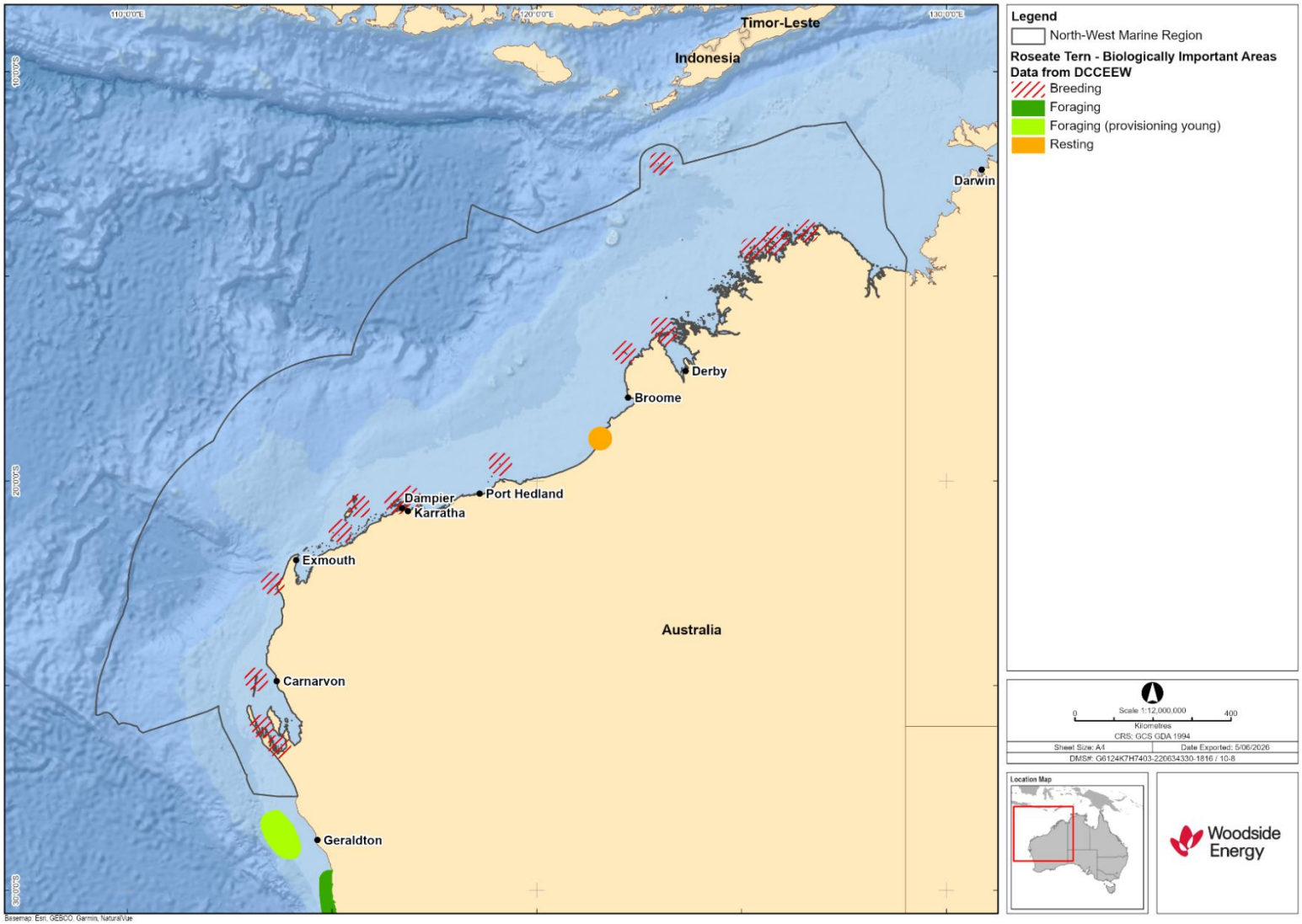


Figure 9-9: Roseate tern BIAs for the NWMR

Source: DCCEEW (2025b)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

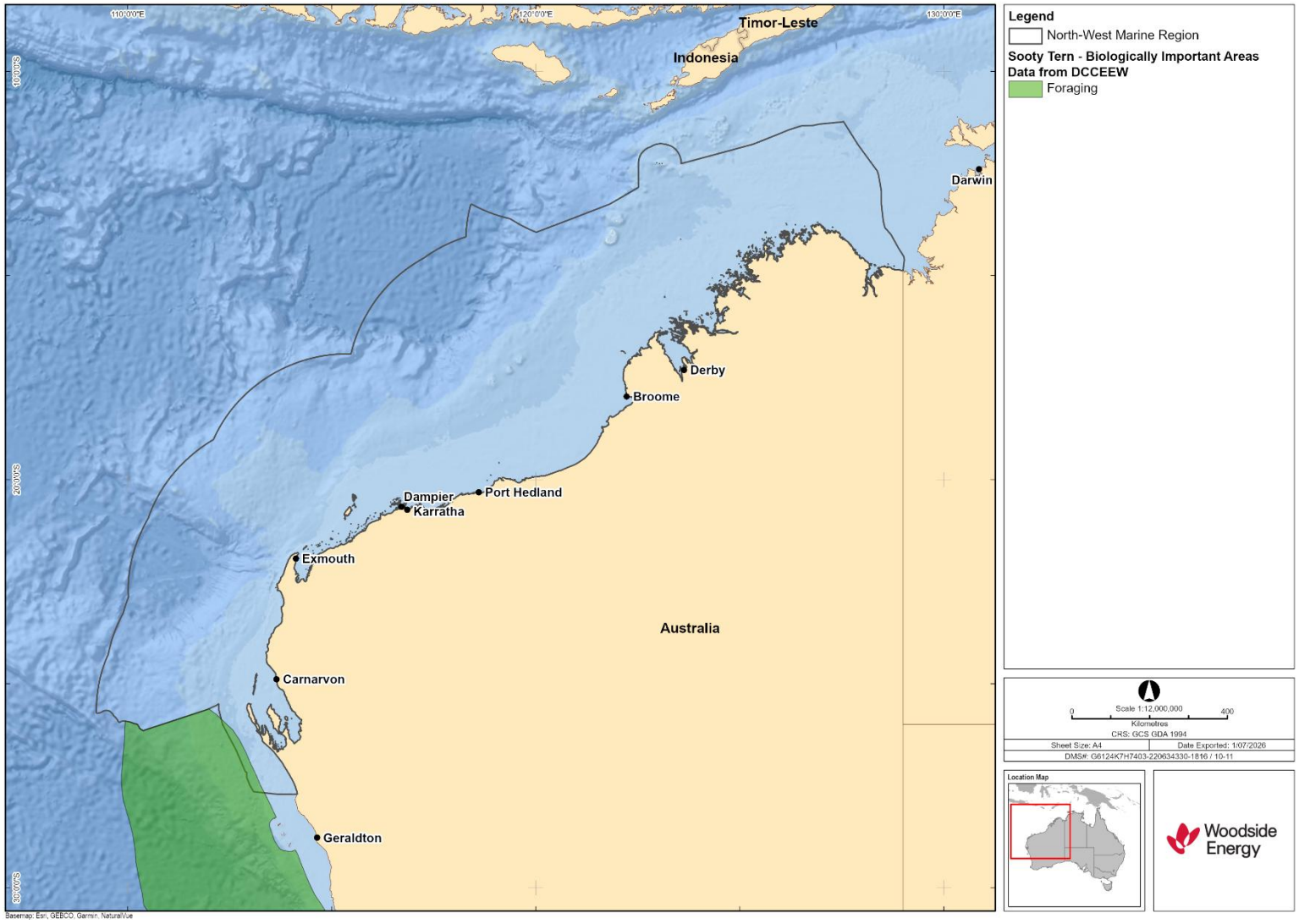


Figure 9-10: Sooty tern BIAs for the NWMR

Source: DCCEEW (2025b)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

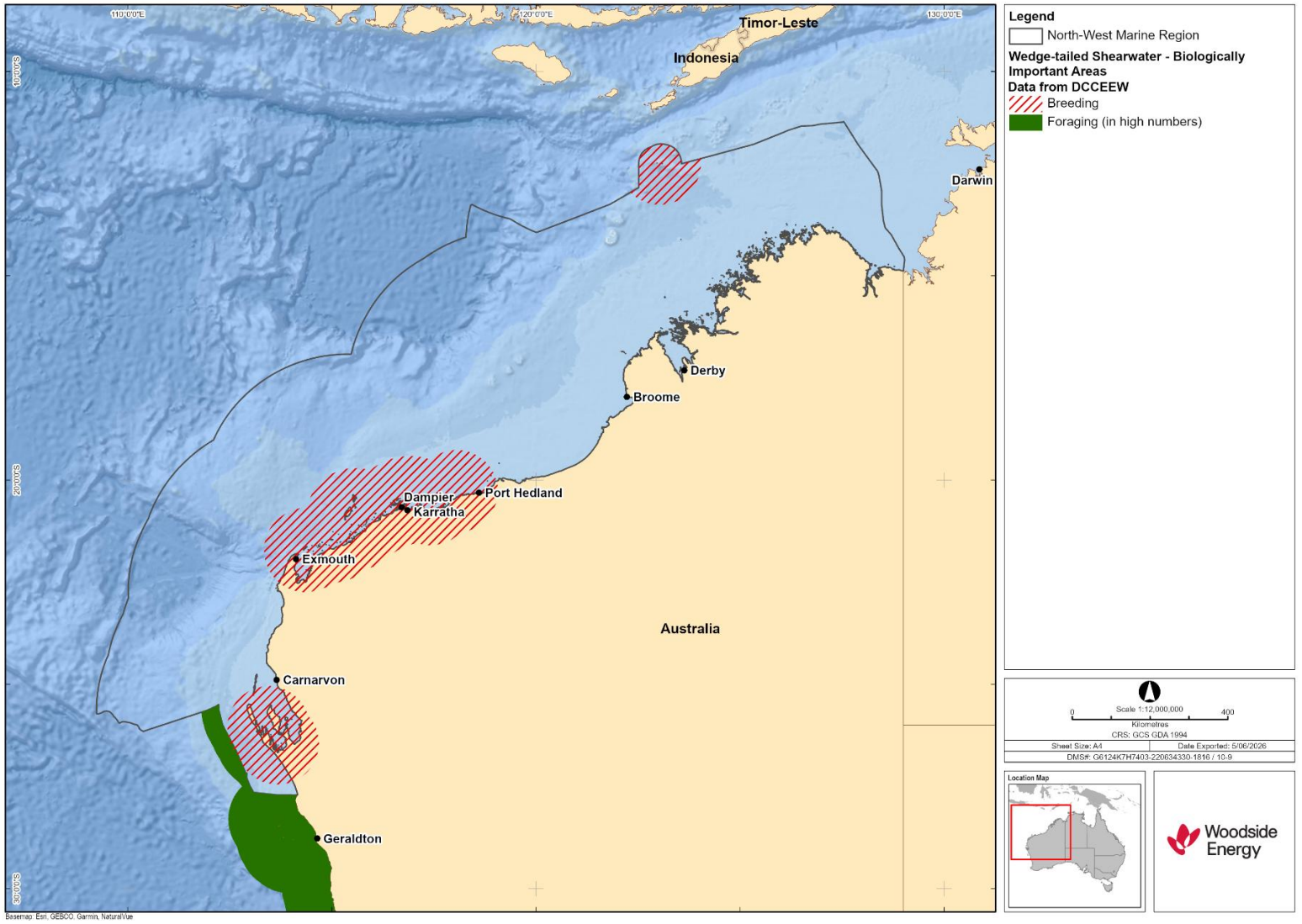


Figure 9-11: Wedge-tailed shearwater BIAs for the NWMR

Source: DCCEEW (2025b)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

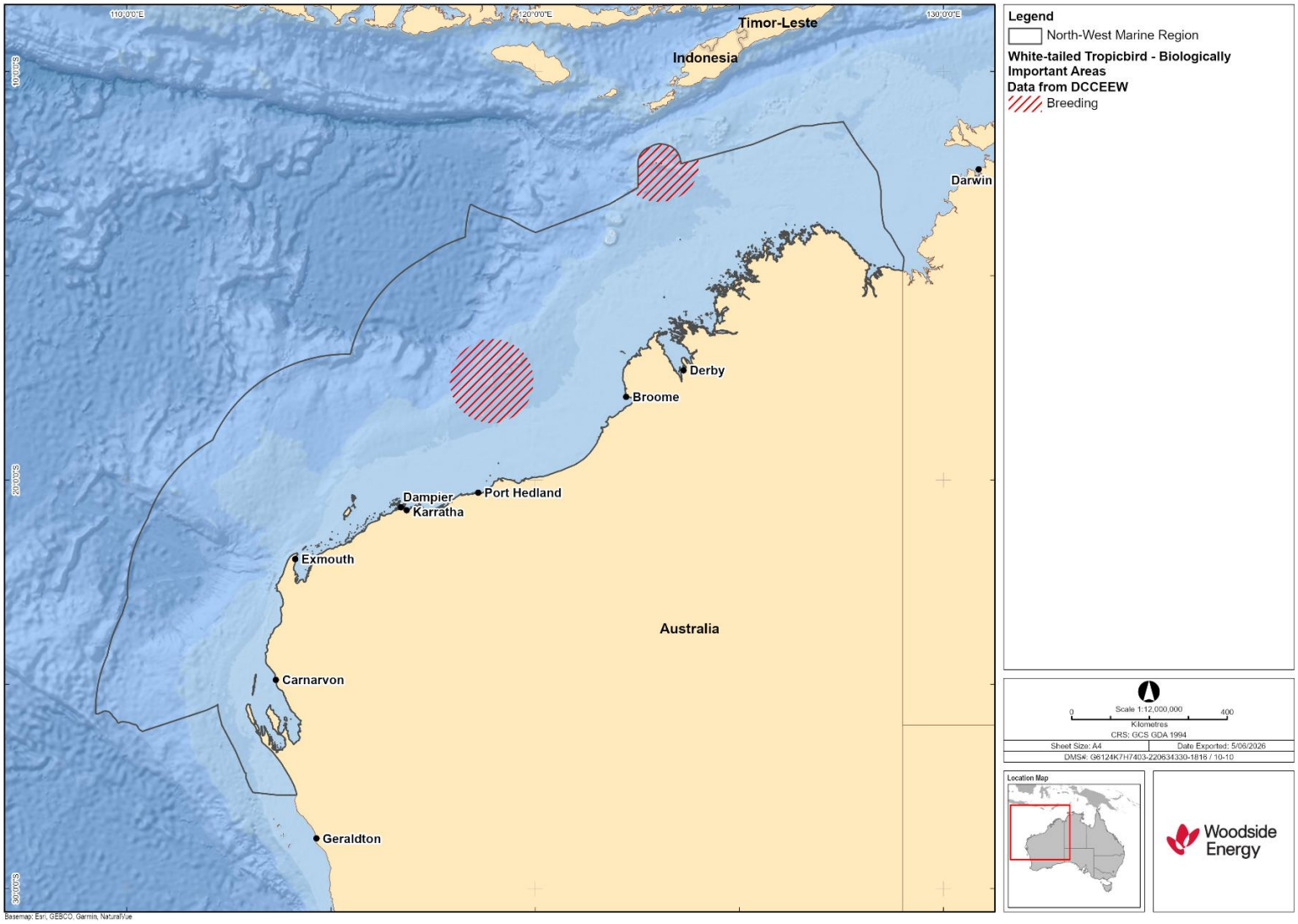


Figure 9-12: White-tailed tropicbird BIAs for the NWMR

Source: DCCEEW (2025b)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

9.3 Shorebirds in the NWMR

Shorebirds (migratory and resident species) are generally associated with wetland or coastal environmentsI the NWMR hosts many, particularly in the Austral summer (see Appendix A for the EPBC Act PMST reports on listed species of shorebirds). Shorebirds may use coastal environments for feeding, nesting or migratory stopovers. In coastal environments, shorebirds generally feed during low tide on exposed intertidal mud and sand flats, and roost in suitable habitat above the high water mark.

At least 34 key shorebird species (high and moderate occurrence as per Worley (2024), or listed as threatened or migratory under the EPBC Act) are known to occur in the NWMR. The NWMR is situated within the EAAF, a geographic region supporting populations of migratory shorebirds throughout their annual cycle (Bamford *et al.* 2008). Australia supports >67% of the entire flyway population for 11 migratory shorebird species (such as the far eastern curlew, great knot, oriental pratincole, little curlew and red-necked stint) (Driessen *et al*. 2026). The EAAF extends from breeding grounds in the Russian tundra, Mongolia and Alaska southwards through east and southeast Asia, to non-breeding areas of Indonesia, Papua New Guinea, Australia and New Zealand (Weller and Lee 2017). All shorebird species identified undertake annual migrations from breeding sites in the northern hemisphere to more southern non-breeding sites within the EAAF (Bamford *et al.* 2008).

The EAAF encompasses a large proportion of the NWMR. Migratory shorebirds are known to migrate through the offshore areas of the NWMR between overwintering grounds in Australia and breeding sites in the northern hemisphere (Bamford *et al.* 2008). Peak migration occurs between March and May (northern migration) and August and November (southern migration) (Bamford *et al.* 2008). Several key EAAF sites in the NWMR, such as Eighty Mile Beach, Roebuck Bay and the Gulf of Carpentaria, receive large influxes of birds during the southward and northward migrations (Driessen *et al.* 2026). The 220 km stretch of sand, mudflats and mangroves of Eighty Mile Beach receives the largest numbers of shorebirds out of all the sites in Australia (Williams *et al.* 2026). During the southward migration, large influxes of birds begin arriving at key EAAF sites in the NWMR by late August before dispersing across Australia, with many reaching the southeastern states by October (Driessen *et al.* 2025). Immature migratory shorebirds have a slower southwards migration and tend to arrive in Australia from September to late November (Rogers *et al.* 2025). Toward the end of the non-breeding season, birds return to major sites within the NWMR by March, where they feed intensely to prepare for a northward migration in March and April (Driessen *et al.* 2025). Migration routes of some migratory shorebird species have been characterised using band recoveries (Minton *et al.* 2006), but the migration pathways taken between sightings are poorly understood.

Migratory shorebird species are in Australia during the non-breeding period (December to February), in coastal and inland habitats where adult birds feed and rest, accumulating the energy reserves necessary to support northward migration and subsequent breeding (Commonwealth of Australia 2015c). During this time, individuals must maintain an energy intake greater than their energy expenditure to recover from the southward migration, to allow moulting, and to build fat reserves in preparation for the northward migration The high energy demands of migration mean both foraging and resting during the non-breeding period are vital for individual fitness and survival (Commonwealth of Australia 2015c). Some young shorebirds may choose to delay migration based on achieving body composition and fuel stores to support migration, or due to the delayed timing of flight-feather and pre-breeding moults (Rogers *et al.* 2025). Coastal shorebird species tend to delay maturity more than species that spend their non-breeding season in non-tidal inland wetlands.

Long-term monitoring of 15 migratory shorebird taxa over 28 years shows varied population trajectories; four species have declined by more than 50%, three by more than 30%, five by less than 30%, and two species have increased. Notably, five species that declined by more than 30% exhibited higher mean annual growth rates in 2012 to 2021 compared to 1993 to 2012, indicating a potential slowing of decline (Rogers *et al.* 2025).

Due to differences in coastal or wetland habitat requirements between roosting and foraging behaviours, areas used most by migratory shorebirds usually comprise networks of coastal or wetland foraging and roosting habitats (Commonwealth of Australia 2015c). Coastal habitats such as mudflats, saltmarsh and mangroves, which are rich in benthic macroinvertebrates, are important foraging habitats for migratory shorebirds (Williams *et al.* 2026). Other foraging habitats can also include inland ephemeral wetlands, which have been recorded to intermittently support high numbers of migratory shorebirds after major rainfall events (Driessen *et al.* 2026).Shorebirds move between areas of this network, depending on the time of day, availability of resources, levels of disturbance and environmental conditions Displacement from one habitat or the other may result in use of sub-optimal habitat or increase in energetic demands via increased distance

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

between habitats (Commonwealth of Australia 2015c). Foraging habitat preference is linked to the availability of prey as many shorebirds have narrow foraging and dietary niches, which vary between species (Williams *et al.* 2026).

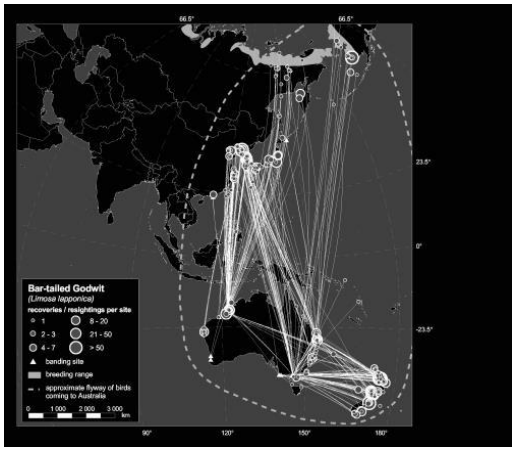
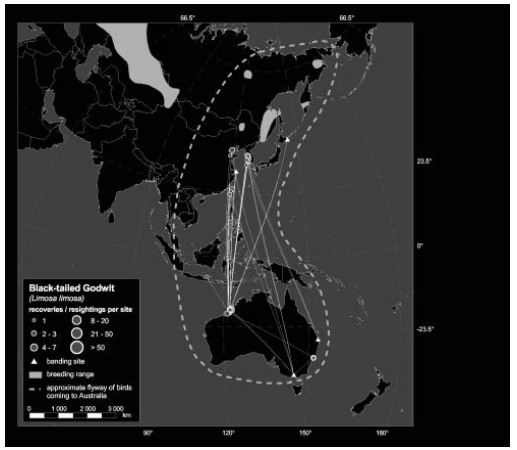
Within the EAAF, “a wetland should be considered internationally important if it regularly supports 1% of the individuals in a population of one species or subspecies of waterbird” (Ramsar Convention Bureau 2000). All shorebirds identified as high occurrence key species occur in shoreline habitats within the NWMR for at least part of their non-breeding season in Australia.

Ashmore Reef is documented as a BIA for migratory shorebirds in the NWMR (DSEWPaC 2012a).

Table 9-4 and Table 9-5 provide descriptions for key high and moderate occurrence shorebird species, including information about migration routes where available. It should be noted that Minton *et al.* (2006) did not report on the Pilbara region or Exmouth Gulf, so the migratory pathways may be incompletely depicted.

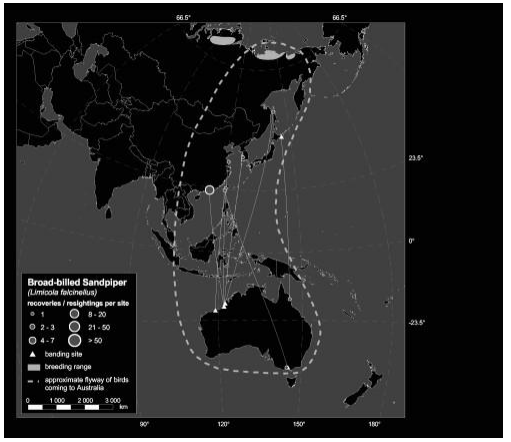
This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 9-4: Species summary for high and selected moderate occurrence key shorebird species

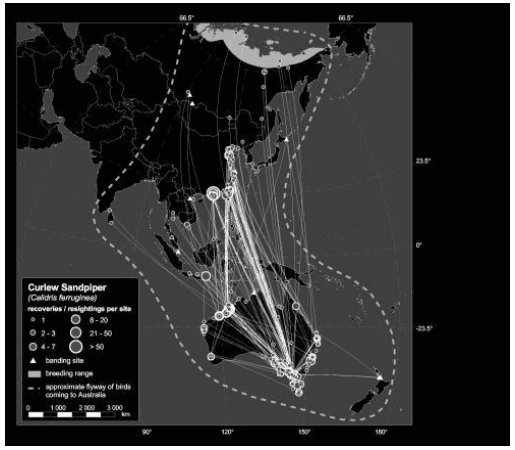
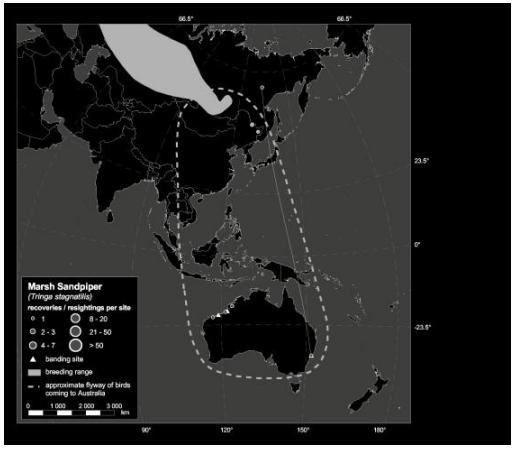
Species	Presence in NWMR	Roosting habitat	Foraging habitat	Diet	Migration From Minton *et al.* (2006)
Bar-tailed godwit[16]	Widespread around the coast as far east as Derby, with a few scattered records elsewhere in the Kimberley *Internationally important sites:* • Roebuck Bay • Eighty Mile Beach	Sandy beaches, sandbars, spits and in near-coastal saltmarsh	Tidal estuaries and harbours	Worms, molluscs, crustaceans, insects and some plant material	
Black-tailed godwit	Found in coastal regions of all states and territories of Australia *Internationally important site:* • Roebuck Bay	Claypan	Intertidal mudflats or sandflats	Annelids, crustaceans, arachnids, fish eggs and spawn and tadpoles	

[16] Nominate species Limosa lapponica. Subspecies which may occur includes L. l menzbieri, which is listed Critically Endangered under the EPBC Act. Specific information on L. l menzbieri is lacking, but information regarding habitat use and diet for the nominate species is considered applicable.

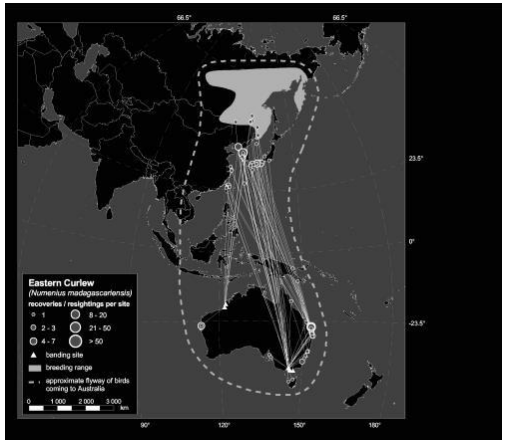
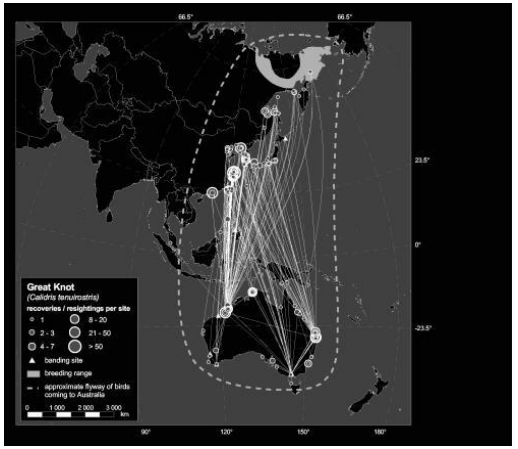
This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species	Presence in NWMR	Roosting habitat	Foraging habitat	Diet	Migration From Minton *et al.* (2006)
Broad billed sand piper	Regular visitor to coasts of the Pilbara and Kimberley between Onslow and Broome *Internationally important site:* • Port Hedland Saltworks	Sheltered sandy, shelly or shingly beaches	Mudflats, mangroves	Molluscs, crustaceans, insects, seeds and worms, including polychaetes	
Common redshank	Records in the Gascoyne region, Coral Bay and Carnarvon Widespread from the Dampier Saltworks to Roebuck Bay and Broome Ashmore Reef	Sheltered coastal wetlands such as bays, river estuaries, lagoons, inlets and saltmarsh	Bare mud or sand, or on algal deposits, round the edges of wetlands	Worms, molluscs, crustaceans, arachnids and insects	Not available

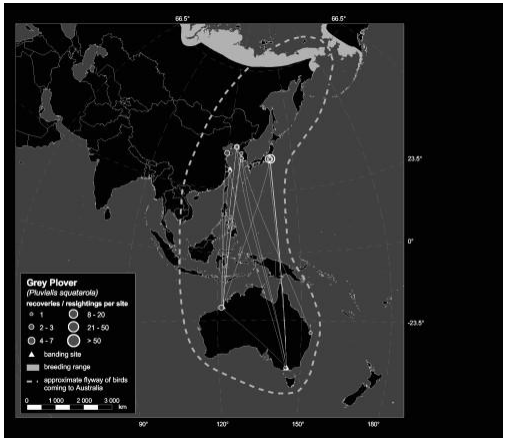
This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species	Presence in NWMR	Roosting habitat	Foraging habitat	Diet	Migration From Minton *et al.* (2006)
Curlew sandpiper	Widespread around coastal and subcoastal plains Non-breeding one year old birds may remain in Australia rather than migrating north *Internationally important sites:* • Dampier Saltworks • Port Hedland Saltworks • Eighty Mile Beach • Roebuck Bay	Bare dry shingle, shell or sand beaches, sandspits and islets in or around coastal or near-coastal lagoons and other wetlands	Mudflats and nearby shallow water	Worms, molluscs, crustaceans, insects and seeds	
Marsh sandpiper	Widespread; notable areas include Eighty Mile Beach, Port Hedland Saltworks	Tidal mudflats	Mudflats, marshy vegetation	Molluscs, crustaceans and insects	

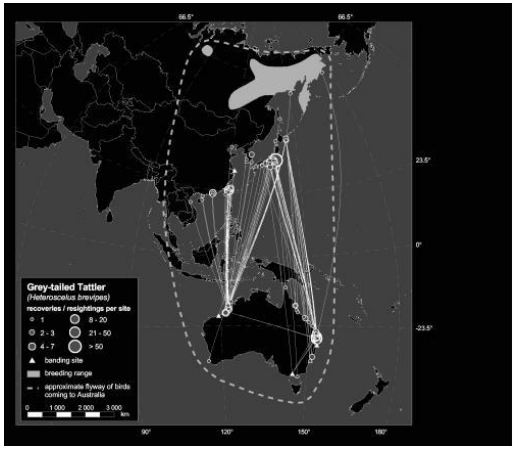
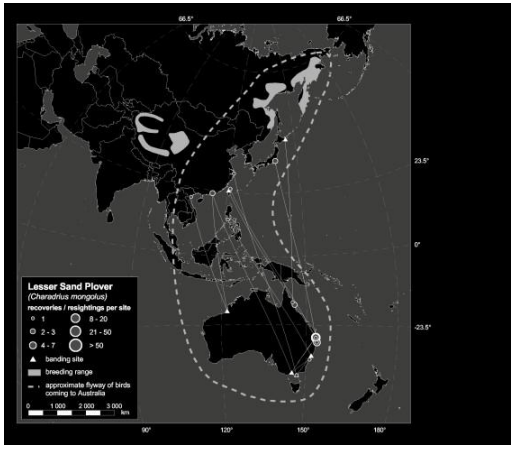
This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species	Presence in NWMR	Roosting habitat	Foraging habitat	Diet	Migration From Minton *et al.* (2006)
Eastern curlew	Continuous distribution from Barrow Island and Dampier Archipelago through the Kimberley region *Internationally important sites:* • Eighty Mile Beach • Roebuck Bay	Sandy spits, sandbars and islets, beaches near the high water mark, and coastal vegetation, including low saltmarsh or mangroves	Soft sheltered intertidal sandflats or mudflats, salt flats and saltmarsh, near mangroves, among rubble on coral reefs, and beaches near the tideline	Crustaceans, insects and small molluscs	
Great knot	Common on the coasts of the Pilbara and Kimberley, from the Dampier Archipelago to the NT border *Internationally important sites:* • Eighty Mile Beach • Roebuck Bay	Roosts in large groups in open areas, often at the water's edge or in shallow water near feeding grounds	Sheltered coastal habitats with large intertidal mudflats or sandflats	Bivalves, gastropods, crustaceans and other invertebrates	

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species	Presence in NWMR	Roosting habitat	Foraging habitat	Diet	Migration From Minton *et al.* (2006)
Greater sand plover	Widespread between North West Cape and Roebuck Bay *Internationally important sites:* • Eighty Mile Beach • Roebuck Bay	Sand spits and banks on beaches or in tidal lagoons	Surface of wet sand or mud on open intertidal flats of sheltered embayments, lagoons or estuaries	Molluscs, worms, crustaceans and insects	
Grey plover	Widespread in coastal areas across Australia *Internationally important sites:* • Eighty Mile Beach • Roebuck Bay	Sandy habitats, including unvegetated sandbanks or sand spits, sheltered beaches, estuaries or lagoons	Large areas of exposed mudflats and beaches of sheltered coastal shores	Molluscs, insects and their larvae, crustaceans and polychaete worms	

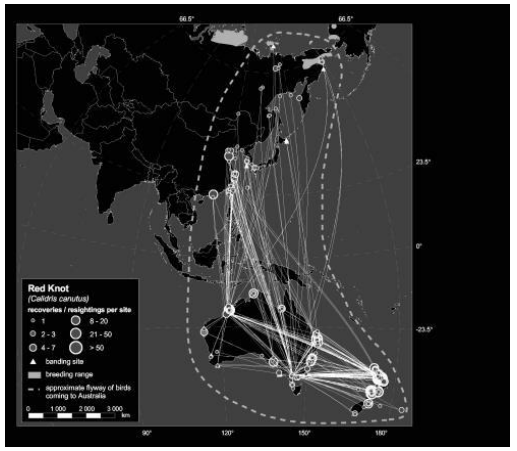
This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species	Presence in NWMR	Roosting habitat	Foraging habitat	Diet	Migration From Minton *et al.* (2006)
Grey-tailed tattler	Widespread from Houtman Abrolhos and the mainland adjacent to the Kimberley *Internationally important sites:* • Barrow Island • Roebuck Bay • Eighty Mile Beach • Lacepede Islands	Branches of mangroves, snags or driftwood	Shallow water on hard intertidal substrates, such as reefs and rock platforms, in rock pools and among rocks and coral rubble	Polychaetes, molluscs, crustaceans, insects and, occasionally, fish	
Lesser sand plover	*Widespread, internationally important sites:* • Eighty Mile Beach • Roebuck Bay • Broome • Port Hedland Saltworks	Beaches, banks, spits of sand or shell, occasionally rocky spits, islets and reefs	Exposed intertidal sandflats and mudflats of beaches or estuaries, occasionally shallow water in saltworks	Molluscs, worms, crustaceans and insects	

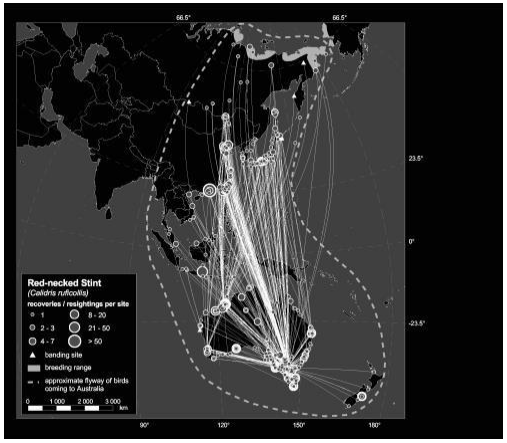
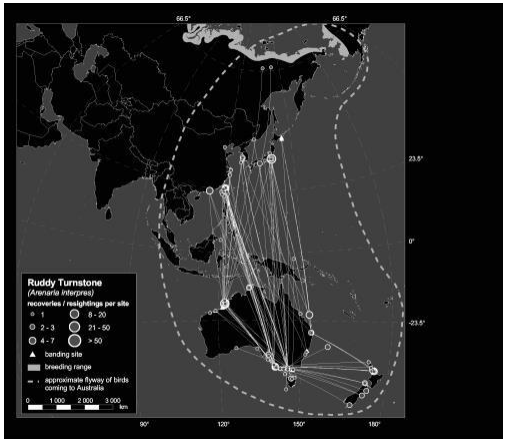
This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species	Presence in NWMR	Roosting habitat	Foraging habitat	Diet	Migration From Minton *et al.* (2006)
Oriental plover	Most records are along the north-western coast between Exmouth Gulf and Derby in WA *Internationally important sites:* • Dampier Saltworks • Port Hedland Saltworks • Eighty Mile Beach • Roebuck Bay	Soft wet mud or in shallow water of beaches and tidal mudflats	Short grass, hard stony bare ground, mudflats or among beach-cast seaweed on beaches	Insects, including termites, beetles, grasshoppers and crickets	Not available
Oriental pratincole	Widespread along the coasts of the Pilbara and Kimberley *Internationally important sites:* • Eighty Mile Beach • Roebuck Plains	Bare areas such as claypans or areas with low vegetation, such as saltmarsh	Open plains, floodplains or short grassland, artificial wetlands (saltworks), beaches, mudflats and islands, or around coastal lagoons Usually feeds aerially, at heights varying from just above the ground up to 300 m	Insects, including dragonflies, cicadas, beetles, moths, ants, termites, locusts, grasshoppers, flies, bees and wasps	Not available

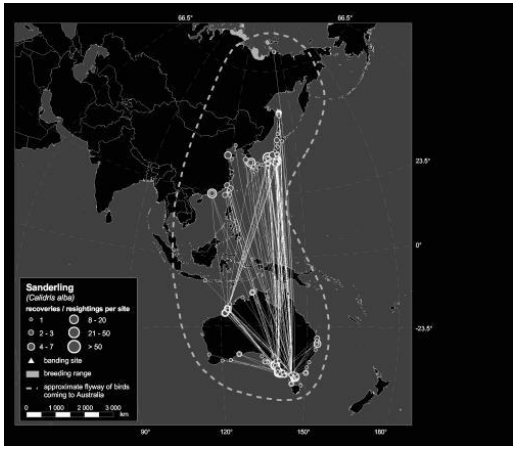
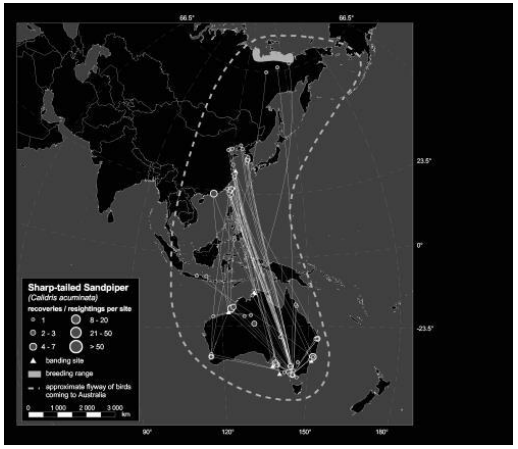
This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species	Presence in NWMR	Roosting habitat	Foraging habitat	Diet	Migration From Minton *et al.* (2006)
Pacific golden plover	Widespread along the coasts of the Pilbara and Kimberley *Nationally important site:* • Eighty Mile Beach	Sandy beaches and spits, rocky points, islets, exposed reef, occasionally mangrove and saltmarsh vegetation, beach-cast seaweed, levee banks and saltwork evaporation ponds	Sandy, muddy and rocky shores, sheltered estuaries and lagoons, occasionally saltmarsh, mangrove or pasture	Molluscs, polychaete worms, insects, insect larvae, spiders, crustaceans, occasionally seeds, leaves, lizards, bird eggs and fish	
Red knot	Large numbers regularly recorded in north-west Australia *Internationally important sites:* • Eighty Mile Beach • Roebuck Bay	Sandy beaches, spits and islets, and mudflats near feeding grounds	Soft substrate near the water edge, including intertidal mudflats and sandflats exposed by low tide	Worms, bivalves, gastropods, crustaceans and echinoderms	

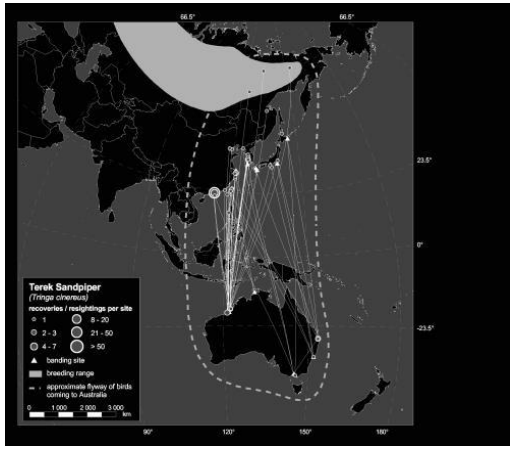
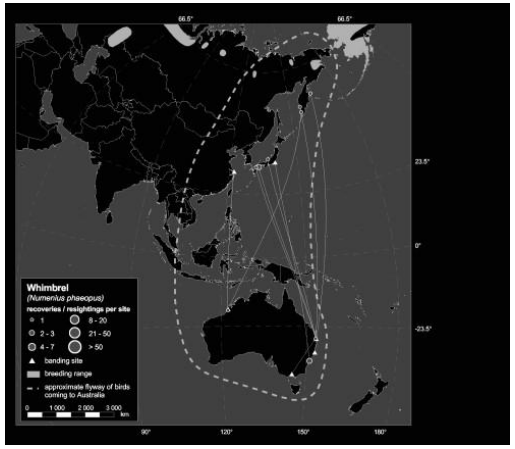
This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species	Presence in NWMR	Roosting habitat	Foraging habitat	Diet	Migration From Minton *et al.* (2006)
Red-necked stint	Widespread in coastal areas across Australia *Internationally important sites:* • Barrow Island • Port Hedland Saltworks • Eighty Mile Beach • Roebuck Bay	Sheltered beaches, spits, banks or islets of sand, mud, coral or shingle, occasionally in saltmarsh or other vegetation	Feed in dense flocks on bare wet mud such as intertidal mudflats or sandflats, or in very shallow water	Marine worms, molluscs, snails and slugs, shrimps, spiders, beetles, flies and ants	
Ruddy turnstone	Found in most coastal regions across Australia *Internationally important sites:* • Barrow Island • Eighty Mile Beach • Roebuck Bay • Lacepede Islands	Beaches above the tideline, among rocks, shells, beach-cast seaweed or other debris	Between lower supralittoral and lower littoral zones of foreshores. Often forage among banks of stranded seaweed or other tide-wrack Occasionally forage on exposed rocky platforms, coral reefs and mudflats	Insects, worms, crustaceans, molluscs and spiders Occasionally been known to eat fish, birds' eggs and carrion, and human food scraps	
Ruff	Periodically recorded in Port Hedland, Kununurra and the Argyle Diamond Mine	Wetlands with exposed mudflats and short, dense vegetation	Exposed mudflats with shallow water and dry mud	Moss, plant fibre, seeds, annelid worms, molluscs, crustaceans, spiders, insects, fish and amphibians	Not available

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species	Presence in NWMR	Roosting habitat	Foraging habitat	Diet	Migration From Minton *et al.* (2006)
Sanderling	Occur across most of the NWMR coast as far east as Derby *Internationally important sites:* • Eighty Mile Beach • Roebuck Bay	Bare sand high on the beach clumps of washed-up kelp, coastal dunes, rocky reefs and ledge	Open sandy beaches exposed to open sea swell, exposed sandbars and spits and shingle banks, where they forage in the wave-wash zone and among rotting seaweed	Plants, seeds, worms, crustaceans, spiders, insects Occasionally on medusae, fish, larger molluscs and crustaceans taken as carrion	
Sharp-tailed sandpiper	Widespread from Cape Arid to Carnarvon, around coastal and subcoastal plains of the Pilbara to Kimberley *Internationally important site:* • Port Hedlands Saltworks • Eighty Mile Beach	Edges of wetlands, on wet open mud or sand, in shallow water, or in short, sparse vegetation, such as grass or saltmarsh	Edge of the water of wetlands or intertidal mudflats, either on bare wet mud or sand, or in shallow water Also forage among inundated vegetation of saltmarsh, grass or sedges	Seeds, worms, molluscs, crustaceans and insects	

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species	Presence in NWMR	Roosting habitat	Foraging habitat	Diet	Migration From Minton *et al.* (2006)
Terek sandpiper	The species is widespread in the Pilbara and Kimberley, from Dampier to Wyndham, with occasional records around Shark Bay *Internationally important sites:* • Eighty Mile Beach • Roebuck Bay	In or among mangroves, may perch in branches or roots up to 2 m from the ground, or in shade beneath	Soft wet intertidal mudflats or in sheltered estuaries, embayments, harbours or lagoons	Crustaceans, insects, seeds, molluscs and arachnids	
Whimbrel	Widespread from Carnarvon to the north-east Kimberley Primarily coastal distribution; there are also scattered inland records of whimbrels in all regions *Internationally important site:* • Roebuck Bay	Regularly roost in mangroves and other structures flooded at high tide May also roost on ground of muddy, sandy or rocky beaches, rocky islets and coral cays	Intertidal mudflats, muddy banks of estuaries and in coastal lagoons, open unvegetated areas or among mangroves Occasionally on sandy beaches or among rocks	Annelids, crustaceans and, rarely, vertebrates (such as small fish, little tern chicks)	

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 9-5: Species summary for moderate occurrence key shorebird species

Species	NWMR presence	Roosting habitat	Foraging habitat	Diet
Asian dowitcher	Regular visitor to the north-west between Port Hedland and Broome *Internationally important sites:* • Roebuck Bay • Port Hedland saltworks	Coastal lagoons, estuaries and tidal creeks	Intertidal mud flats	Polychaete worms and larvae, also insect larvae and molluscs
Australian painted snipe	Widespread in low numbers	Shallow freshwater wetlands with bare mud and dense canopy cover	Dense vegetation cover, occasionally mudflats and grassland	Vegetation, seeds, insects, worms, molluscs and crustaceans
Little curlew	Widespread with distribution concentrated along the northern coast from Port Hedland during the non-breeding season *Internationally important sites:* • Roebuck Plains • Roebuck Bay • Anna Plains • Derby Sewage Ponds • Parry Floodplain	Short, dry grassland, and occasionally dry saltmarshes, coastal swamps, mudflats or sandflats in estuaries, or on the beaches of sheltered coasts	Short, dry grassland and sedgeland with shallow freshwater pools or seasonal inundation	Insects, seeds and berries
Common greenshank	Occurs in all types of wetlands and has the widest distribution of any shorebird in Australia *Internationally important sites:* • Eighty Mile Beach • Roebuck Bay	Wetlands, shallow pools and puddles, or slightly elevated on rocks, sandbanks or small muddy islets	Edges of wetlands, in soft mud on mudflats, in channels, among pneumatophores of mangroves or other sparse, emergent or fringing vegetation, such as sedges or saltmarsh	Molluscs, crustaceans, insects, and occasionally fish and frogs
Common sandpiper	Widespread in low numbers	Rocks or in roots or branches of vegetation, especially mangroves	Bare soft mud at the edges of wetlands	Molluscs, crustaceans and insects
Pectoral sandpiper	Low numbers recorded across the Gascoyne, Pilbara and Kimberley regions	Coastal lagoons, estuaries, bays, swamps, lakes, inundated grasslands, saltmarshes, river pools, creeks, floodplains and artificial wetlands	Bare soft mud at the edges of wetlands	Algae, seeds, crustaceans, arachnids and insects

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species	NWMR presence	Roosting habitat	Foraging habitat	Diet
Wood sandpiper	NWMR supports largest numbers in Australia; notable areas include Parry floodplain, Shark Bay	Low trees, grassy hillocks	Bare, soft mud at the edges of wetlands	Insects and molluscs
Long-toed stint	Widespread along the coasts of the Pilbara and Kimberley	Shallow inland wetlands	Wetland or islets with wet mud or shallow water and short vegetation	Seeds, molluscs, crustaceans, insects, occasionally algae
Pin-tailed snipe	Recorded in the Pilbara, Port Hedland, Myaree Pool, Maitland River and near Karratha	Wide variety of wetland habitats, including flooded paddy fields, wet grasslands, seepage swamps and marshland	Muddy shorelines of swamps and along streams	Molluscs, adult and larval insects, earthworms and occasionally crustaceans, seeds and other plant matter
Swinhoe's snipe	Recorded in the Pilbara, Kimberley, Mount Goldsworth, Mount Blaize and near the Mitchell Plateau	Grasses and rushes around the edge of fresh and brackish marshes	Grasses and rushes near the water edge, in addition to hummocks or on mudflats around seepage areas	Earthworms, adult and larval insects

9.4 Other marine birds in the NWMR

Table 9-6 summarises species descriptions for high occurrence key other marine bird species.

Table 9-6: Species summary for high occurrence key other marine bird species

Species	NWMR presence	Predominant feeding behaviour	Diet
Fork-tailed swift	Non-breeding: Oct to Apr Widespread in coastal areas as far north as Carnarvon, including some on nearshore and offshore islands Scattered along the Pilbara coast to the east Kimberley region	Aerial forager, flying anywhere from 1 m to 300 m above the ground to forage Typically feed in flocks ranging from 10 to 1,000 birds	Insectivorous
Osprey	Breeding: April to February, though depends on latitude; NWMR individuals breeding early in the season compared to the SWMR Non-breeding: Remain in breeding territories Continuous distribution of the species around the coast except for a possible gap at Eighty Mile Beach	Hover momentarily then dive down, sometimes in stages, before snatching prey from near the surface with the feet or by plunging into the water feet first	Fish, especially mullet where available Rarely take molluscs, crustaceans, insects, reptiles, birds and mammals

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

10. THREATENED AND MIGRATORY SPECIES' SEASONAL PRESENCE

Seasonal sensitivity for key threatened and migratory species in the NWMR and applicable to Woodside activities are presented in Table 10-1. The timing presented is displayed as a broad representation for the NWMR, with location specific seasonality presented within Environment Plans (EPs).

Table 10-1: Seasonal sensitivity of key threatened and migratory species in the NWMR

Species	January	February	March	April	May	June	July	August	September	October	November	December
Fishes, sharks and rays												
Whale shark – foraging (northward from Ningaloo) Whale shark foraging northward from Ningaloo in Spring[1] Migration along the north coast of WA also known to occur between July and November[2] Potential presence of whale sharks year-round at Ningaloo[3]												
Whale shark – foraging (high density prey, Ningaloo Reef) Whale shark foraging (high density prey) Ningaloo April to June, Autumn[1] March to July[2] Potential presence of whale sharks year-round at Ningaloo[3]												
Dwarf sawfish – reproduction[1] Potential to occur all seasons												
Dwarf sawfish – foraging[1] Potential to occur all seasons												
Largetooth (freshwater) sawfish – reproduction (pupping)[1] Pupping occurs from January to May												
Largetooth (freshwater) sawfish – foraging[1]												
Green sawfish (reproduction)[1]												
Green sawfish (foraging)[1]												

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species	January	February	March	April	May	June	July	August	September	October	November	December
Marine reptiles – marine turtle nesting [note, hatchling emergence is generally six to eight weeks after nesting activity]												
Green turtle												
Ashmore Reef stock (G-AR)[1, 4] Mating occurs September to November Nesting occurs year round (peak December to January) Hatching September to May												
Scott Reef-Browse Island stock (G-ScBr)[1, 4] Mating: October Nesting: November to March (peak January to February) Hatching: Peak March to April												
NWS stock (G-NWS)[1, 4] Mating: September to December Nesting: November to March (peak December to February) Hatching: January to May (peak February to March)												
Hawksbill turtle												
WA stock (H-WA)[1, 4] Mating: Unknown Nesting: November to March (peak January) Hatching: January to May												
Flatback turtle												
Cape Domett stock (F-CD)[1, 4] Mating: year round Nesting: all year (peak August to September) Hatching: all year												
South-west Kimberley stock (F-swKim)[1, 4] Mating: year round Nesting: all year (peak December to January) Hatching: all year												

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species	January	February	March	April	May	June	July	August	September	October	November	December
Pilbara stock (F-Pil)[1, 4] Mating: September to January Nesting: October to March (peak November to January) Hatching: February to March												
Unknown genetic stock, Kimberley, WA[1, 4] May to July												
Loggerhead turtle												
WA stock (LH-WA)[1, 4] Mating: Unknown Nesting: November to March (peak January) Hatching: January to May												
Olive ridley turtle												
Unknown genetic stock, Kimberley, WA[1, 4] May to July												
Cetaceans												
Fin whale[5] Fin whale presence NWMR May to October Migrating north from Cape Leeuwin (SWMR) May to October Present offshore Dampier August to October												
Humpback whale – northern migration[6] Range June to September[1, 6, 14] Peak July to August[7]												
Humpback whale – southern migration[7] Range July to November. Peak August to October[6, 7, 8, 14]												
Humpback whale – reproduction (nursing, Kimberley coast)[8] Reproduction (nursing, Kimberley coast) Winter (June to August)[1] Breeding August to September[6, 14] Calves present off Kimberley in October[9]												

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species	January	February	March	April	May	June	July	August	September	October	November	December
Omura's whale Limited data but sightings reported year round[9]												
Pygmy blue whale – northern migration[10] Pygmy blue whale northern migration April to August[1, 6, 11, 12] Peak April to July[13] From the Perth Canyon (April/May) to the NWS (June/July) [13]												
Pygmy blue whale – southern migration[11] Migration October to December, possibly into January[1, 6] Peak November to December[13]												
Southern right whale (calving/presence in NWMR)[12] Calving and migratory presence in Exmouth Gulf (NWMR) June to September[1] Peak: July and August[1]												
Seabirds (high occurrence seabirds with designated BIAs[15]												
Wedge-tailed shearwater – breeding/foraging *fledgling emergence (first two weeks of April)				*								
Australian lesser noddy NWMR presence in non-breeding period *breeding – Ashmore Reef and Abrolhos, may forage in NWMR								*	*	*	*	*
Common noddy – breeding												
Bridled tern – breeding and foraging												
Great frigatebird – breeding/foraging *possibly present in NWMR in non-breeding and foraging in breeding season	*	*	*	*	*	*	*	*	*			
Lesser frigatebird – breeding/foraging *possibly present in NWMR in non-breeding and foraging in breeding season	*	*	*	*	*	*	*	*	*			
Brown booby – presence in NWMR (breeding/foraging) Present NWMR year-round (breeding at Ashmore Reef, Adele Island, Lacepedes between January and March (protracted through to October at Ashmore Reef)												

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Species	January	February	March	April	May	June	July	August	September	October	November	December
Red-footed booby – presence in NWMR (breeding/foraging) Breed at Ashmore Reef and Adele Island, recorded breeding year-round at Ashmore Reef												
Little tern – breeding/foraging maybe present in NWMR outside breeding season – foraging and resting												
Roseate tern – breeding												
Caspian tern – breeding Dampier Archipelago and North West Cape												
Greater crested tern												
White-tailed and red-tailed tropicbird – breeding largest breeding populations on Christmas Island												
Key												
	Peak period (reliable/predictable)											
	Species present/undertaking biologically important behaviour in the NWMR											
	Species not likely to be present or undertaking biologically important behaviour in the NWMR											

1. *Biologically Important Areas (DCCEEW 2025b)*
2. *Threatened Species Scientific Committee (2015d)*
3. *Norman* et al. *(2017)*
4. *Recovery Plan for Marine Turtles in Australia (Commonwealth of Australia 2017)*
5. *Aulich* et al. *(2022)*
6. *DSEWPaC (2012a)*
7. *Salgado Kent* et al. *(2012)*
8. *Irvine and Salgado Kent (2019)*
9. *Thums* et al. *(2018)*
10. *Cerchio* et al. *(2019)*
11. *Commonwealth of Australia (2015a)*
12. *McCauley* et al. *(2018)*
13. *Thums* et al. *(2022)*
14. *Threatened Species Scientific Committee (2015b)*
15. *All seabird seasonality information derived from BIA metadata, scientific publications and expert opinion (Worley 2024)*

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

11. KEY ECOLOGICAL FEATURES

KEFs are elements of the Commonwealth marine environment that are considered important for a marine region's biodiversity or ecosystem function and integrity. The Australian Government has identified KEFs based on advice from scientists about the ecological processes and characteristics of the area.

KEFs meet one or more of the criteria of:

- a species, group of species, or a community with a regionally important ecological role; for example, a predator, or prey that affects a large biomass or number of other marine species
- a species, group of species or a community that is nationally or regionally important for biodiversity
- an area or habitat that is nationally or regionally important for:
  - enhanced or high productivity, such as predictable upwellings – an upwelling occurs when cold nutrient-rich waters from the bottom of the ocean rise to the surface
  - aggregations of marine life, such as feeding, resting, breeding or nursery areas, or
  - biodiversity and endemism (species that only occur in a specific area)
- a unique seafloor feature, with known or presumed ecological properties of regional significance.

Thirteen KEFs are designated within the NWMR, detailed in Table 11-1. Twelve KEFs are designated within the SWMR and eight within the NMR, detailed in (Appendix A).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 11-1 details the 13 KEFs within the NWMR as identified by the PMST (Appendix A) and are displayed in Figure 11-1.

Table 11-1: Key ecological features within the NWMR

KEF name	Woodside activity area			Values[1]	Description
	Browse	*NWS/ Scarborough*	*North West Cape*		
Ancient coastline at 125 m depth contour	✓	✓	✓	Unique seafloor feature with ecological properties of regional significance. Provides areas of hard substrate and may provide sites for higher diversity and enhanced species richness relative to surrounding areas of predominantly soft sediment.	Several steps and terraces as a result of Holocene sea level changes occur in the region, with the most prominent of these features occurring as an escarpment along the NWMR and Sahul Shelf at a water depth of 125 m. The ancient coastline is not continuous throughout the NWMR and coincides with a well-documented eustatic stillstand at about 130 m depth worldwide (Falkner *et al.* 2009). Where the ancient coastline provides areas of hard substrate, it may contribute to higher diversity and enhanced species richness relative to soft sediment habitat (Falkner *et al.* 2009). Parts of the ancient coastline, represented as rocky escarpment, are considered to provide biologically important habitat in an area predominantly made up of soft sediment. The escarpment type features may also potentially facilitate mixing within the water column due to upwelling, providing a nutrient-rich environment. Although the ancient coastline adds more habitat types to a representative system, the habitat types are not unique to the coastline as they are widespread on the upper shelf (Falkner *et al.* 2009).
Ashmore Reef and Cartier Island and surrounding Commonwealth waters	✓	-	-	High productivity, biodiversity and aggregation of marine life that apply to both the benthic and pelagic habitats within the feature.	Ashmore Reef is the largest of only three emergent oceanic reefs in the north-eastern Indian Ocean and is the only oceanic reef in the region with vegetated islands. Ashmore contains a large reef shelf, two large lagoons, several channelled carbonate sand flats, shifting sand cays, an extensive reef flat, three vegetated islands – East, Middle and West islands – and surrounding waters. Rising from a depth of more than 100 m, the reef platform is at the edge of the NWS and covers an area of 239 km². Ashmore Reef and Cartier Island and the surrounding Commonwealth waters are regionally important for feeding and breeding aggregations of birds and other marine life; they are areas of enhanced primary productivity in an otherwise low- nutrient environment (DSEWPaC 2012a). Ashmore Reef supports the highest number of coral species of any reef off the WA coast.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

KEF name	Woodside activity area			Values[1]	Description
	Browse	*NWS/ Scarborough*	*North West Cape*		
Carbonate bank and terrace system of the Sahul Shelf	✓	-	-	Unique seafloor feature with ecological properties of regional significance. Regionally important because of their role in enhancing biodiversity and local productivity relative to their surrounds. The carbonate banks and terraces provide areas of hard substrate in an otherwise soft sediment environment, and are important for sessile species.	The carbonate banks and terrace system of the Sahul Shelf are in the western Joseph Bonaparte Gulf and north of Cape Bougainville and Cape Londonderry. The carbonate banks and terraces are part of a larger complex of banks and terraces that occurs on the Van Diemen Rise in the adjacent NMR. The bank and terrace system of the Van Diemen Rise covers about 31,278 km² and forms part of the larger system associated with the Sahul Banks to the north and Londonderry Rise to the east. The feature is characterised by terrace, banks, channels and valleys (DSEWPaC 2012c). The banks, ridges and terraces of the Van Diemen Rise are raised geomorphic features with relatively high proportions of hard substrate that support sponge and octocoral gardens. These, in turn, provide habitat to other epifauna, by providing structure in an otherwise flat environment (Przeslawski *et al.* 2011). Plains and valleys are characterised by scattered epifauna and infauna that include polychaetes and ascidians. These epibenthic communities support higher order species such as olive ridley turtles, sea snakes and sharks (DSEWPaC 2012c).
Canyons linking the Argo Abyssal Plain and Scott Plateau	-	✓	-	Facilitates nutrient upwelling, creating enhanced productivity and encouraging diverse aggregations of marine life. Likely to be important due to their historical association with sperm whale aggregations.	Interactions with the Leeuwin Current and strong internal tides are thought to result in upwelling at the canyon heads, thus creating conditions for enhanced productivity in the region (Brewer *et al.* 2007). As a result, aggregations of whale sharks, manta rays, humpback whales, sea snakes, sharks, predatory fishes and seabirds are known to occur in the area due to its enhanced productivity (Sleeman *et al.* 2007).
Canyons linking the Cuvier Abyssal Plain and the Cape Range Peninsula	-	-	✓	Unique seafloor feature with ecological properties of regional significance. The feature creates an enhanced productivity environment, attracting aggregations of fish and higher-order consumers such as large predatory fish, sharks, toothed whales and dolphins.	The canyons are associated with upwelling as they channel deep water from the Cuvier Abyssal Plain up onto the slope, Exmouth Plateau and Ningaloo Reef. This nutrient-rich water interacts with the Leeuwin Current at the canyon heads (DSEWPaC 2012a). Aggregations of whale sharks, manta rays, sea snakes, sharks, seabirds and large predatory fish are known to occur in this area.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

KEF name	Woodside activity area			Values[1]	Description
	Browse	*NWS/ Scarborough*	*North West Cape*		
Commonwealth waters adjacent to Ningaloo Reef	-	-	✓	High productivity and diverse aggregations of marine life. The Commonwealth waters adjacent to Ningaloo Reef and associated canyons and plateaus are interconnected and support the high productivity and species richness of Ningaloo Reef. Ningaloo Reef is globally significant as it is the only extensive coral reef in the world that fringes the west coast of a continent.	The Leeuwin and Ningaloo currents interact, leading to areas of enhanced productivity in the Commonwealth waters adjacent to Ningaloo Reef. Aggregations of whale sharks, manta rays, humpback whales, sea snakes, sharks, seabirds and large predatory fish are known to occur in this area (DSEWPaC 2012a). The spatial boundary of this KEF, as defined in the Australian Marine Spatial Information System, is defined as the waters contained in the existing Ningaloo AMP provided in Section 12.5.
Continental slope demersal fish communities	✓	✓	✓	High biodiversity of demersal fish assemblages, including high levels of endemism.	The diversity of demersal fish assemblages on the continental slope in the Timor Province, the Northwest Transition and the Northwest Province is high compared to elsewhere along the Australian continental slope (DSEWPaC 2012a). The continental slope between North West Cape and the Montebello Trough has more than 500 fish species, 76 of which are endemic, which makes it the most diverse slope bioregion in Australia (Last *et al.* 2005). The slope of the Timor Province and the Northwest Transition also contains more than 500 species of demersal fishes, of which 64 are considered endemic (Last *et al.* 2005), making it the second richest area for demersal fishes throughout the whole continental slope. Demersal fish species occupy two distinct demersal biomes associated with the upper slope (225 to 500 m water depths) and the mid-slope (750 to 1,000 m). Although poorly known, it is suggested the demersal slope communities rely on bacteria and detritus-based systems comprised of infauna and epifauna, which in turn become prey for a range of teleost fishes, molluscs and crustaceans (Brewer *et al.* 2007). Higher-order consumers may include carnivorous fishes, deepwater sharks, toothed whales and large squid (Brewer *et al.* 2007). Pelagic production is phytoplankton-based, with hotspots around oceanic reefs and islands (Brewer *et al.* 2007)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

KEF name	Woodside activity area			Values[1]	Description
	Browse	***NWS/ Scarborough***	***North West Cape***		
Exmouth Plateau	-	✓	✓	Unique seafloor feature with ecological properties of regional significance, which apply to both benthic and pelagic habitats. Likely to be an important area of biodiversity as it provides an extended area offshore for communities adapted to depths of about 1,000 m.	The Exmouth Plateau is a large, mid-slope, continental margin plateau that lies off the north-west coast of Australia. It ranges in depth from about 500 to more than 5,000 m and is a major structural element of the Carnarvon Basin (Miyazaki and Stagg 2013). The large size of the Exmouth Plateau and its expansive surface may modify deepwater flow and be associated with generating internal tides, both of which may subsequently contribute to the upwelling of deeper, nutrient-rich waters nearer the surface (Brewer *et al.* 2007). Satellite observations suggest productivity is enhanced along the northern and southern boundaries of the plateau (Brewer *et al.* 2007). Sediments on the plateau suggest biological communities include scavengers, benthic filter feeders and epifauna (DSEWPaC 2012a). Fauna in the pelagic waters above the plateau are likely to include small pelagic species and nekton attracted to seasonal upwellings, as well as larger predators such as billfishes, sharks and dolphins (Brewer *et al.* 2007). Protected and migratory species are also known to pass through the region, including whale sharks and cetaceans.
Glomar Shoal	-	✓	-	An area of high productivity and aggregations of marine life, including commercial and recreational fish species.	Glomar Shoal is a submerged littoral feature about 150 km north of Dampier on the Rowley shelf at depths of 33 to 77 m (Falkner *et al.* 2009). Studies by Abdul Wahab *et al.* (2018) found hard coral and sponge species in water depths less than 40 m. One hundred and seventy different species of fishes were detected, with greatest species richness and abundance in shallow habitats (Abdul Wahab *et al.* 2018). Fish species present include commercial and recreational species such as rankin cod, brown striped snapper, red emperor, crimson snapper, bream and yellow-spotted triggerfish (Falkner *et al.* 2009; Fletcher and Santoro 2009). These species have recorded high catch rates associated with Glomar Shoal, indicating the shoal is likely to be an area of high productivity.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

KEF name	Woodside activity area			Values[1]	Description
	Browse	*NWS/ Scarborough*	*North West Cape*		
Mermaid Reef and Commonwealth waters surrounding Rowley Shoals	-	✓	-	Regionally important in supporting high species richness, higher productivity and aggregations of marine life.	The Mermaid Reef and Commonwealth waters surrounding the KEF is adjacent to the 3 nm State waters limit surrounding Clerke Reef and Imperieuse Reef, and include the Mermaid Reef Marine Park as described in Section 12. The reefs provide a distinctive biophysical environment in the region. They have steep and distinct reef slopes and associated fish communities. In evolutionary terms, the reefs may play a role in supplying coral and fish larvae to reefs further south via the southward-flowing Indonesian Throughflow. Both coral communities and fish assemblages differ from similar habitats in eastern Australia (Done *et al*. 1994).
Pinnacles of the Bonaparte Basin	✓	-	-	Unique seafloor feature with ecological properties of regional significance. Provide areas of hard substrate in an otherwise soft sediment environment and so are important for sessile species. Recognised as a biodiversity hotspot for sponges. The KEF is within both the NWMR and NMR.	The Pinnacles of the Bonaparte Basin provide areas of hard substrate in an otherwise relatively featureless environment, the pinnacles are likely to support a high number of species, although a better understanding of the species richness and diversity associated with these structures is required (DSEWPaC 2012a; 2012c). Covering >520 km² within the Bonaparte Basin, this feature contains the largest concentration of pinnacles along the Australian margin. The pinnacles of the Bonaparte Basin are thought to be the eroded remnants of underlying strata; it is likely the vertical walls generate local upwelling of nutrient-rich water, leading to phytoplankton productivity that attracts aggregations of planktivorous and predatory fish, seabirds and foraging turtles (DSEWPaC 2012a; 2012c).
Seringapatam Reef and the Commonwealth waters in the Scott Reef complex	✓	-	-	Support diverse aggregations of marine life, have high primary productivity relative to other parts of the region, are relatively pristine and have high species richness, which apply to both the benthic and pelagic habitats within the feature.	Seringapatam Reef and the Commonwealth waters in the Scott Reef complex are regionally important in supporting the diverse aggregations of marine life, high primary productivity and high species richness associated with the reefs themselves. As two of the few offshore reefs in the north-west, they provide an important biophysical environment in the region (DSEWPaC 2012a).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

KEF name	Woodside activity area			Values[1]	Description
	Browse	***NWS/ Scarborough***	***North West Cape***		
Wallaby Saddle	-	-	✓	High productivity and aggregations of marine life, representing almost the entire area of this type of geomorphic feature in the NWMR. It is a unique habitat that neither occurs anywhere else nearby (within hundreds of kilometres) nor with as large an area (Falkner *et al.* 2009).	The Wallaby Saddle may be an area of enhanced productivity. Historical whaling records provide evidence of sperm whale aggregations in the area of the Wallaby Saddle, possibly due to the enhanced productivity of the area and aggregations of baitfish (DSEWPaC 2012a).

1. Values description sourced from Marine Bioregional Plan for the North-west Marine Region (DSEWPaC 2012a) and DCCEEW SPRAT database.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

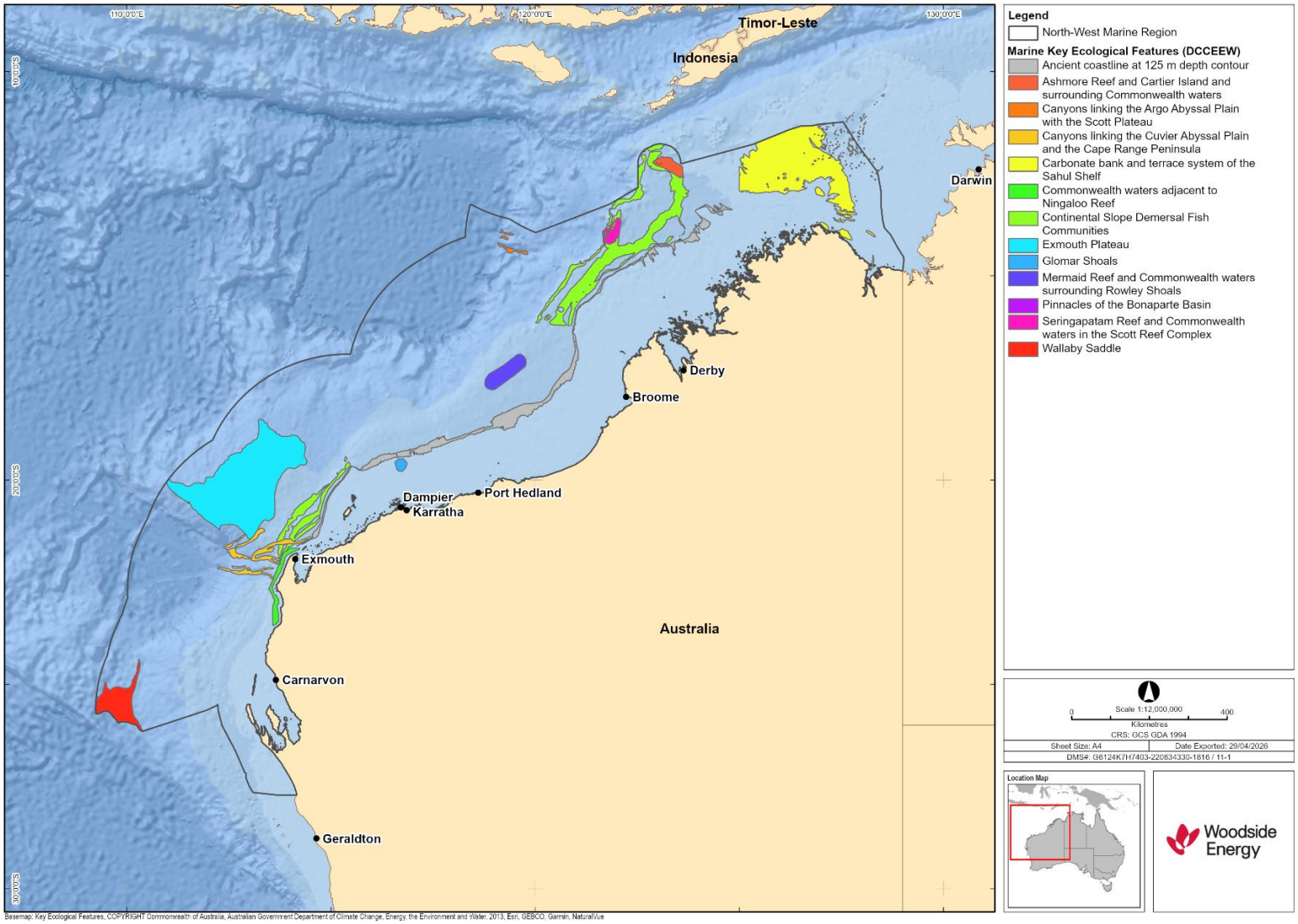


Figure 11-1: Key ecological features within the NWMR

Source: DCCEEW (2024b)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

12. PROTECTED AREAS

12.1 Regional context

Protected areas include World Heritage properties, National Heritage places, wetlands of international importance, AMPs, State marine parks and reserves, threatened ecological communities and the Australian Whale Sanctuary. The PMST Reports (Appendix A) show 30 protected areas in the NWMR, 19 in the SWMR and nine in the NMR.

12.2 World Heritage properties

World Heritage listings are sites of outstanding universal value and meet at least ten selection criteria, compiled of cultural and natural basis criteria. World Heritage listings classed as meeting outstanding natural criteria are discussed in this section and World Heritage sites classed as meeting outstanding cultural criteria are discussed in Section 13.

The list of Australia's World Heritage Properties and the PMST reports (Appendix A) show two World Heritage properties classed as natural within the NWMR (Table 12-4), and one World Heritage property classed as cultural, the Murujuga Cultural Landscape (MCL), which is described in Section 12.2.1. One World Heritage property is within the SWMR and one in the NMR (Appendix A).

Table 12-4 describes the World Heritage properties within the NWMR.

12.2.1 Murujuga Cultural Landscape World Heritage property

The MCL, within the NWMR (Figure 12-2), is globally significant and is recognised on Australia's National Heritage list and United Nations Educational, Scientific and Cultural Organization's (UNESCO) World Heritage list. The landscape encompasses one of the largest, densest and most diverse collections of rock art in the world. The area is estimated to contain over a million engravings (petroglyphs) demonstrating a broad range of styles and subjects. The landscape also boasts various archaeological sites, including quarries, middens, fish traps, rock shelters, ceremonial sites, artefact scatters, grinding patches and stone arrangements that evidence tens of thousands of years of human occupation. These significant places are linked through the stories, knowledge and customs maintained by Traditional Custodians of Murujuga.

12.2.1.1 UNESCO World Heritage listing

UNESCO "seeks to encourage the identification, protection and preservation of cultural and natural heritage around the world considered to be of outstanding value to humanity" via the World Heritage List, established under the World Heritage Convention 1972 (UNESCO 2024).

The MCL was nominated by the Federal Department of the Environment and Energy in 2020 and was inscribed on the UNESCO World Heritage List on 11 July 2025. This property is comprised of 99,881 ha, includes 8,356 ha of the Burrup Peninsula, 42 islands of the Dampier Archipelago and adjacent marine areas.

The outstanding universal values of the MCL World Heritage property include the following:

- Petroglyphs demonstrate artistic achievement assembled over 50,000 years. They are visually outstanding, demonstrate technical skill, and represent multiple phases in the development of regional and local styles.
- The Murujuga Cultural Landscape bears testimony to the living cultural traditions of Ngarda-Ngarli and the spiritual relationship between people and landscape that is at least 50,000 years old.
- The Murujuga Cultural Landscape is an outstanding example of human interaction with the environment over at least 50,000 years. The landscape is patterned by this long-term presence persisting through irreversible environmental and climatic changes.

The MCL is inscribed under Cultural Criterion i, iii and v, which reflect the outstanding universal values.

More information about the MCL can be found on the publicly available UNESCO World Heritage Listing[17].

[17] https://whc.unesco.org/en/list/1709

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

The WA DBCA states “World Heritage listing also brings a commitment at local, state and national levels to protect and manage the property for present and future generations.” This affirms that with appropriate management, the World Heritage listing and industry could occur in parallel, as long as there are no significant impacts on World Heritage values (DBCA 2019).

12.2.1.2 Condition of Murujuga Cultural Landscape

The identified condition of the MCL has been assessed from publicly available sources:

The following is an excerpt from the World Heritage Submission for MCL (Murujuga Aboriginal Corporation (MAC), DBCA, DoEE 2020) which noted, with regards to the Statements of Integrity and/or Authenticity:

> “Aboriginal cultural landscapes are living landscapes that change as time progresses, where oral tradition is the canon of proof and where changing practices of embodied experience with landscapes grow from generation to generation (Andrews and Buggey 2008).
>
> “In the context of Aboriginal cultural landscapes, any test of authenticity must recognise, expect, and endorse changes (Andrews and Buggey 2008). The archaeological and anthropological evidence for Murujuga is well preserved, with a high degree of authenticity. The exceptionally well-preserved cultural values of Murujuga can be found across an area of more than 37,000 ha, comprising the majority of the Burrup Peninsula, as well as the surrounding islands of the Dampier Archipelago.
>
> “The petroglyphs of Murujuga have been made on the exceptionally hard, dark volcanic rock using stone tool technology. Methods of production included pecking, abrasion, incision and bas-relief. When first produced the very pale grey petroglyphs would have contrasted starkly with the dark red-brown cortex of the rock. With subsequent patination and weathering, this contrast gradually reduces…
>
> “Murujuga has a high level of integrity and received enhanced protection and management following its National Heritage listing in 2007. A detailed land-use impact study of Murujuga documented that all 40 islands included in the Dampier Archipelago (including Burrup Peninsula) National Heritage place and approximately 85 per cent of the Burrup Peninsula, retain extremely high integrity (McDonald and Veth 2006), and contain all the attributes that constitute the potential outstanding universal value of the place…
>
> “Within the National Heritage listed area, the petroglyphs are whole and intact (Jo McDonald Cultural Heritage Management 2009; 2011). Although the entirety of Murujuga has not been surveyed and recorded, there are thousands of known sites which demonstrate the potential outstanding universal value of the Murujuga Cultural Landscape…
>
> “While industrial development visually compromises some areas of the southern section of the Burrup Peninsula, the topography, with its deeply dissected gorges, valleys and scree slopes, means that a large portion of Murujuga, including the vast majority of its islands retain high visual integrity (Jo McDonald Cultural Heritage Management 2011; Australian Heritage Council 2012). In summary, the Murujuga Cultural Landscape is an intact and representative example of one of the most significant concentrations of human artistic creativity in the world, which survives through the continuity of Ngurra-ra Ngarli cultural and social practices and active management.”

A report titled The Potential Outstanding Universal Value of the Dampier Archipelago Site and Threats to that Site – A report by the Australian Heritage Council to the Minister for Sustainability, Environment, Water, Population and Communities (Australian Heritage Council 2012), found that:

> “It is clear that the undisturbed area within the boundaries of the National Heritage listed place is complete and whole, notwithstanding the proximity of industry.”

The Australian Heritage Database listing for the Nationally Heritage Listed Dampier Archipelago (including Burrup Peninsula) states:

> “Condition: Parts of the area, particularly the Burrup Peninsula, East Intercourse Island and Mid East Intercourse Island, have been subject to industrial development and other impacts such as the construction of towns and work camps. A land use impact assessment, undertaken using aerial photographs from August 2004, estimates that high levels of impact have occurred on 1,643 ha (or 16.4 square kilometres) on the Burrup Peninsula (McDonald and Veth 2006). A high level of impact in these areas on the Burrup Peninsula has resulted in the destruction of archaeological material and in some cases the relocation of engravings and other stone features. Despite this, the natural and cultural heritage in Dampier Archipelago and its surrounding waters is in good condition” (DCCEEW 2007).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

12.2.1.3 Murujuga rock art monitoring

In 2019, the WA Department of Water and Environmental Regulation (DWER) released the Murujuga Rock Art Strategy (MRAS), a "monitoring, analysis and decision-making framework to protect Aboriginal rock art located on Murujuga (the Dampier Archipelago and Burrup Peninsula)" (DWER 2019). The MRAS notes "This strategy builds on the previous work on Murujuga to deliver a scientifically rigorous approach to monitoring, analysis and management that will provide an appropriate level of protection to the rock art. It describes a risk-based approach for the management of impacts to the rock art that is consistent with the State Government's responsibilities under the *Environmental Protection Act 1986* (EP Act) and provides the monitoring and analysis to determine whether accelerated change is occurring to the petroglyphs" (DWER 2019).

The results from these studies will guide management and protection of the rock art" (Government of Western Australia 2023). The MRAS states that "The successful implementation of the management framework to protect the rock art from anthropogenic emissions will require…a monitoring program that is appropriately designed and implemented to take the necessary measurements, to analyse the data and to report on the integrity or condition of the rock art and change in that condition" (DWER 2019). As described in the MRAS, "The Western Australian Government in partnership with MAC and in consultation with international and national experts in relevant disciplines and the Murujuga Rock Art Stakeholder Reference Group, will develop and implement a revised long-term Murujuga Rock Art Monitoring Program" (DWER 2019).

The Murujuga Rock Art Monitoring Program (MRAMP) is a five-year program run by MAC and DWER, is described as a "best practice monitoring and analysis program" by the Government of Western Australia, which "will provide reliable information about changes and trends in the condition of the rock art and whether the rock art is showing signs of accelerated change. In 2025, MRAMP published interim environmental quality criteria that set the initial levels of airborne substances that are considered to not cause harm to rock art (Curtin University 2025). Interim standards published by MRAMP indicated that activities in the region currently remain below this value. Interim Environmental Quality Criteria Guidelines exist to guide an ongoing management approach under the MRAMP framework for the region.

More information about the MRAS and MRAMP can be found on the Government of Western Australia publicly available website.[18]

12.2.1.4 *Aboriginal and Torres Strait Islander Heritage Protection Act* section 10 (Murujuga) declaration

The (Murujuga) Declaration 2025 was issued on 12 September 2025 under section 10 of the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (Commonwealth) to provide additional Commonwealth protection for areas of the MCL, specifically on the Burrup Peninsula and Dampier Archipelago (DCCEEW 2025f). The declaration comes into force 12 months after its issue (12 September 2026).

The declaration allows the Minister for Environment and Water (the Minister) to intervene when an area of Aboriginal significance is considered under threat of injury or desecration. The Minister determined that Murujuga is a *significant Aboriginal area* and is subject to a range of threats, including those arising from existing and proposed industrial development, access arrangements, and indirect impacts on heritage values. The original application included a broader area for protection; a partial declaration was issued covering certain defined *declared areas.* These declared areas include Woodside-operated onshore leases. The prohibitions in the declaration do not apply where a person has prior written agreement from MAC to undertake certain activities (DCCEEW 2025f).

The statement about making the section 10 (Murujuga) Declaration is available on DCCEEW's webpage.[19]

12.3 National and Commonwealth Heritage places

The National Heritage List (DCCEEW 2026a) is Australia's list of natural, historic and Indigenous places of outstanding significance to the nation. The National Heritage List Spatial Database (DCCEEW 2026e) describes the place name, class (Indigenous, natural, historic) and status of the heritage places.

[18] Murujuga rock art strategy

[19] Statement about the making of a partial declaration under section 10 of the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (Commonwealth) in relation to parts of Murujuga, Western Australia

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Commonwealth Heritage places are a collection of sites recognised for their Indigenous, historical or natural values and are owned or controlled by the Australian Government.

A search of the National Heritage List Spatial Database and the PMST reports (Appendix A) identified six National Heritage places in the NWMR (Table 12-4), four in the SWMR and two in the NMR (Appendix A). A search of the Commonwealth Heritage List identified seven Commonwealth Heritage places within the NWMR (Table 12-4) and six within the SWMR (Appendix A). Four Commonwealth Heritage places are listed within the NMR (Appendix A).

Table 12-4 describes National and Commonwealth Heritage places within the NWMR.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

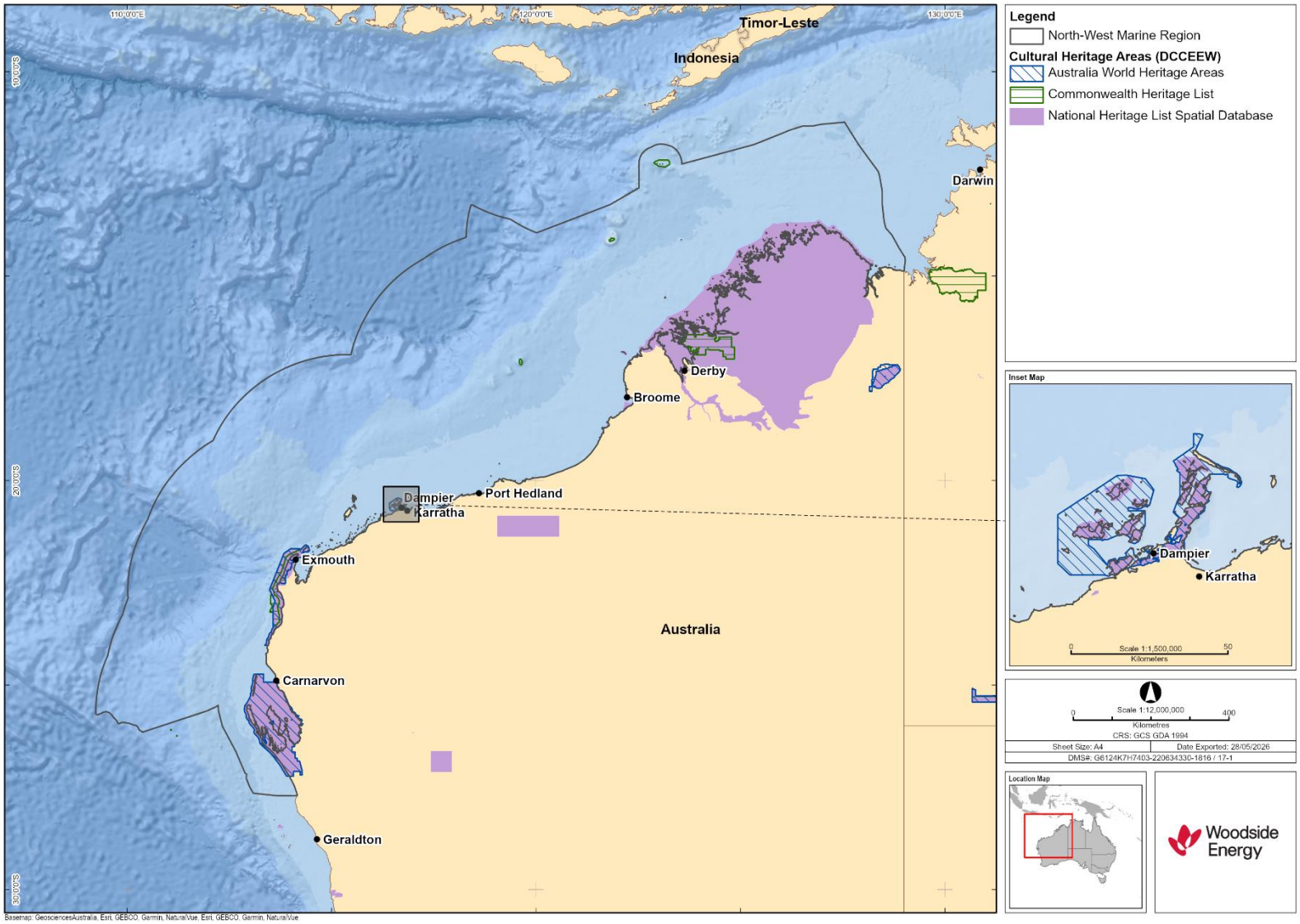


Figure 12-1: World Heritage properties and National and Commonwealth Heritage listed places in the NWMR

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

12.4 Wetlands of international importance (listed under the Ramsar Convention)

Australia has 65 Ramsar wetlands that cover >8.3 million hectares. Ramsar wetlands are those that are representative, rare or unique wetlands, or that are important for conserving biological diversity.

The List of Wetlands of International Importance held under the Ramsar Convention and the PMST reports (Appendix A) identified four Ramsar sites with coastal features within the NWMR (Table 12-4). There are five Ramsar sites within the SWMR (Appendix A) and two within the NMR in the PMST report (Appendix A).

Table 12-4 describes Ramsar wetlands within the NWMR.

12.5 Australian Marine Parks

AMPs, proclaimed under the EPBC Act in 2007 and 2013, are in Commonwealth waters from the outer edge of State and Territory waters (3 nm) to the outer boundary of Australia's EEZ 200 nm from the shore.

PMST reports (Appendix A) identified 16 AMPs within the NWMR, ten within the SWMR and eight within the NMR.

There are also two AMPs in the Indian Ocean territories. These are the Cocos (Keeling) Islands Marine Park and the Christmas Island Marine Park (Table 12-2) (Commonwealth of Australia 2021). Section 12.5.2 describes these further.

Table 12-1 describes the values of all marine parks identified in the North-west Marine Network management plans.

12.5.1 North-west Marine Parks Network

Table 12-1 describes AMPs within the North-west Marine Park Network, according to the North-west Marine Parks Network Management Plan 2018 (Director of National Parks (DNP) 2018a).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 12-1: Summary of Australian Marine Parks in the North-west Marine Park Network

North-west Marine Park Network	IUCN zones	Description and values
Argo-Rowley Terrace Marine Park	National Park (II) Multiple Use (VI) Special Purpose Zone (Trawl) (VI)	**Description** The Argo–Rowley Terrace Marine Park is about 270 km north-west of Broome, WA, and extends to the limit of Australia's EEZ. This AMP covers an area of 146,003 km² and water depths between 220 m and 6,000 m, protecting ecological communities in the deep offshore region. The AMP provides connectivity between the Mermaid Reef Marine Park and WA Rowley Shoals Marine Park. The marine park was proclaimed under the EPBC Act on 14 December 2013 and renamed Argo-Rowley Terrace Marine Park on 9 October 2017.
		Natural values The marine park includes ecosystems representative of: • Northwest Transition – an area of shelf break, continental slope and most of the Argo Abyssal Plain; key topographic features include Mermaid, Clerke and Imperieuse reefs • Timor Province – an area dominated by warm, nutrient-poor waters; canyons are an important feature in this area of the marine park and are generally associated with high productivity and aggregations of marine life. KEFs are: • canyons linking the Argo Abyssal Plain with the Scott Plateau • Mermaid Reef and Commonwealth waters surrounding Rowley Shoals. The marine park includes a range of seafloor features such as canyons on the slope between the Argo Abyssal Plain, Rowley Terrace and Scott Plateau. These are believed to be up to 50 million years old and are associated with small, periodic upwellings that results in localised higher levels of biological productivity. The marine park includes species listed under the EPBC Act. BIAs within the marine park include resting and breeding habitat for seabirds and a migratory pathway for the pygmy blue whale.
		Cultural values Sea Country is valued for Indigenous cultural identity, health and wellbeing. Across Australia, Indigenous people have been sustainably using and managing their Sea Country for tens of thousands of years. As noted in the North-west Marine Park Management Plan, limited information regarding the cultural significance of this marine park is currently available (DNP 2018a).
		Heritage values There are no International, Commonwealth or National Heritage listings relevant to the Argo-Rowley Terrace Marine Park. The marine park contains two known shipwrecks listed under the *Historic Shipwrecks Act 1976*: Alfred (wrecked in 1908) and Pelsart (wrecked in 1908).
		Social and economic values Socioeconomic values of this marine park include commercial fishing and mining.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

North-west Marine Park Network	IUCN zones	Description and values
Ashmore Reef Marine Park	Sanctuary (Ia) Recreational Use (IV)	**Description** The Ashmore Reef Marine Park is about 630 km north of Broome and 110 km south of the Indonesian island of Roti. The marine park is in Australia's External Territory of Ashmore and Cartier islands. It is within an area subject to a Memorandum of Understanding (MoU) between Indonesia and Australia, known as the MoU Box. The marine park covers an area of 583 km² and water depths from less than 15 m to 500 m. The marine park was originally proclaimed under the *National Parks and Wildlife Conservation Act 1975* on 16 August 1983 as the Ashmore Reef National Nature Reserve, and proclaimed under the EPBC Act on 14 December 2013 and renamed Ashmore Reef Marine Park on 9 October 2017.
		Natural values The Ashmore Reef Marine Park includes ecosystems representative of the Timor Province – a bioregion with a depth range from about 200 m near the shelf break to 5,920 m over the Argo Abyssal Plain. Ashmore Reef is an important feature of the bioregion. There are two distinct demersal fish communities: one on the upper slope, the other mid slope. The marine environment includes two extensive lagoons, sand flats, shifting sand cays, extensive reef flat and large areas of seagrass. The reef ecosystems are comprised of hard and soft corals, gorgonians, sponges and a range of encrusting organisms, with the highest number of coral species of any reef off the WA coast. This marine park supports a range of species listed under the EPBC Act. BIAs within the marine park include breeding, foraging and resting habitat for seabirds, resting and foraging habitat for migratory shorebirds, foraging, mating, nesting and internesting habitat for marine turtles, foraging habitat for dugongs, and a migratory pathway for pygmy blue whales. The Ashmore Reef Ramsar site includes the largest of the atolls in the region. West Island, Middle Island and East Island represent the only vegetated islands in the region. The site supports internationally significant populations of seabirds and shorebirds, is important for turtles (green, hawksbill and loggerhead) and dugongs, and has the highest diversity of hermatypic (reef-building) corals on the WA coast. It is known for its abundance and diversity of sea snakes, although populations at Ashmore Reef have been in decline since 1998. KEFs are: • Ashmore Reef and Cartier Island and surrounding Commonwealth waters • continental slope demersal fish communities – an area of high-diversity demersal fish assemblages.
		Cultural values Sea Country is valued for Indigenous Australians' cultural identity, health and wellbeing. Across Australia, Indigenous people have been sustainably using and managing their Sea Country for tens of thousands of years. As noted in the North-west Marine Park Management Plan, there is limited information about the cultural significance of this marine park (DNP 2018a). This marine park is valued in Indonesian culture as it contains Indonesian artefacts and grave sites. Ashmore Lagoon is still accessed as a rest or staging area for traditional Indonesian fishers travelling to and from fishing grounds within the MoU Box.
		Heritage values Ashmore Reef is a Commonwealth Heritage listed site, meeting criteria A, B and C.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

North-west Marine Park Network	IUCN zones	Description and values
		Social and economic values Tourism, recreation and scientific research are important activities in this marine park.
Carnarvon Canyon Marine Park	Habitat Protection (IV)	**Description** The Carnarvon Canyon Marine Park is about 300 km north-west of Carnarvon. It covers an area of 6,177 km² and a water depth range of 1,500 to 6,000 m. The marine park was proclaimed under the EPBC Act on 14 December 2013 and renamed Carnarvon Canyon Marine Park on 9 October 2017.
		Natural values This marine park includes ecosystems representative of the Central Western Transition – a bioregion characterised by large areas of continental slope, a range of topographic features such as terraces, rises and canyons, seasonal and sporadic upwelling, and benthic slope communities. It includes the Carnarvon Canyon, a single-channel canyon covering the entire depth range of this marine park. Ecosystems of this marine park are influenced by tropical and temperate currents, deepwater environments and proximity to the continental slope and shelf. The soft-bottom environment at the base of the Carnarvon Canyon is likely to support deep seafloor species, such as holothurians, polychaetes and sea-pens. This marine park supports a range of species listed under the EPBC Act.
		Cultural values Sea Country is valued for Indigenous cultural identity, health and wellbeing. Across Australia, Indigenous people have been sustainably using and managing their Sea Country for tens of thousands of years.
		Heritage values No International, Commonwealth or National Heritage listings apply to the marine park.
		Social and economic values Commercial fishing is an important activity in the marine park.
Cartier Island Marine Park	Sanctuary (Ia)	**Description** The Cartier Island Marine Park is about 45 km south-east of Ashmore Reef Marine Park and 610 km north of Broome, WA. Both marine parks are in Australia's External Territory of Ashmore and Cartier islands and within an area subject to an MoU between Indonesia and Australia, known as the MoU Box. The Cartier Island Marine Park covers an area of 172 km² and water depths from less than 15 m to 500 m. The marine park was originally proclaimed under the *National Parks and Wildlife Conservation Act* on 21 June 2000 as the Cartier Island Marine Reserve. It was then proclaimed under the EPBC Act on 14 December 2013 and renamed Cartier Island Marine Park on 9 October 2017.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

North-west Marine Park Network	IUCN zones	Description and values
		Natural values This marine park includes ecosystems representative of the Timor Province – a bioregion with depths ranging from about 200 m near the shelf break to 5,920 m over the Argo Abyssal Plain. The reefs and islands of this bioregion are regarded as biodiversity hotspots. KEFs are: • Ashmore Reef and Cartier Island and surrounding Commonwealth waters • continental slope demersal fish communities. There are two distinct demersal fish communities of the continental slope: one on the upper slope, the other mid slope. This marine park includes an unvegetated sand island (Cartier Island), mature reef flat, a small, submerged pinnacle (Wave Governor Bank), and two shallow pools north-east of the island. It is also an area of high diversity and abundance of hard and soft corals, gorgonians (sea fans), sponges and a range of encrusting organisms. The reef crests are generally algal dominated, while the reef flats feature ridges of coral rubble and large areas of seagrass. This marine park supports a range of species listed under the EPBC Act. BIAs within this marine park include breeding and foraging habitat for seabirds, internesting, nesting and foraging habitat for marine turtles, and foraging habitat for whale sharks. This marine park is internationally significant for its abundance and diversity of sea snakes.
		Cultural values Sea Country is valued for Indigenous cultural identity, health and wellbeing. Across Australia, Indigenous people have been sustainably using and managing their Sea Country for tens of thousands of years. As noted in the North-west Marine Park Management Plan, there is limited information about the cultural significance of this marine park (DNP 2018a).
		Heritage values This marine park contains one known shipwreck listed under the *Historic Shipwrecks Act:* the Ann Millicent (wrecked in 1888). No International or National Heritage listings apply to this marine park.
		Social and economic values Scientific research is an important activity in this marine park.
Dampier Marine Park	National Park (II) Habitat Protection (IV)	**Description** The Dampier Marine Park is about 10 km north-east of Cape Lambert and 40 km from Dampier, extending from the WA State water boundary. This marine park covers an area of 1,252 km² and a water depth range between less than 15 m and 70 m. The marine park was proclaimed under the EPBC Act on 14 December 2013 and renamed Dampier Marine Park on 9 October 2017.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

North-west Marine Park Network	IUCN zones	Description and values
	Multiple Use (VI)	**Natural values** This marine park includes ecosystems representative of the Northwest Shelf Province – a dynamic environment influenced by strong tides, cyclonic storms, long-period swells and internal tides. The bioregion includes diverse benthic and pelagic fish communities, and ancient coastline thought to be an important seafloor feature and migratory pathway for humpback whales. This marine park supports a range of species listed under the EPBC Act. BIAs within this marine park include breeding and foraging habitat for seabirds, internesting habitat for marine turtles, and a migratory pathway for humpback whales.
		Cultural values Sea Country is valued for Indigenous cultural identity, health and wellbeing. Across Australia, Indigenous people have been sustainably using and managing their Sea Country for tens of thousands of years. The Ngarluma, Yindjibarndi, Yaburara and Mardudhunera people have responsibilities for Sea Country in this marine park. The native title holders for these peoples are represented by the Ngarluma Aboriginal Corporation and Yindjibarndi Aboriginal Corporation. These Prescribed Bodies Corporate represent Traditional Owners with native title over coastal areas adjacent to this marine park. The Yamatji Marlpa Aboriginal Corporation is the Native Title Representative Body for the Pilbara and Yamatji regions.
		Heritage values No International, Commonwealth or National Heritage listings apply to this marine park, but the marine park is about 10 km north of the Dampier Archipelago (including Burrup Peninsula) National Heritage listing, which has significant Indigenous heritage values. including rock art sites.
		Social and economic values Port activities, commercial fishing and recreation, including fishing, are important activities in this marine park.
Eighty Mile Beach Marine Park	Multiple Use (VI)	**Description** The Eighty Mile Beach Marine Park is about 74 km north-east of Port Hedland, adjacent to the WA Eighty Mile Beach Marine Park. This marine park covers an area of 10,785 km² and water depth ranges between less than 15 m and 70 m. The marine park was proclaimed under the EPBC Act on 14 December 2013 and renamed Eighty Mile Beach Marine Park on 9 October 2017.
		Natural values This marine park includes examples of ecosystems representative of the Northwest Shelf Province – a dynamic environment influenced by strong tides, cyclonic storms, long-period swells and internal tides. The bioregion includes diverse benthic and pelagic fish communities, and ancient coastline thought to be an important seafloor feature and migratory pathway for humpback whales. This marine park supports a range of species listed under the EPBC Act. BIAs within this marine park include breeding, foraging and resting habitat for seabirds, internesting and nesting habitat for marine turtles, foraging, nursing and pupping habitat for sawfish, and a migratory pathway for humpback whales.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

North-west Marine Park Network	IUCN zones	Description and values
		Cultural values Sea Country is valued for Indigenous cultural identity, health and wellbeing. Across Australia, Indigenous people have been sustainably using and managing their Sea Country for tens of thousands of years. The Sea Country of the Nyangumarta, Karajarri and Ngarla people extends into the Eighty Mile Beach Marine Park. Sea Country is culturally significant and important to their identity. They have an unbroken, deep spiritual connection to their Sea Country, with traditional practices continuing today. Staple foods of living cultural value for the Nyangumarta, Karajarri and Ngarla people include saltwater fish, turtles, dugongs, crabs and oysters. Access to Sea Country by families is important for cultural traditions, livelihoods and future socioeconomic development opportunities. The native title holders for the Nyangumarta, Karajarri and Ngarla people are represented by the Karajarri Aboriginal Corporation, Nyangumarta Karajarri Aboriginal Corporation, Nyangumarta Warrarn Aboriginal Corporation and Wanparta Aboriginal Corporation. These Prescribed Body Corporates represent Traditional Owners with native title over coastal area adjacent to the marine park. They are the points of contact for their respective areas of responsibility for Sea Country in the marine park. The Kimberley Land Council and the Yamatji Marlpa Aboriginal Corporation are the Native Title Representative Bodies for the Kimberley and Pilbara regions.
		Heritage values This marine park contains three known shipwrecks listed under the *Historic Shipwrecks Act:* Lorna Doone (wrecked in 1923), Nellie (wrecked in 1908) and Tifera (wrecked in 1923). No International, Commonwealth or National Heritage listings apply to the marine park.
		Social and economic values Tourism, commercial fishing, pearling and recreation are important activities in this marine park.
Gascoyne Marine Park	National Park (II) Habitat Protection (IV) Multiple Use (VI)	**Description** The Gascoyne Marine Park is about 20 km off the west coast of the Cape Range Peninsula, adjacent to the Ningaloo Reef Marine Park and the WA Ningaloo Marine Park, and extends to the limit of Australia's EEZ. This marine park covers an area of 81,766 km² and water depth varies between 15 m and 6,000 m. The marine park was proclaimed under the EPBC Act on 14 December 2013 and renamed Gascoyne Marine Park on 9 October 2017.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

North-west Marine Park Network	IUCN zones	Description and values
		Natural values This marine park includes ecosystems representative of: • Central Western Shelf Transition – continental shelf with water depths up to 100 m, and a significant transition zone between tropical and temperate species • Central Western Transition – characterised by large areas of continental slope, a range of topographic features such as terraces, rises and canyons, seasonal and sporadic upwelling, and benthic slope communities comprising tropical and temperate species • Northwest Province – an area of continental slope comprising diverse and endemic fish communities. KEFs are: • canyons linking the Cuvier Abyssal Plain and the Cape Range Peninsula • Commonwealth waters adjacent to Ningaloo Reef • continental slope demersal fish communities • Exmouth Plateau. Ecosystems represented in this marine park are influenced by the interaction of the Leeuwin Current, Leeuwin Undercurrent and the Ningaloo Current. This marine park supports a range of species listed under the EPBC Act. BIAs within this marine park include breeding habitat for seabirds, internesting habitat for marine turtles, a migratory pathway for humpback whales, and foraging habitat and migratory pathway for pygmy blue whales.
		Cultural values Sea Country is valued for Indigenous cultural identity, health and wellbeing. Across Australia, Indigenous people have been sustainably using and managing their Sea Country for tens of thousands of years. The Gnulli people have responsibilities for Sea Country in this marine park. The Yamatji Marlpa Aboriginal Corporation is the Native Title Representative Body for the Yamatji region.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

North-west Marine Park Network	IUCN zones	Description and values
		Heritage values *World Heritage* The Ningaloo Coast was listed as an area of outstanding universal value under the World Heritage Convention in 2011, meeting World Heritage listing criteria vii and x. The Ningaloo Coast World Heritage property is adjacent to the marine park. *Commonwealth Heritage* The Ningaloo Marine Area (Commonwealth waters) meets the Commonwealth Heritage listing criteria A, B and C. The Ningaloo Marine Area is adjacent to the marine park. *National Heritage* The Ningaloo Coast meets the National Heritage listing criteria A, B, C, D, and F and is adjacent to the marine park. *Historic shipwrecks* The marine park contains more than five known shipwrecks listed under the *Historic Shipwrecks Act*.
		Social and economic values Commercial fishing, mining and recreation are important activities in this marine park.
Joseph Bonaparte Gulf Marine Park	Multiple Use Zone (VI) Special Purpose Zone (VI) (NMR only)	**Description** The Joseph Bonaparte Gulf Marine Park is about 15 km west of Wadeye, NT, and about 90 km north of Wyndham, WA, in the Joseph Bonaparte Gulf. It is adjacent to the WA North Kimberley Marine Park. This marine park covers an area of 8,597 km² and water depth ranges between less than 15 m and 100 m. The marine park was proclaimed under the EPBC Act on 14 December 2013 and renamed Joseph Bonaparte Gulf Marine Park on 9 October 2017.
		Natural values This marine park includes examples of ecosystems representative of the Northwest Shelf Transition – a dynamic environment influenced by strong tidal currents, monsoonal winds, cyclones and wind-generated waves. The large tidal ranges and wide intertidal zones near this marine park create a physically dynamic and turbid marine environment. The KEF in this marine park is the carbonate bank and terrace system of the Sahul Shelf – characterised by terraces, banks, channels and valleys supporting sponges, soft corals, sessile filter feeders, polychaetes and ascidians. This marine park supports a range of species listed under the EPBC Act. BIAs within this marine park include foraging habitat for marine turtles and the Australian snubfin dolphin.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

North-west Marine Park Network	IUCN zones	Description and values
		Cultural values Sea Country is valued for Indigenous cultural identity, health and wellbeing. Across Australia, Indigenous people have been sustainably using and managing their Sea Country for tens of thousands of years. The Miriuwung, Gajerrong, Doolboong, Wardenybeng and Gija and Balangarra people have responsibilities for Sea Country in this marine park. They are represented by the following Prescribed Bodies Corporate: Miriuwung and Gajerrong Aboriginal Corporation and Balanggarra Aboriginal Corporation. These corporations are the points of contact for their respective areas of Sea Country in this marine park. The Northern Land Council and the Kimberley Land Council are the Native Title Representative Bodies for the NT's northern region and the Kimberley region, respectively.
		Heritage values No International, Commonwealth or National Heritage listings apply to this marine park, but this marine park is adjacent to the West Kimberley National Heritage place.
		Social and economic values Tourism, commercial fishing, mining and recreation, including fishing, are important activities in this marine park.
Kimberley Marine Park	Habitat Protection (IV) National Park (II) Multiple Use (VI)	**Description** The Kimberley Marine Park is about 100 km north of Broome, extending from the WA State water boundary north from the Lacepede Islands to the Holothuria Banks offshore from Cape Bougainville. This marine park is adjacent to the WA Lalang-garram/Camden Sound Marine Park and the North Kimberley Marine Park. This marine park covers an area of 74,469 km² and water depths from less than 15 m to 800 m. **The marine park was proclaimed under the EPBC Act on 14 December 2013 and renamed Kimberley Marine Park on 9 October 2017.**
		Natural values This marine park includes ecosystems representative of: • Northwest Shelf Province – a dynamic environment influenced by strong tides, cyclonic storms, long-period swells and internal tides. The bioregion includes diverse benthic and pelagic fish communities, and an ancient coastline thought to be an important seafloor feature and migratory pathway for humpback whales. • Northwest Shelf Transition – straddles the NWMR and NMR and in the north-west includes shelf break, continental slope and most of the Argo Abyssal Plain, and is subject to a high incidence of cyclones. Benthic biological communities in the deeper parts of the bioregion have not been extensively studied, although high levels of species diversity and endemism occur among demersal fish communities on the continental slope. • Timor Province – water depths (of the bioregion) range from about 200 m near the shelf break to 5,920 m over the Argo Abyssal Plain. The reefs and islands of the bioregion are regarded as biodiversity hotspots. Endemism in demersal fish communities of the continental slope is high; two distinct communities have been identified on the upper and mid slopes. KEFs are: • ancient coastline at the 125 m depth contour

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

North-west Marine Park Network	IUCN zones	Description and values
		• continental slope demersal fish communities. This marine park supports a range of species listed under the EPBC Act. BIAs within this marine park include breeding and foraging habitat for seabirds, internesting and nesting habitat for marine turtles, breeding, calving and foraging habitat for inshore dolphins, calving, migratory pathway and nursing habitat for humpback whales, migratory pathway for pygmy blue whales, foraging habitat for dugongs, and foraging habitat for whale sharks.
		Cultural values Sea Country is valued for Indigenous cultural identity, health and wellbeing. Across Australia, Indigenous people have been sustainably using and managing their Sea Country for tens of thousands of years. The Wunambal Gaambera, Dambimangari, Mayala, Bardi Jawi and the Nyul Nyul people's Sea Country extends into the Kimberley Marine Park. The Wunambal Gaambera people's country includes daagu (deep waters), with about 3,400 km² of their Sea Country in this marine park. The Wunambal Gaambera, Dambimangari, Mayala, Bardi Jawi and the Nyul Nyul people have an unbroken connection to their Sea Country, having deep spiritual connection through wunggurr (creator snakes) that still live in the sea. Staple foods of living cultural value include saltwater fish, turtles, dugongs, crabs and oysters. Access to Sea Country by families is important for cultural traditions, livelihoods and future socioeconomic development opportunities. The National Heritage listing for the West Kimberley recognises the following key cultural heritage values: • Wanjina Wunggurr cultural tradition, which incorporates many Sea Country cultural sites • log-raft maritime tradition, which involved using tides and currents to access warrurru (reefs) far offshore to fish • interactions with Makassan traders around sea foods over hundreds of years • important pearl resources that were used in traditional trade through the wunan and in contemporary commercial agreements. The Wunambal Gaambera, Dambimangari and Bardi Jawi people consider that these values extend into the Kimberley Marine Park. The Wanjina Wunggurr is law of the Wunambal Gaambera and Dambimangari people and it is recognised all the Sea Country, land, plants and animals were put there by Wanjina Wunggurr. Under Wanjina Wunggurr law, the Wunambal Gaambera and Dambimangari people have a responsibility to manage Country, to maintain the health of the Country and all living things. The Wunambal Gaambera, Bardi Jawi, Mayala and the Nyul Nyul people have had native title determined over parts of their Sea Country included in this marine park. The native title holders for these people are represented by the Wunambal Gaambera Aboriginal Corporation, Bardi and Jawi Niimidiman Aboriginal Corporation and the Kimberley Land Council. These representative bodies are the points of contact for their respective areas of Sea Country for this marine park. The Kimberley Land Council is the Native Title Representative Body for the Kimberley region.
		Heritage values This marine park contains more than 40 known shipwrecks listed under the *Historic Shipwrecks Act*. No International, Commonwealth or National Heritage listings apply to the marine park, but the marine park is adjacent to the National Heritage place of the West Kimberley.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

North-west Marine Park Network	IUCN zones	Description and values
		Social and economic values Tourism, commercial fishing, mining, recreation, including fishing, and traditional use are important activities in this marine park.
Mermaid Reef Marine Park	National Park (II)	**Description** The Mermaid Reef Marine Park is about 280 km north-west of Broome, adjacent to the Argo-Rowley Terrace Marine Park and about 13 km from the WA Rowley Shoals Marine Park. This marine park covers an area of 540 km² and water depths from less than 15 m to 500 m. Mermaid Reef is one of three reefs forming the Rowley Shoals. The reefs of the Rowley Shoals are significant as they are considered ecological stepping stones for reef species originating in Indonesian/Western Pacific waters, are one of a few offshore reef systems on the NWS, and may provide an upstream source for recruitment to reefs further south. The marine park was originally proclaimed under the *National Parks and Wildlife Conservation Act* on 10 April 1991 as the Mermaid Reef Marine National Nature Reserve and proclaimed under the EPBC Act on 14 December 2013 and renamed Mermaid Reef Marine Park on 9 October 2017.
		Natural values This marine park includes examples of ecosystems representative of the Northwest Transition – an area of shelf break, continental slope, and most of the Argo Abyssal Plain. Together with Clerke Reef and Imperieuse Reef, Mermaid Reef is a biodiversity hotspot and key topographic feature of the Argo Abyssal Plain. A KEF of this marine park is the Mermaid Reef and Commonwealth waters surrounding the Rowley Shoals. Ecosystems of this marine park are associated with emergent reef flat, deep reef flat, lagoon, and submerged sand habitats. This marine park supports a range of species listed under the EPBC Act. BIAs within this marine park include breeding habitat for seabirds and a migratory pathway for the pygmy blue whale.
		Cultural values Sea Country is valued for Indigenous cultural identity, health and wellbeing. Across Australia, Indigenous people have been sustainably using and managing their Sea Country for tens of thousands of years. As noted in the North-west Marine Park Management Plan, there is limited information about the cultural significance of this marine park (DNP 2018a).
		Heritage values No International or National Heritage listings apply to this marine park. Mermaid Reef-Rowley Shoals was established on the Commonwealth Heritage List in 2004, meeting Commonwealth Heritage listing criteria A, B, C and D. This marine park contains one known shipwreck listed under the *Historic Shipwrecks Act*: Lively (wrecked in 1810).
		Social and economic values Tourism, recreation and scientific research are important activities in this marine park.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

North-west Marine Park Network	IUCN zones	Description and values
Montebello Marine Park	Multiple Use (VI)	**Description** The Montebello Marine Park is offshore of Barrow Island and 80 km west of Dampier, extending from the WA State waters boundary, and is adjacent to the WA Barrow Island and Montebello Islands marine parks. This marine park covers an area of 3,413 km² and water depths from less than 15 m to 150 m. The marine park was proclaimed under the EPBC Act on 14 December 2013 and renamed Montebello Marine Park on 9 October 2017.
		Natural values This marine park includes examples of ecosystems representative of the Northwest Shelf Province – a dynamic environment influenced by strong tides, cyclonic storms, long-period swells and internal tides. The bioregion includes diverse benthic and pelagic fish communities. A KEF of this marine park is the ancient coastline at 125 m depth contour. This marine park supports a range of species listed under the EPBC Act. BIAs within this marine park include breeding habitat for seabirds, internesting, foraging, mating and nesting habitat for marine turtles, a migratory pathway for humpback whales, and foraging habitat for whale sharks. The marine park contains important breeding grounds for four turtle species: flatback, green, hawksbill and loggerhead turtles.
		Cultural values The Yamatji Marlpa Aboriginal Corporation is the Native Title Representative Body for the Pilbara region. Sea Country is valued for Indigenous cultural identity, health and wellbeing. Across Australia, Indigenous people have been sustainably using and managing their Sea Country for tens of thousands of years. As noted in the North-west Marine Park Management Plan, there is limited information about the cultural significance of this marine park (DNP 2018a).
		Heritage values No International, Commonwealth or National listings apply to this marine park, but this marine park is adjacent to the WA Barrow Island and the Montebello–Barrow Island Marine Conservation Reserves, which have been nominated for National Heritage listing. This marine park contains two known shipwrecks listed under the *Historic Shipwrecks Act*: Trial (wrecked in 1622), the earliest known shipwreck in Australian waters, and Tanami (unknown date).
		Social and economic values Tourism, commercial fishing, mining and recreation are important activities in this marine park.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

North-west Marine Park Network	IUCN zones	Description and values
Ningaloo Marine Park	National Park (II) Recreational Use (IV)	**Description** The Ningaloo Marine Park stretches about 300 km along the west coast of the Cape Range Peninsula, and is adjacent to the WA Ningaloo Marine Park and Gascoyne Marine Park. This marine park covers an area of 2,435 km² and a water depth range of 30 m to more than 500 m. This marine park provides connectivity between deeper offshore waters of the shelf break and coastal waters of the adjacent WA Ningaloo Marine Park. It includes some of the most diverse continental slope habitats in Australia, including the continental slope area between North West Cape and the Montebello Trough. Canyons in this marine park are important for sustaining the nutrient conditions that support the high diversity of Ningaloo Reef. The marine park was originally proclaimed under the *National Parks and Wildlife Conservation Act* on 20 May 1987 as the Ningaloo Marine Park (Commonwealth waters) and proclaimed under the EPBC Act on 14 December 2013 and renamed Ningaloo Marine Park on 9 October 2017.
		Natural values This marine park includes examples of ecosystems representative of: • Central Western Shelf Transition – continental shelf of water depths up to 100 m, and a significant transition zone between tropical and temperate species • Central Western Transition – characterised by large areas of continental slope, a range of topographic features such as terraces, rises and canyons, seasonal and sporadic upwelling, and benthic slope communities comprising tropical and temperate species • Northwest Province – an area of continental slope comprising diverse and endemic fish communities • Northwest Shelf Province – a dynamic environment, influenced by strong tides, cyclonic storms, long-period swells and internal tides. The bioregion includes diverse benthic and pelagic fish communities, and ancient coastline thought to be an important seafloor feature and migratory pathway for humpback whales. KEFs are: • canyons linking the Cuvier Abyssal Plain and the Cape Range Peninsula • Commonwealth waters adjacent to Ningaloo Reef • continental slope demersal fish communities. Ecosystems represented in this marine park are influenced by interaction of the Leeuwin Current, Leeuwin Undercurrent and the Ningaloo Current. This marine park supports a range of species listed under the EPBC Act. BIAs within this marine park include breeding and foraging habitat for seabirds, internesting habitat for marine turtles, a migratory pathway for humpback whales, foraging habitat and migratory pathway for pygmy blue whales, breeding, calving, foraging and nursing habitat for dugongs, and foraging habitat for whale sharks.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

North-west Marine Park Network	IUCN zones	Description and values
		Cultural values Sea Country is valued for Indigenous cultural identity, health and wellbeing. Across Australia, Indigenous people have been sustainably using and managing their Sea Country for tens of thousands of years. The Gnulli people have responsibilities for Sea Country in this marine park. The Yamatji Marlpa Aboriginal Corporation is the Native Title Representative Body for the Yamatji region.
		Heritage values *World Heritage* This marine park is within the Ningaloo Coast World Heritage property, meeting World Heritage listing criteria vii and x. The area is valued for high terrestrial species endemism, marine species diversity and abundance, and the interconnectedness of large-scale marine, coastal and terrestrial environments. The area connects the limestone karst system and fossil reefs of the ancient Cape Range to the nearshore reef system of Ningaloo Reef, to the continental slope and shelf in Commonwealth waters. *National Heritage* The Ningaloo Coast overlaps this marine park, meeting the national heritage listing criteria A, B, C, D, and F. *Commonwealth Heritage* The Ningaloo Marine Area (Commonwealth waters) meets Commonwealth Heritage listing criteria A, B and C. The Ningaloo Marine Area overlaps this marine park. *Historic shipwrecks* This marine park contains more than 15 known shipwrecks listed under the *Historic Shipwrecks Act*.
		Social and economic values Tourism and recreation, including fishing, are important activities in this marine park.
Roebuck Marine Park	Multiple Use (VI)	**Description** The Roebuck Marine Park is about 12 km offshore of Broome and is adjacent to the WA Yawuru Nagulagun/Roebuck Bay Marine Park. This marine park covers an area of 304 km² and a water depth range of less than 15 m to 70 m. This marine park is adjacent to the Roebuck Bay Ramsar site, recognised as one of the most important areas for migratory shorebirds in Australia; and the WA Yawuru Nagulagun/Roebuck Bay Marine Park, providing connectivity between offshore and inshore coastal waters of Roebuck Bay. The marine park was proclaimed under the EPBC Act on 14 December 2013 and renamed Roebuck Marine Park on 9 October 2017.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

North-west Marine Park Network	IUCN zones	Description and values
		Natural values This marine park includes examples of ecosystems representative of the Northwest Shelf Province – a dynamic environment influenced by strong tides, cyclonic storms, long-period swells and internal tides. The bioregion includes diverse benthic and pelagic fish communities, and ancient coastline thought to be an important seafloor feature and migratory pathway for humpback whales. This marine park supports a range of species listed under the EPBC Act. BIAs within this marine park include breeding and resting habitat for seabirds, foraging and internesting habitat for marine turtles, a migratory pathway for humpback whales, and foraging habitat for dugongs.
		Cultural values Sea Country is valued for Indigenous cultural identity, health and wellbeing. Across Australia, Indigenous people have been sustainably using and managing their Sea Country for tens of thousands of years. Yawuru people have always recognised the waters of Roebuck Bay as nagula (Yawuru Sea Country), and have customary responsibilities to care for it. They have a deep spiritual connection to offshore landscapes from bugarrigarra (creator beings), and believe snake-like metaphysical beings inhabit the sea. Cultural sites in Sea Country are also a source of law. The Yawuru people harvest marine resources according to the six Yawuru seasons. They have harvested pearl shell for food and cultural purposes. Fish are a staple food source, and fishing a form of cultural expression, connecting people to their Country, modelled on tradition and based in traditional law. Access to Sea Country by families is important to cultural traditions, livelihoods and future socioeconomic development opportunities. The Yawuru Native Title Holders Aboriginal Corporation is the Prescribed Body Corporate representing Traditional Owners with native title over coastal areas adjacent to this marine park, and is the point of contact for Sea Country in this marine park. The Kimberley Land Council is the Native Title Representative Body for the Kimberley region.
		Heritage values No international, Commonwealth or national listings apply to the marine park, but it is adjacent to the West Kimberley National Heritage place.
		Social and economic values Tourism, commercial fishing, pearling and recreation, including fishing, are important activities that occur in the marine park.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

North-west Marine Park Network	IUCN zones	Description and values
Shark Bay Marine Park	Multiple Use (VI)	**Description** The Shark Bay Marine Park is about 60 km offshore of Carnarvon, adjacent to the Shark Bay World Heritage property and National Heritage place. This marine park covers an area of 7,443 km², extending from the WA State water boundary, and a water depth range between 15 m and 220 m. The marine park was proclaimed under the EPBC Act on 14 December 2013 and renamed Shark Bay Marine Park on 9 October 2017.
		Natural values This marine park includes examples of ecosystems representative of: • Central Western Shelf – a predominantly flat, sandy and low-nutrient area, in water depths 50 to 100 m; the bioregion is a transitional zone between tropical and temperate species • Central Western Transition – characterised by large areas of continental slope, a range of topographic features such as terraces, rises and canyons, seasonal and sporadic upwelling, and benthic slope communities comprising tropical and temperate species. Ecosystems represented in this marine park are influenced by the Leeuwin, Ningaloo and Capes currents. This marine park supports a range of species listed under the EPBC Act. BIAs within this marine park include breeding habitat for seabirds, internesting habitat for marine turtles, and a migratory pathway for humpback whales. This marine park and adjacent coastal areas are also important for shallow-water snapper.
		Cultural values Sea Country is valued for Indigenous cultural identity, health and wellbeing. Across Australia, Indigenous people have been sustainably using and managing their Sea Country for tens of thousands of years. The Gnulli and Malgana people have responsibilities for Sea Country in this marine park. The Yamatji Marlpa Aboriginal Corporation is the Native Title Representative Body for the Yamatji region.
		Heritage values no international, commonwealth or national heritage listings apply to this marine park, but this marine park is adjacent to the Shark Bay World Heritage property and Shark Bay National Heritage place. The marine park contains about 20 known shipwrecks listed under the *Historic Shipwrecks Act*.
		Social and economic values Tourism, commercial fishing, mining and recreation, including fishing, are important activities in the marine park.

Source: DNP, 2018a

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

12.5.2 Commonwealth Marine Parks within Indian Ocean territory

Table 12-2 describes the values of the Indian Ocean territory AMPs according to the Christmas Island Marine Park Management Plan (DNP 2025a) and the Cocos (Keeling) Islands Marine Park Management Plan (DNP 2025b).

Table 12-2: Summary of Australian Marine Parks within Indian Ocean territories

Indian Ocean territory marine park	IUCN zones	Values
Christmas Island Marine Park (DNP 2025a)	National Park (II) Habitat Protection (IV)	**Description** Christmas Island Marine Park covers an area of 277,016 km² and extends from the island's shoreline to the limit of Australia's Exclusive Economic Zone, about 200 nm from shore (except to the north of Christmas Island). This marine park adjoins the marine boundary of Christmas Island National Park, which extends 50 m seaward from the island. Almost all the island's port is excluded from this marine park, except for a very small and narrow part of the port's western boundary.
		Natural values The tropical waters and fringing coral reefs that surround Christmas Island contain a mix of coral reef species from both the Indian and Pacific oceans; over 680 species of fish have been recorded in the region. The overlap of these waters gives rise to varieties of hybrid marine fish and some endemic species. Christmas Island also has the world's greatest diversity and abundance of land crabs. The island's waters are essential for the crabs, as they migrate to the coast to breed and release their eggs into the ocean. This marine park contains a range of unique seafloor features, habitats and species, particularly seamounts and deep-sea plains. BIAs include foraging areas for the endemic Abbott's booby, Christmas Island frigatebird and golden bosun and other seabirds that nest on Christmas Island, as well as whale shark feeding areas and southern bluefin tuna breeding habitat. Christmas Island includes rainforests, surrounding clear azure waters, and marine and terrestrial habitats and species of international conservation significance.
		Cultural values The ocean is a centrepiece of life for many community members of Christmas Island, including those of Malay and Chinese heritage who maintain strong cultural traditions and connections to the surrounding marine environment. History of the land has been passed down through generations through historical and cultural stories.
		Heritage values Not listed.
		Social and economic values This marine park is valued for fishing (commercial, recreational and subsistence), diving, snorkelling and tourism. There is potential for scientific study and educational activities.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Indian Ocean territory marine park	IUCN zones	Values
Cocos (Keeling) Islands Marine Park (DNP 2025b)	National Park (II) Habitat Protection (IV)	**Description** Cocos (Keeling) Islands are located around 2,750 km north-west of Perth. The Cocos (Keeling) Islands Marine Park covers a 467,054 km² area, extending from most of the islands' shoreline to the limit of the Australian EEZ, about 100 nm from shore. The Cocos (Keeling) Islands are a group of 27 tropical low-lying coral islands. The Cocos (Keeling) Islands Marine Park was established on the 20 March 2022 by the Australian Government under the EPBC Act and managed by the Commonwealth DNP.
		Natural values The central lagoon system and outer reefs are two of the islands' important habitats. The lagoon encompasses a variety of unique and distinct habitats. This includes seagrass, which is essential for the resident green turtle population (which is a genetically distinct stock that is unique to the islands) and for sustaining fish populations. The outer reef habitats are dominated by hard and soft corals and have a high abundance and diversity of reef fish and other species. The offshore waters contain a range of unique seafloor features, habitats and species, particularly seamounts, deep-sea plains and a significant deep-sea ridgeline. This marine park also protects the foraging habitat of nesting seabirds on North Keeling Island (Pulu Keeling National Park), and species such as dolphins, deep-sea fish and sharks that are or may be threatened elsewhere in the region.
		Cultural values Most of the islands' community members are Cocos Malay, who maintain vibrant and unique cultural traditions, including strong cultural connections to the surrounding marine environment, which is evident through traditional fishing practices, and environmental knowledge of the marine environment, which has been sustained over generations. The lagoon and ocean are an important part of life for all community members living on the remote atoll.
		Heritage values Not listed.
		Social and economic values This marine park is valued for recreational and subsistence activities (fishing, boating, diving, snorkelling, kite surfing, and kayaking), tourism, scientific research and educational activities.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

12.6 Threatened ecological communities

No threatened ecological communities (TECs) as listed under the EPBC Act are known to occur within the marine waters of the NWMR or NMR, as indicated by the PMST reports (Appendix A). However, the monsoon vine thickets on the coastal sand dunes of Dampier Peninsula TEC occurs on the coastal dunes of Dampier Peninsula in the NWMR. The subtropical and temperate coastal saltmarsh (which is a TEC) occurs within the marine water of the SWMR. No TECs occur in the NMR. Table 12-3 describes TECs in the NWMR.

Table 12-3: Summary of threatened ecological communities within the NWMR

TEC	Description	Conservation values
Monsoon vine thickets on the coastal sand dunes of Dampier Peninsula	The ecological community represents certain occurrences of monsoon vine thickets in the southwest Kimberley region of WA, predominantly restricted to the coastlines of the Dampier Peninsula from Broome in the south to One Arm Point in the north and on the north-eastern coast of the Peninsula from One Arm Point to Goodenough Bay (DSEWPaC 2013d). The TEC occurs as discontinuous patches of dense vegetation and contains about 23% of vascular plant species that occur on the Dampier Peninsula. The ecological community contains deciduous, semi-deciduous and evergreen perennial flora species (DSEWPaC 2013d).	The ecological community is listed as endangered (DSEWPaC 2013d). The extent of the ecological community corresponds to Country (the traditional lands) of the Bardi Jawi, Djabera Djabera, Goolarabaloo, Jabirr Jabirr, Nyul Nyul and Yawuru Indigenous people. The ecological community is of cultural significance (DSEWPaC 2013d). Patches of the TEC operate as an ecological network, with birds, mammals and frugivore species providing connectivity. The vegetation provides refuge for animals (DSEWPaC 2013d).

12.7 Australian Whale Sanctuary

The Australian Whale Sanctuary (DCCEEW 2023g) has been established to protect all whales and dolphins found in Australian waters. Under the EPBC Act, all cetaceans (whales, dolphins and porpoises) are protected in Australian waters.

The Australian Whale Sanctuary includes all Commonwealth waters from the 3 nm State/Territory waters limit out to the boundary of the EEZ (i.e. out to 200 nm and further in some places). Within the Australian Whale Sanctuary, it is an offence to kill, injure or interfere with a cetacean. Severe penalties apply to anyone convicted of such offences. It is the responsibility of the state and territory governments to protect whales and dolphins within State and Territory waters (3 nm from the coastline).

12.8 State marine parks and reserves

State marine parks and reserves, proclaimed under the *Conservation and Land Management Act 1984* (WA), are in State waters and vested in the WA Conservation and Parks Commission. Marine-interfacing state marine parks and reserves of WA have been considered, with 12 occurring in the NWMR (Table 12-4), six in the NMR and 14 in the SWMR.

The Exmouth Gulf Taskforce delivered its final report, including advice and recommendations to the Minister for the Environment in 2025, to inform the Exmouth Gulf Marine Park and outline its values and recommended management approach (Government of Western Australia 2025).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

12.9 Summary of protected areas within the NWMR

Table 12-4 describes the protected areas classed as natural within the NWMR. Protected places classed as Indigenous and historic within the NWMR are described in Table 13-2.

Table 12-4: Protected areas within the NWMR

Protected area	Woodside activity area			IUCN protected area category* or relevant park zone	Description and values
	Browse	*NWS/ Scarborough*	*North West Cape*		
World Heritage properties					
Shark Bay World Heritage property	-	-	✓	Natural	**Description** The Shark Bay World Heritage property is adjacent to the Shark Bay AMP and was included on the World Heritage List in 1991 (UNESCO 1991).
					Conservation values Universal values of the Shark Bay World Heritage property include large and diverse seagrass beds, stromatolites and populations of dugongs and threatened species. Inscribed under natural criteria vii, viii, ix and x (UNESCO 1991).
The Ningaloo Coast World Heritage property	-	-	✓	Natural	**Description** The Ningaloo Coast World Heritage property is about 710,000 ha and lies within the Ningaloo AMP and was included on the World Heritage List in 2011 (UNESCO 2011).
					Conservation values Universal values of the Ningaloo Coast World Heritage property include high marine species diversity and abundance; particularly, Ningaloo Reef supports both tropical and temperate marine reptiles and mammals inscribed under natural criteria vii and x (UNESCO 2011).
Murujuga Cultural Landscape	-	✓	-	Indigenous	See Section 12.2.1 for the description and values of this World Heritage property.
National Heritage places					
Shark Bay	-	-	✓	Natural	**Description** The Shark Bay National Heritage Place consists of the same area included in the Shark Bay World Heritage property (refer above) and was established on the National Heritage List in 2007 (DEC 2008).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Protected area	Woodside activity area			IUCN protected area category* or relevant park zone	Description and values
	Browse	*NWS/ Scarborough*	*North West Cape*		
					Conservation values This National Heritage place has multiple exceptional natural features, including one of the largest and most diverse seagrass beds in the world, colonies of stromatolites and rich marine life, including a large population of dugongs, and provides a refuge for other globally threatened species. Shark Bay meets the National Heritage listing criteria a, b, c, d, e, f, g, h and i (DEC 2008).
The Ningaloo Coast	-	-	✓	Natural	**Description** The Ningaloo Coast National Heritage Place consists of the same area included in the Ningaloo Coast World Heritage property (refer above) and was established on the National Heritage List in 2010 (Commonwealth of Australia 2010).
					Natural values The Ningaloo Coast contains one of the best developed nearshore reefs in the world, being home to rugged limestone peninsulas, spectacular coral and sponge gardens, and the whale shark. The Ningaloo Coast meets National Heritage listing criteria a, b, c, d and f (Commonwealth of Australia 2010).
The West Kimberley	✓	✓	-	Natural	**Description** The West Kimberley National Heritage place covers an area of around 192,000 km² in the north-west of Australia from Broome to Wyndham, and was established on the National Heritage List in 2011 (Commonwealth of Australia 2011a).
					Conservation values The Kimberley plateau, north-western coastline and northern rivers of the West Kimberley provide a vital refuge for many native plants and animals that are found nowhere else or which have disappeared from much of the rest of Australia. In addition, Roebuck Bay is internationally recognised as one of Australia's most significant sites for migratory wading birds. This National Heritage place also contains a remarkable history of Indigenous occupation, with many places of Indigenous sacred value. The West Kimberley meets the National Heritage listing criteria a, b, c, d, e, f, g, h and i (Commonwealth of Australia 2011a).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Protected area	Woodside activity area			IUCN protected area category* or relevant park zone	Description and values
	Browse	*NWS/ Scarborough*	*North West Cape*		
Dampier Archipelago	-	✓	-	Historic	**Description** The Dampier Archipelago National Heritage place, about 1550 km north of Perth in WA, covers around 400 km² of islands, reefs and the Burrup Peninsula, and was added to the National Heritage List on 3 July 2007 for its extensive and significant Indigenous rock art and natural values (Commonwealth of Australia 2007). **Conservation values** The Dampier Archipelago National Heritage place is recognised for its outstanding cultural heritage values, particularly its extensive and diverse rock engravings that record Aboriginal responses to environmental change over thousands of years. The area is notable for the rarity and density of its engravings and stone features, its high potential to yield information about Australia's cultural history, and its representation of major Pilbara rock art styles. It also demonstrates a high degree of creative and technical achievement through detailed and complex depictions of human activity and fauna. The Dampier Archipelago meets National Heritage criteria a, b, c, d and f (Commonwealth of Australia 2007).
Dirk Hartog Landing Site/Cape Inscription	-	-	✓	Indigenous	**Description** Cape Inscription, located on Dirk Hartog Island in WA, was inscribed on the National Heritage List in 2006 and marks the site of the earliest recorded European landings on Australia's west coast in 1616, with subsequent visits over 250 years contributing to the mapping of the continent and its inclusion on world maps (Commonwealth of Australia 2006b). **Conservation values** The Cape Inscription/Dirk Hartog Landing National Heritage place is recognised for its outstanding cultural heritage values as the site of the earliest recorded European landing on Australia's west coast and for its strong associations with a sequence of prominent explorers and surveyors over a 250-year period. The area is notable for the rarity of its surviving physical evidence of early exploration, including inscription sites and landing locations, and its role in the development of European scientific knowledge, particularly early botanical collection and classification. It also demonstrates the processes of exploration, survey and mapping that led to the first accurate delineation of the Australian coastline and major changes in world cartography. The Cape Inscription/Dirk Hartog Landing meets National Heritage criteria a, b, d and h (Commonwealth of Australia 2006b).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Protected area	Woodside activity area			IUCN protected area category* or relevant park zone	Description and values
	Browse	*NWS/ Scarborough*	*North West Cape*		
HMAS Sydney II and HSK Kormoran Shipwreck Sites	-	-	✓	Historic	**Description** The HMAS Sydney II and HSK Kormoran shipwrecks are about 290 km west-south-west of Carnarvon, WA, in waters around 2,500 m deep, and were added to the National Heritage List in 2011 after their significance as the site of a major World War II naval battle on 19 November 1941.
					Conservation values The HMAS Sydney II and HSK Kormoran Shipwreck Sites are recognised for their outstanding cultural heritage values as the remains of a defining naval engagement in Australia's World War II history and for their enduring significance as places of loss and commemoration. The sites are notable for the rarity and integrity of their surviving underwater fabric, which provides important archaeological evidence of the 1941 battle and has contributed to resolving longstanding historical uncertainties. They also demonstrate aspects of wartime technological innovation and Australia's evolving wartime experience, alongside strong social value as the final resting places of those who perished. The HMAS Sydney II and HSK Kormoran Shipwreck Sites meet Commonwealth Heritage criteria a, c, f, g and h (Commonwealth of Australia 2011b).
Commonwealth Heritage places					
Ashmore Reef National Nature Reserve	✓	-	-	Natural	**Description** The Ashmore Reef Commonwealth Heritage place is within the boundary of the Ashmore Reef Marine Park (refer AMPs below). The site was listed as a Commonwealth Heritage place in 2004 (DCCEEW n.d.-d).
					Conservation values Ashmore Reef has major significance as a staging point for wading birds migrating between Australia and the northern hemisphere and supports high concentrations of breeding seabirds, many of which are nomadic and typically breed on small, isolated islands. Ashmore Reef is an important scientific reference area for migratory seabirds, sea snakes and marine invertebrates. The Ashmore Reef Commonwealth Heritage place is significant for its history of human occupation and use. The island is believed to have been visited by Indonesian fishers since the early eighteenth century. The islands were used both for fishing and as a staging point for voyages to the southern reefs off Australia's coast (DCCEEW n.d.-d).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Protected area	Woodside activity area			IUCN protected area category* or relevant park zone	Description and values
	Browse	*NWS/ Scarborough*	*North West Cape*		
Learmonth Air Weapons Range Facility	-	-	✓	Natural	**Description** Located along the Ningaloo coastline, the Learmonth Air Weapons Range Facility was one of Australia's most active bombing ranges until 1990. It is of considerable importance in documenting sea level and landform changes since the late Cenozoic period (DCCEEW n.d.-b). **Conservation values** The area includes an ancient reef complex and cave fauna that is of exceptional importance. The ages of the reef terraces are key to understanding the timing of uplift events. The Learmonth Air Weapons Range Facility meets the Commonwealth Heritage listing criteria a, b and c (DCCEEW n.d.-b).
Mermaid Reef–Rowley Shoals	-	✓	-	Natural	**Description** The Mermaid Reef–Rowley Shoals Commonwealth Heritage place is within the boundary of the Mermaid Reef Marine National Nature Reserve. The site was listed as a Commonwealth Heritage place in 2004 (DCCEEW n.d.-a). **Conservation values** The Mermaid Reef–Rowley Shoals Commonwealth Heritage place is regionally important for the diversity of its fauna and, together with Clerke and Imperieuse reefs, has biogeographical significance due to the presence of species that are at or near the limits of their geographic ranges, including fishes known previously only from Indonesian waters. Rowley Shoals is important for benchmark studies as one of the few places off the north-west coast of WA that have been the site of major biological collection trips by the Western Australian Museum (DCCEEW n.d.-a).
Ningaloo Marine Area – Commonwealth Waters	-	-	✓	Natural	**Description** The Ningaloo Marine Area Commonwealth Heritage place is within the Commonwealth waters of the Ningaloo Marine Park (refer AMPs below). The site was listed as a Commonwealth Heritage place in 2004 (DCCEEW n.d.-f).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Protected area	Woodside activity area			IUCN protected area category* or relevant park zone	Description and values
	Browse	*NWS/ Scarborough*	*North West Cape*		
					Conservation values The Ningaloo Marine Area Commonwealth Heritage place provides a migratory pathway for humpback whales and foraging habitat for whale shark. The place is an important breeding area for billfish and manta ray. The Ningaloo Marine Area provides opportunities for scientific research relating to aspects of the area's unique features, including tourism, marine ecology (whales, turtles, whale shark, fish) and oceanography (DCCEEW n.d.-f).
Scott Reef and Surrounds – Commonwealth Area	✓	-	-	Natural	**Description** Scott Reef and Surrounds Commonwealth Heritage place is within the WA coastal waters surrounding North and South Scott Reef. The site was listed as a Commonwealth Heritage place in 2004 (DCCEEW n.d.-e).
					Conservation values The Scott Reef and Surrounds Commonwealth Heritage place is regionally important for the diversity of its fauna and has biogeographical significance due to the presence of species that are at or near the limits of their geographic ranges, including fish known previously only from Indonesian waters. Scott Reef is recognised as important for scientific research and benchmark studies due to its age, the extensive documentation of its geophysical and physical environmental characteristics, and its use as a site of major biological collection trips and surveys by the Western Australian Museum and AIMS (DCCEEW n.d.-e).
Yampi Defence Area	✓	-	-	Natural	**Description** Located 35 km south of Koolan Island, the Yampi Defence Area displays a unique mosaic of geographical landforms that is unique to the region. The occurrence of such diverse landscapes within a small area is unusual (DCCEEW n.d.-c).
					Conservation values The Yampi Defence Area occurs at the confluence of three biogeographic regions in the north-west of Australia. It exhibits diverse landforms, soils and vegetation representative of the sandstone plateaux of the wetter areas of the north-west Kimberley to the broad plains and pindin scrub of the drier areas in the south-west Kimberley. The Yampi Peninsula contains one of the richest amphibian records in the Kimberley. The Yampi Defence Area meets Commonwealth Heritage Listing criteria a, b and c (DCCEEW n.d.-c).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Protected area	Woodside activity area			IUCN protected area category* or relevant park zone	Description and values
	Browse	*NWS/ Scarborough*	*North West Cape*		
HMAS Sydney II and HSK Kormoran Shipwreck Sites	-	-	✓	Historic	Refer to National Heritage properties for a description and the conservation values of the HMAS Sydney II and HSK Kormoran Shipwreck Sites.
Wetlands of international importance (Ramsar)					
Ashmore Reef National Nature Reserve	✓	-	-	Ramsar	**Description** The Ashmore Reef Ramsar site is within the boundary of the Ashmore Reef Marine Park (refer AMPs below). The site was listed under the Ramsar Convention in 2002 (Commonwealth of Australia 2002b). **Conservation values** The Ashmore Reef Ramsar site supports internationally significant populations of seabirds and shorebirds, is important for turtles (green, hawksbill and loggerhead) and dugongs, and has the highest diversity of hermatypic (reef-building) corals on the WA coast. It is known for its abundance and diversity of sea snakes. However, populations of sea snakes at Ashmore Reef since 1998 have been in decline (Commonwealth of Australia 2002b). **Cultural values** Indonesian fishers have regularly visited Ashmore Reef since the early eighteenth century to fish within the area and use the islands for staging points before travelling to other reefs in the region. Indonesian artefacts have been found on Cartier Island and West, Middle and East Islands (Commonwealth of Australia 2002b).
Eighty Mile Beach	-	✓	-	Ramsar	**Description** The Eighty Mile Beach Ramsar site covers an area of 1,250 km², located along a long section of the WA coastline adjacent to the Eighty Mile Beach AMP (refer below) (CALM 2003a). **Conservation values** The Eighty Mile Beach Ramsar site includes saltmarsh and a raised peat bog more than 7,000 years old. The site contains the most important wetland for waders in north-western Australia, supporting up to 336,000 birds, and is especially important as a landfall for waders migrating south for the austral summer (CALM 2003a).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Protected area	Woodside activity area			IUCN protected area category* or relevant park zone	Description and values
	Browse	***NWS/ Scarborough***	***North West Cape***		
Ord River Floodplain	✓	-	-	Ramsar	**Description** The Ord River Floodplain Ramsar site is in the East Kimberley region and encompasses an extensive system of river, seasonal creek, tidal mudflat and floodplain wetlands. The site is a nursery, feeding or breeding ground for migratory birds, waterbirds, fish, crabs, prawns and crocodiles. The site supports vulnerable species under the EPBC Act, including freshwater sawfish (*Pristis microdon*), green sawfish (*Pristis zijsron*) and the Australian painted snipe (*Rostratula australis*). The site is also one of the only two known habitats in WA of the nationally endangered northern river shark (*Glyphis garricki*) (DCCEEW 2019a).
					Conservation values The site represents the best example of wetlands associated with the floodplain and estuary of a tropical river system in the Tanami–Timor Sea Coast bioregion in the Kimberley. In addition, the False Mouths of the Ord are the most extensive mudflat and tidal waterway complex in WA (DCCEEW 2019a).
Roebuck Bay	-	✓	-	Ramsar	**Description** The Roebuck Bay Ramsar site covers an area of 550 km², south of Broome and adjacent to the Roebuck AMP (refer below) (CALM 2003b).
					Conservation values The Roebuck Bay Ramsar site is recognised as one of the most important areas for migratory shorebirds in Australia. The site regularly supports over 100,000 waterbirds, with numbers being highest in the Austral spring when migrant species breeding in the Palearctic stop to feed during migration. Roebuck Bay supports one of the largest known populations of Australian snubfin dolphins (*Orcaella heinsohni*) – a species with a limited distribution, vulnerable conservation status and high cultural value (CALM 2003a; D'Cruz *et al*. 2022).
State marine parks and reserves					
Bardi Jawi Gaarra Marine Park	✓	-	-	Sanctuary, Recreation, Special Purpose Zones (biocultural	**Description** The Bardi Jawi Gaara Marine Park is in the West Kimberley region surrounding the northern part of the Dampier Peninsula and the western islands of the Buccaneer Archipelago, covering areas of about 2,040 km².

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Protected area	Woodside activity area			IUCN protected area category* or relevant park zone	Description and values
	Browse	*NWS/ Scarborough*	*North West Cape*		
				conservation and cultural protection), and General use	**Conservation values** The Bardi Jawi Gaara Marine Park has a tidal range of 11 m, which is the highest in Australia. The mangrove-lined creeks, intertidal and fringing reef areas that encompass the coastline and islands are ecologically important and host a vast number of plants and animals that have adapted to the unique area. Migratory marine mammals. including humpback whales, migrate to the areas between June and November each year to birth their young. Dugongs visit the area in the cooler months from May to July (DBCA 2022a).
					Social and Economic Values Commercial fishing, pearling and aquaculture are important economic activities that occur within this region. The area is a popular tourism destination and hosts a number or recreational activities and water sports (DBCA 2022a).
					Cultural values The Bardi and Jawi people have a significant connection to the animals, sites and places within this region, which are connected by stories and songlines. The Sea Country is used for hunting, fishing, cultural activities and business (DBCA 2022a).
Barrow Island Marine Park and Barrow Island Marine Management Area, and Montebello Islands Marine Park (jointly managed)	-	✓	-	Sanctuary, Recreation, General Use and Special Purpose Zones	**Description** The Barrow Island Marine Park and Barrow Island Marine Management Area and Montebello Islands Marine Park are located off the north-west coast of WA, about 1,600 km north of Perth, and cover areas of about 583 km², 42 km² and 1,147 km², respectively (DEC 2007b).
					Conservation values The Montebello/Barrow Islands marine conservation reserves have very complex seabed and island topography, resulting in a myriad of different habitats, subtidal coral reefs, macroalgal and seagrass communities, subtidal soft-bottom communities, rocky shores and intertidal reef platforms, which support a rich diversity of invertebrates and finfish. The reserves are important breeding areas for several species of marine turtles and seabirds, which use the undisturbed sandy beaches for nesting. Humpback whales migrate through the reserves and dugongs occur in the shallow warm waters (DEC 2007b).
					Social and economic values Major commercial fishing and pearling occur within the area and provide employment and economic value to surrounding communities. Nature-based tourism, water sports and recreational fishing are popular recreational activities in the area (DEC 2007b).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Protected area	Woodside activity area			IUCN protected area category* or relevant park zone	Description and values
	Browse	*NWS/ Scarborough*	*North West Cape*		
					Cultural values There are no recorded seabed Aboriginal sites within this park. However, it is possible there are Aboriginal archaeological sites on the seabed that were created before the most recent sea level rise (DEC 2007b).
Eighty Mile Beach Marine Park	-	✓	-	Sanctuary, Recreation, Special Purpose and General Use Zones	**Description** Eighty Mile Beach Marine Park covers about 2,000 km² stretching across 220 km of coastline between Port Hedland and Broome (Department of the Parks and Wildlife (DPAW) 2014a).
					Conservation values Eighty Mile Beach Marine Park is one of the world's most important feeding grounds for small wading birds that migrate to the area each summer, travelling from countries thousands of kilometres away. The marine park is a major nesting area for flatback turtles that are found only in northern Australia. Sawfishes, dugongs, dolphins and millions of invertebrates inhabit the sand and mud flats, seagrass meadows, coral reefs and mangroves (DPAW 2014a).
					Social and economic values Social values of the marine park include tourism, nature-based recreational activities and commercial fishing (DPAW 2014a).
					Cultural values The Karajarri, Nyangumarta and Ngarla people have a powerful connection to the land and sea of this region. Traditional hunting and fishing are important cultural activities for the Traditional Owners of this marine park (DPAW 2014a).
Lalang-gaddam Marine Park	✓	-	-	Sanctuary, Recreation, General Use and Special Purpose Zones	**Description** The Lalang-gaddam Marine Park is managed under the amended joint management plan for the Lalang-gaddam/Camden Sound, Lalang-gaddam/Horizontal Falls and North Lalang-gaddam marine parks, and the indicative joint management plan for the proposed Maiyalam Marine Park (DBCA 2022b). . The Lalang-gaddam Marine Park is in the Kimberley region of WA and adjacent to Derby and the Shire of Wyndham. The Class A marine park covers about 13,085 km² (DBCA 2022b).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Protected area	Woodside activity area			IUCN protected area category* or relevant park zone	Description and values
	Browse	*NWS/ Scarborough*	*North West Cape*		
					Conservation values The Lalang-gaddam/Camden Sound Marine Park is the most important humpback whale nursery in the southern hemisphere. It also features the spectacular coastal Montgomery Reef. The marine park is home to six species of threatened marine turtle, Australian snubfin and Indo-Pacific humpback dolphins, saltwater crocodiles, manta rays, several species of protected sawfish, and the world's large population of dugongs (about 12,000). The Lalang-gaddam Marine Park's most celebrated attraction, The Horizontal Falls, is created by massive tides of up to 10 m and narrow gaps in two parallel tongues of land, meaning the tide falls faster than the water can escape, producing 'horizontal falls'. There are also islands with fringing coral reefs and mangrove-lined creeks and bays. This marine park has islands fringed with coral reef. It has been identified as an ecological hotspot and supports more than 1% of the world's population of brown boobies, with up to 2,000 breeding pairs. About 500 pairs of crested terns also nest on the island (DBCA 2022b).
					Social and economic values This marine park has spectacular scenery that attracts tourists and generates about $563 million annually. Recreational fishing and recreational maritime activities are popular within this marine park. Commercial fisheries can operate within the waters of this marine park, but many do not regularly fish within this area. Pearling and aquaculture occur within this marine park and provide economic value for the region (DBCA 2022b).
					Cultural values The area is of cultural significance to the Dambeemangarddee people who have lived on the land and cared for land and Sea Country for tens of thousands of years. Some animals such as the barramundi and rock cod have particular cultural significance and are sacred animals to the Dambeemangarddee people. Numerous coastal and marine plants continue to be an important food source for the Traditional Owners of this marine park (DBCA 2022b).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Protected area	Woodside activity area			IUCN protected area category* or relevant park zone	Description and values
	Browse	*NWS/ Scarborough*	*North West Cape*		
Mayala Marine Park	✓	-	-	Sanctuary, Recreation, General Use and Special Purpose Zones	**Description** The Mayala Marine Park is a Class A reserve in the West Kimberley region and covers about 3,150 km² (DBCA 2022c).
					Conservation values The Mayala Marine Park has a tidal range of 11 m, the highest in Australia. The mangrove-lined creeks, intertidal and fringing reef areas that encompass the coastline and islands are ecologically important and host a vast number of plants and animals that have adapted to the unique area. The seagrass communities provide habitat and food for many species, including turtles and dugongs. Migratory marine mammals, including humpback whales, migrate to the areas between June and November each year to birth their young. Dugongs visit the area in the cooler months from May to July (DBCA 2022c).
					Social and economic values Due to the extraordinary natural values of the area, the number of visitors to the area has continued to grow over the years. Popular activities within the park include fishing, boating and wildlife watching. The waters of this area provide optimal conditions for commercial fishing, pearling and aquaculture (DBCA 2022c).
					Cultural values The area is of exceptional cultural significance to the Malaya people who are true saltwater people and use both land and sea resources and have a strong connection to the land, animals and plants of the region. This marine park has many sacred sites that occur on land and sea, which include artefacts, fish traps and human-made structures. This marine park is culturally significant to the Malaya people who care for Country and use this marine park for fishing, hunting and camping (DBCA 2022c).
Ningaloo Marine Park and Muiron Islands Marine Management	-	-	✓	Sanctuary, Recreation, General Use and	**Description** The Ningaloo Marine Park and Muiron Islands Marine Management Area are off the North West Cape, about 1,200 km north of Perth, and cover areas of about 2,633 km² and 286 km², respectively (CALM 2005a).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Protected area	Woodside activity area			IUCN protected area category* or relevant park zone	Description and values
	Browse	*NWS/ Scarborough*	*North West Cape*		
Area (jointly managed)				Special Purpose Zones	**Ecological Values** Ningaloo Reef is the largest fringing coral reef in Australia. Temperate and tropical currents converge in the Ningaloo region, resulting in highly diverse marine life, including spectacular coral reefs, abundant fishes and species with special conservation significance such as turtles, whale sharks, dugongs, whales and dolphins. The region has diverse marine communities, including mangroves, algae and filter-feeding communities, and has high water quality. These values contribute to the Ningaloo Marine Park being regarded as the state's premier marine conservation icon. The area features large aggregations of marine mammals, fish and whale sharks, which coincide with the Ningaloo mass coral spawning and seasonal nutrient upwelling events. The key values include karst environments, interglacial fossil reefs, rocks shores and sandy beaches. The area supports populations of threatened turtle nesting areas, seabird and shorebird roosting and breeding areas, and priority flora and vegetation that is a habitat for endemic reptiles and invertebrates (DBCA 2022d). The Muiron Islands Marine Management Area is also important, containing a very diverse marine environment, with coral reefs, filter-feeding communities and macroalgal beds. In addition, the islands are important seabird and green turtle nesting areas (CALM 2005a).
					Social and economic values The Ningaloo region has a high number of visitors enjoying the area who come to appreciate nature-based tourism, which brings important economic value to the communities of the area (CALM 2005a). The aesthetic values of the seascape are noted as a cultural value and that panoramic vistas of turquoise lagoon waters, reefs, beaches, breaking surf and the blue open ocean beyond the reef line are major attractions of the reserves.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Protected area	Woodside activity area			IUCN protected area category* or relevant park zone	Description and values
	Browse	*NWS/ Scarborough*	*North West Cape*		
					Cultural values The Ningaloo Reef has a long history of occupancy by Aboriginal communities and Aboriginal heritage sites. The Jinigudira and Baiyungu people have lived in this region for thousands of years and use coastal areas for fishing, camping and hunting of turtles and dugongs (CALM 2005a). Nyinggulu (Ningaloo) coast is highly valued by the Traditional Owners of the area, with many culturally significant values in the area, including cultural heritage sites and places of ceremonial and mythological significance. There are also culturally significant animals and plants in the areas, some of which are sacred totems that relate to Creation stories, ceremonies or are used as medicine or food. There are also significant thalu sites along the coast, which are used for ceremonies and rituals to increase the numbers of particular species. Undertaking customary activities on Country is central to maintaining the cultural heritage of the land. Such activities are an important part of Traditional Owner and wider Aboriginal culture, enabling maintenance of traditional relationships with the land and water, sharing of knowledge, engagement in traditional practices, and accessing and looking after significant places (DBCA 2022d).
North Kimberley Marine Park	✓	-	-	Sanctuary, Special Purpose and General Use Zones	**Description** The North Kimberley Marine Park covers 18,450 km², with its south-western boundary located about 270 km north-east of Derby (DPAW 2016a).
					Conservation values The marine park covers about 1,845,000 ha. The coral reefs of the North Kimberley have the greatest diversity in WA and are some of the most pristine and remarkable reefs in the world. The park surrounds more than 1,000 islands and is home to listed species such as dugongs, marine turtles and sawfishes (DPAW 2016a).
					Social and economic values The park features diverse wildlife, remarkable scenery and cultural heritage, which provide excellent opportunities for tourism experiences, recreational and nature-based activities such as fishing and hunting (DPAW 2016a).
					Cultural values The Wunambal Gaambera, Balanggarra, Ngarinyin and Miriuwung Gajerrong people have strong and ongoing cultural connections to the North Kimberley saltwater Country and rely on coastal and marine environments and resources for their cultural identity, livelihoods and economy (DPAW 2016a).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Protected area	Woodside activity area			IUCN protected area category* or relevant park zone	Description and values
	Browse	*NWS/ Scarborough*	*North West Cape*		
Pilbara Island Nature Reserve (Great Sandy Island, Rocky Island, Thevenard Island)	-	✓	-	Nature Reserve	**Description** Located between the Ningaloo Coast World Heritage area and the Dampier Archipelago, the Pilbara Islands Nature Reserve includes 174 small islands with a combined area of over 130 km² and a total coastline of over 500 km. Islands within this management area are characterised by foredunes surrounding a central depression and less than 12 m in elevation (DBCA 2020a).
					Conservation values The islands provide a refuge for threatened and migratory species, including the critically endangered eastern curlew, great knot and curlew sandpiper. The islands provide nesting beaches for green, flatback, hawksbill and loggerhead turtles. Mangrove thickets are found on some of the islands, which provide essential habitat for coastal species and shorebirds (DBCA 2020a).
					Social and economic values Visitation to the islands is low and only by private boat. Commercial accommodation is only available at Thevenard Island. Recreational fishing is undertaken around the islands. Thevenard Island previously was used as a base for an oil and gas facility but is being decommissioned (DBCA 2020a).
					Cultural values The Nganhurra Thanadri Garrbu Aboriginal Corporation and the Wirrawandi Aboriginal Corporation have native title determinations over parts of the planning area. The area holds significant cultural value to Indigenous people. Culturally significant sites, places and species are found within the area. Customary activities including hunting, ceremonies and sharing of traditional knowledge is practiced in the region. Thevenard Island contains one registered site under the *Aboriginal Heritage Act 1972*, which includes a midden scatter with three baler shell containers. Aboriginal artefacts have been found on some of the islands, including a burial site, stone and glass flakes, brunt shell and bone and baler shells. Some of the islands were possibly occupied by Indigenous people of the region (DBCA 2020a).
Rowley Shoals Marine Park	-	✓	-	Sanctuary, Recreation and General Use Zones	**Description** The Rowley Shoals comprise three reef systems: Mermaid Reef, Clerke Reef and Imperieuse Reef; all are 30 to 40 km apart. These reef systems are about 300 km west-north-west of Broome (DEC 2007a).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Protected area	Woodside activity area			IUCN protected area category* or relevant park zone	Description and values
	Browse	*NWS/ Scarborough*	*North West Cape*		
					Conservation values The three coral atolls of the Rowley Shoals Marine Park comprise of shallow lagoons inhabited by diverse corals and abundant marine life, each covering around 80 km² at the edge of Australia's continental shelf (DEC 2007a). Further offshore, the seafloor slopes away to the abyssal plain, some 6,000 m below. Undersea canyons slice the slope. These features are commonly associated with diverse communities of deepwater corals and sponges and create localised upwellings that aggregate pelagic species like tunas and billfish (DEC 2007a).
					Social and economic values Due to its remote location, the Rowley Shoals has low numbers of visitors, with most arriving aboard licenced charter boats. Popular activities in the area include scuba diving, recreational fishing and boating (DEC 2007a).
Scott Reef	✓	-	-	Nature Reserve	The values of Scott Reef Nature Reserve are described in the Scott Reef and Surrounds – Commonwealth Area above.
Shark Bay Marine Park and Hamelin Pool Marine Nature Reserve (jointly managed)	-	-	✓	Sanctuary, Recreation, General Use and Special Purpose Zones	**Description** The Shark Bay Marine Park and Hamelin Pool Marine Nature Reserves are 400 km north of Geraldton, covering areas of about 7,487 km² and 1,270 km², respectively (CALM 1996).
					Conservation values Seagrass covers over 4,000 km² of the Shark Bay Marine Park, with 12 different species making it one of the most diverse seagrass assemblages in the world. Dugongs regularly use this habitat, with the bay containing one of the largest populations in the world. Humpback whales also use the bay as a staging post in their migration along the coast. Green and loggerhead turtles occur in the bay, with Dirk Hartog Island providing the most important nesting site for loggerheads in WA. Hamelin Pool contains the most diverse and abundant examples of stromatolites found in the world. These are living representatives of stromatolites that existed some 3,500 million years ago (CALM 1996).
					Social and economic values Commercial fishing and tourism are important economic values of the region. Popular recreational activities include nature-based tourism, recreational fishing and water sports (DEC 2008).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Protected area	Woodside activity area			IUCN protected area category* or relevant park zone	Description and values
	Browse	*NWS/ Scarborough*	*North West Cape*		
					Cultural values The Malgana people occupy the land and waters in the vicinity of Shark Bay and have strong cultural connection to the region. The area is important for cultural practices and for fishing, hunting and camping for the Malgana people (DEC 2008).
Yawuru Nagulagun/ Roebuck Bay Marine Park	-	✓	-	Special Purpose Zone	**Description** Yawuru Nagulagun/Roebuck Bay Marine Park is a series of intertidal flats lying on the coast to the south-east of Broome.
					Conservation values Roebuck Bay is an internationally significant wetland and one of the most important feeding grounds for migratory shorebirds in Australia. Australian snubfin and Australian humpback dolphins frequent the waters and humpback whales pass through on their annual migration. Flatback turtles nest on the shores and are found in the bay's waters with other sea turtle species. Seagrass and macroalgae communities provide food for protected species such as the dugongs and flatback turtles (DPAW 2016b).
					Social and economic values The marine park is adjacent to Broome, supports tourism activities and provides an active outdoor lifestyle for the residents of the region (DPAW 2016b).
					Cultural values The Yawuru people have lived along the shores of Roebuck Bay for thousands of years and have a dynamic and enduring relationship with the Yawuru Country. The coastline is important for cultural activities and is a place for hunting, fishing, gathering and camping for the Yawuru people (DPAW 2016b).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

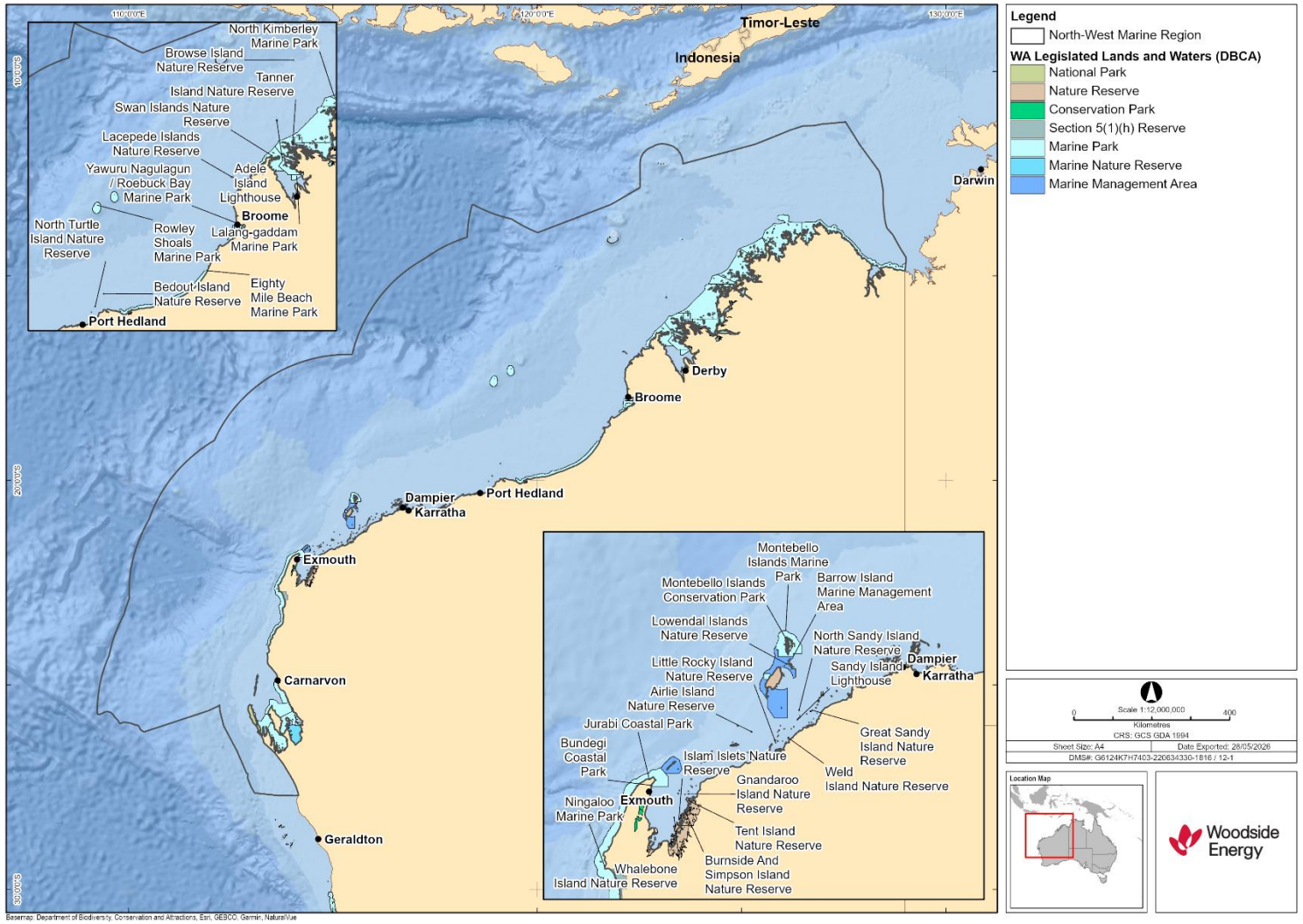


Figure 12-2: Commonwealth and State Marine Protected Areas for the NWMR

Source: Geoscience Australia (2026)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

13. SOCIOECONOMIC AND CULTURAL ENVIRONMENT

This section summarises the information relating to the socioeconomic and cultural environment of the regions offshore of WA, with a focus on the NWMR.

13.1 Cultural values and heritage

Woodside's approach to cultural values and heritage management reflects our publicly available Indigenous Communities Policy (Woodside 2025). This policy is underpinned by core principles that ensure our management of cultural heritage is thorough, transparent and supported by consultation and continued engagement with Indigenous communities. Our approach to identifying, managing and protecting cultural heritage is consistent with the United Nations Declaration on the Rights of Indigenous Peoples, engaging with Indigenous communities in ways that reflect the principles of seeking free, prior and informed consent. Where heritage is concerned, Woodside seeks to avoid impact or, if avoidance is not possible, to minimise and mitigate impact through consultation with relevant Indigenous communities. We seek to ensure Traditional Owners and Custodians are central to heritage management so cultural values are understood and remain protected.

Australia ICOMOS (International Council on Monuments and Sites) is a non-government peak body for cultural heritage professionals formed as a national committee for ICOMOS (international). Australia ICOMOS' mission is to lead cultural heritage conservation in Australia by issuing standards and practice notes. Woodside understands heritage value to mean the cultural significance of a place to an individual or group in line with the Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance (Australia ICOMOS 2013) (Burra Charter), and associated practice notes. A cultural feature is therefore comparable to the Burra Charter term "fabric" and refers to a place's elements, fixtures, contents and objects which have cultural values. Although these features are necessarily physical, the place they inhabit or comprise may have tangible or intangible dimensions (Australia ICOMOS 2013).

13.1.1 Native title

Woodside uses established systems, such as native title, to identify Indigenous groups that have functions, interests or activities that may be affected. While acknowledging cultural features and heritage values may exist outside of the native title framework, native title claims, determinations and Indigenous Land Use Agreements (ILUAs) are defined under the *Native Title Act 1993* (Commonwealth). Woodside considers this to be the broadest extent over which Indigenous groups have claimed native title rights and interests.

Native title claims are applications made to the Federal Court under the *Native Title Act* for a determination or decision about native title in a particular area. A claim is made by a native title claim group that asserts it holds native title rights and interests in an area of land or water, according to its traditional laws and customs. By making a claim, the native title claim group seeks a decision that native title exists so its rights and interests are recognised by the common law of Australia. This is called a native title determination. A determination is a decision by a recognised body, such as the Federal Court or High Court of Australia, that native title either does or does not exist in relation to a particular area (Native Title Tribunal).

A requirement to establishing a positive determination of native title in court is proving there is an organised society that occupied the land or waters at the time of British annexation. The requirement of an 'organised society' is set out by Justice Toohey in the historic judgment of Mabo v Queensland (No 2)) [1992] HCA 23; (1992) 175 CLR 1 ('Mabo'). Justice Toohey had the following to say (at 187):

> "…it is inconceivable that indigenous inhabitants in occupation of land did not have a system by which land was utilised in a way determined by that society. There must, of course, be a society sufficiently organised to create and sustain rights and duties…"

Therefore, Woodside understands native title rights and interests are held communally by an organised society, that native title claims are understood to represent the area over which Indigenous groups are claiming these rights and interests, and that native title determinations provide clarity on where native title rights and interests are found to either exist or not exist. Where native title rights or interests are determined to exist, they will be held by a Registered Native Title Body Corporate (RNTBC) (section 57, *Native Title Act*) in trust or as agent for native title holders.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

ILUAs are voluntary agreements between native title parties and other people or bodies about the use and management of land or waters and are registered by the Native Title Registrar in the Register of ILUAs. An ILUA can be made over areas where:

- native title has been determined to exist in at least part of the area, or
- a native title claim has been made, or
- where no native title claim has been made.

While registered, ILUAs operate as a contract between the parties, including relevant native title holders (Native Title Tribunal).

The *Native Title Act* provides for a Representative Aboriginal/Torres Strait Islander Body (Native Title Representative Body) to be recognised by the Commonwealth Minister for an area. Native Title Representative Bodies have specialist functions set out in the *Native Title Act* within the area for which they are the Native Title Representative Body. However, the functions of a Native Title Representative Body are such that they do not hold details ABOUT the cultural features or heritage values of an area and therefore do not inform Woodside's understanding of heritage values or cultural features.

13.1.2 Coastal Indigenous groups

Indigenous groups are keenly aware of the extent of their rights, interests and responsibilities for Country, and these are generally discrete, defined areas, including areas of sea (Smyth 2007). To identify cultural features and heritage values that may exist outside of native title claim, determination and ILUA areas, Woodside considers native title claims, determinations and ILUAs coastally adjacent to areas of operation to be an instructive means of identifying potentially relevant Indigenous groups to consult.

Woodside understands from engagement with stakeholders that extending a native title group's responsibility to areas those groups have elected to not include in their claims or ILUAs can have significant cultural consequences for groups and individuals. This may also, over time, build expectations in the broader community that a group is responsible for maintaining environmental values in areas for which they do not hold traditional knowledge.

Woodside acknowledges an Indigenous group's relative proximity to any operational areas is not necessarily a meaningful indicator of the connection to the area, and providing advice over such areas can be culturally dangerous. As a result, caution must be used when conducting broader engagement.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

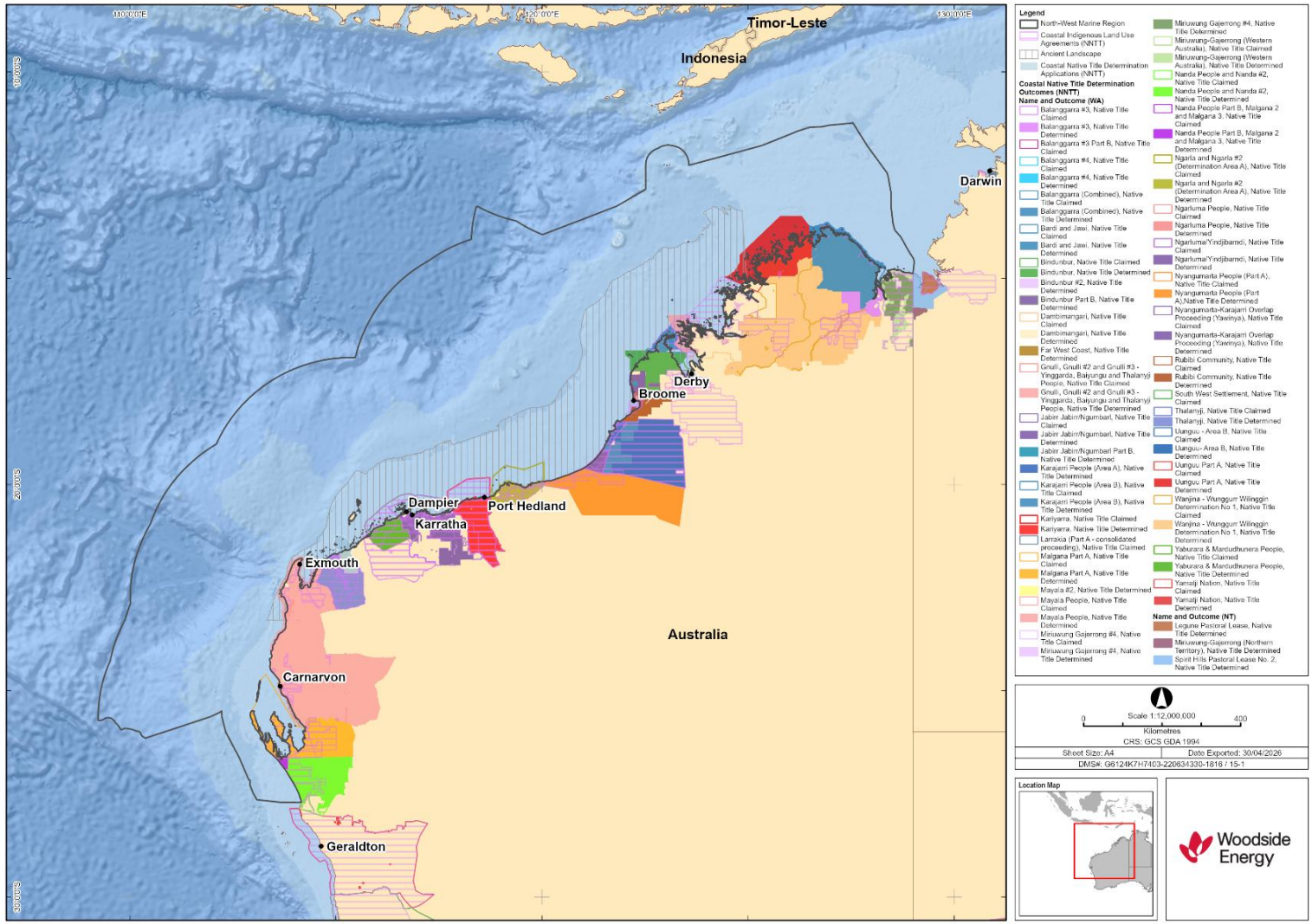


Figure 13-1: Coastal native title determination outcomes in the NWMR

Source: Department of Planning, Lands and Heritage (DPLH 2026)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

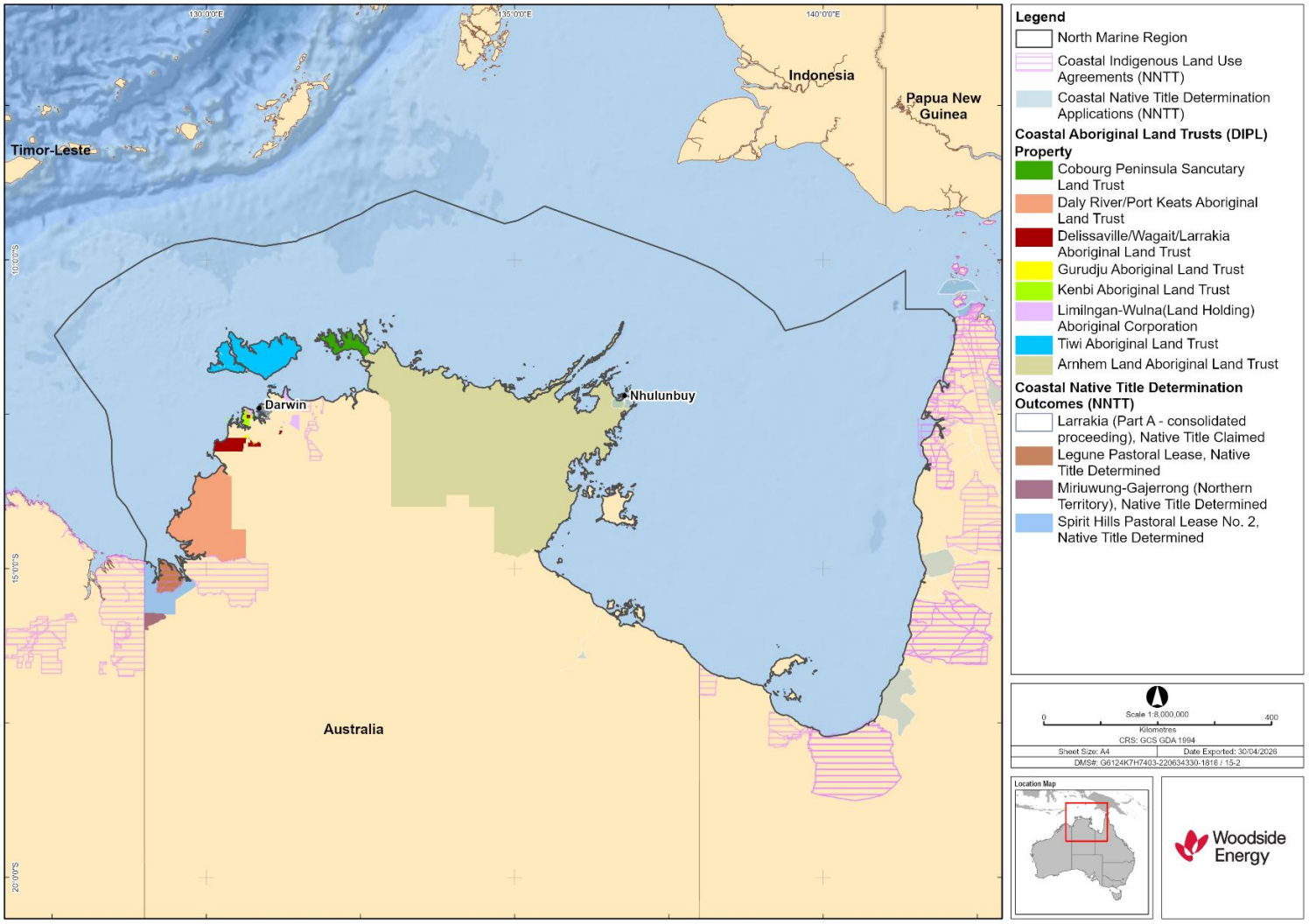


Figure 13-2: Coastal native title claims and determinations and Indigenous Land Use Agreements in the NMR

Source: DPLH (2024)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

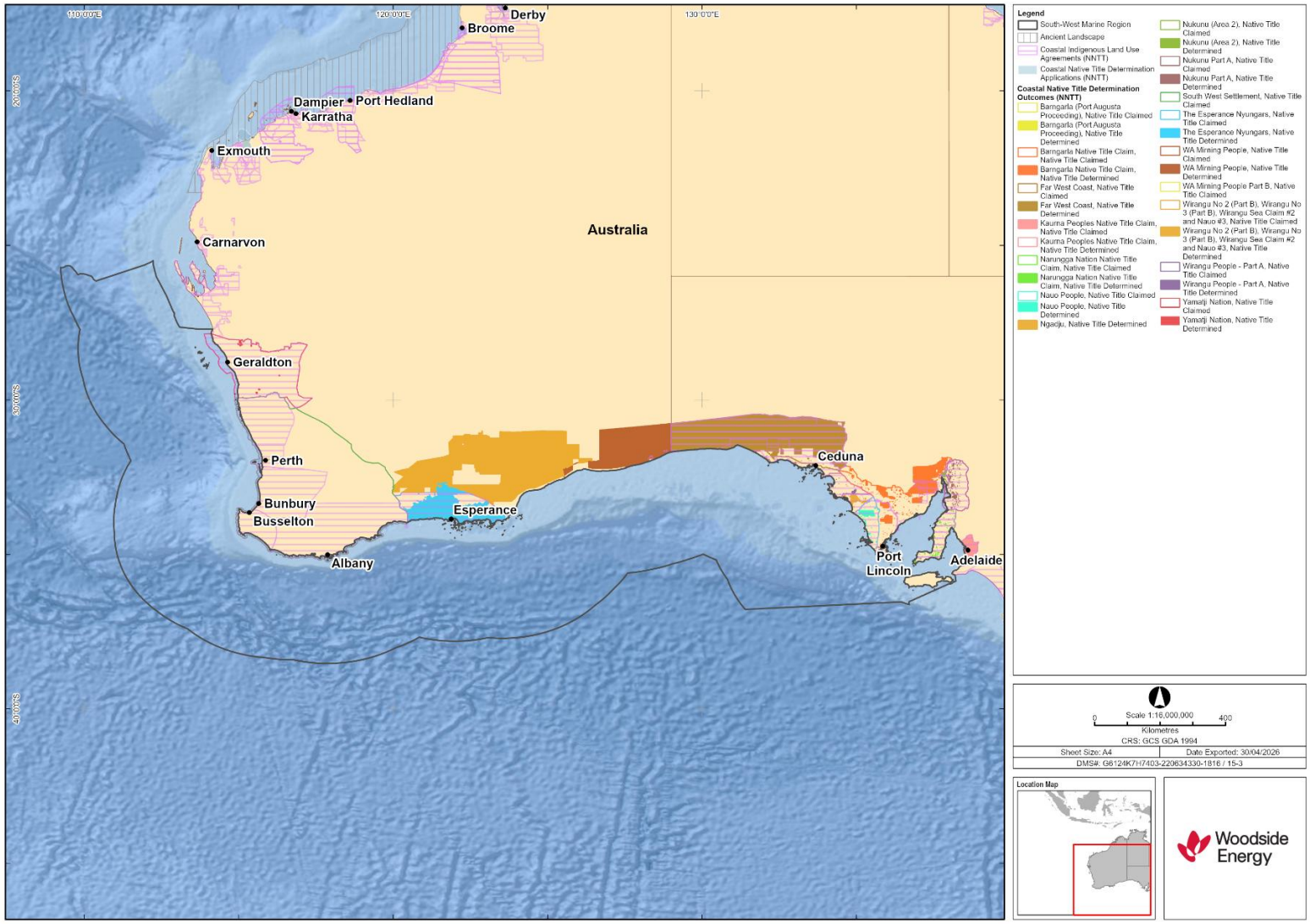


Figure 13-3: Coastal native title claims and determinations and Indigenous Land Use Agreements in the SWMR

Source: DPLH (2026)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

13.1.3 Sea Country

“Sea Country is valued for Indigenous cultural identity, health and wellbeing” (DNP, 2018a; 2018b).

Woodside recognises the potential for marine ecosystems to include cultural features as well as environmental values. This is one aspect of the broader concept of ‘Sea Country’, which can be defined as the area of sea over which an Indigenous group has interests, cultural value, connection and use. It has been noted that “the saltwater peoples of the north-west are associated with discrete clan estates or tribal areas, often referred to in contemporary Aboriginal English as ‘Saltwater Country’ or ‘Sea Country’.

‘Country’ refers to more than just a geographical area; it is shorthand for all the values, places, resources, stories and cultural obligations associated with that geographical area (Smyth 2007), and encompasses the lands, waterways and seas to which Indigenous people are connected (Australian Institute of Aboriginal and Torres Strait Islander Studies 2026).

An impact to marine ecosystems has the potential to impact cultural features where the impact is detectable within Sea Country – the seascape that Traditional Custodians view, interact with or hold knowledge of. The link between environmental protection and cultural heritage protection is illustrated in the Australian Government’s Indigenous Protected Areas Program. The Indigenous Protected Areas Program provides for “areas of land and sea managed by Indigenous groups as protected areas for biodiversity conservation…IPAs [Indigenous Protected Areas] deliver environmental benefits…Managing IPAs also helps Indigenous communities protect the cultural values of their Country for future generations…” (DCCEEW 2025c).

McNiven (2004) suggests that “For those mainland groups whose exploitation of the sea was limited to littoral resources, it is likely that seascapes extended no more than c. 20 to 30 km out to sea, out to the horizon and the limit of human visibility. However, in some coastal places, clouds that can be seen well over 100 km out to sea are imbued with spiritual significance. For those groups with elaborate canoe technology, seascapes extend well over the horizon.” While there is some evidence of traditional watercraft in Australia’s north-west, the recorded evidence is limited to travel across inland rivers (such as Barber and Jackson 2011) or travel between coastal islands (Paterson *et al*. 2019).

Cultural features of coastal areas may include marine species that may travel many thousands of kilometres through areas with similar cultural values to multiple Indigenous language groups. Some species may travel as far as 5,000 km from Antarctica to the Kimberley region of WA (Double *et al.* 2010; 2012), passing Indigenous language groups along the entire west coast of Australia.

Table 13-1: Commonly identified Sea Country species and habitats

Value	Details
Marine mammals	Whales, particularly humpbacks, and dugongs are commonly identified through consultation with Indigenous people as culturally important species, with totemic importance. Common interests include maintaining their populations, biodiversity, and migration patterns.
Marine reptiles	Turtles and sea snakes are commonly identified through consultation with Indigenous people as culturally important species and a favoured resource. Indigenous people that identify marine reptiles as species of totemic importance or integral to songlines may place high cultural value on their protection. Cultural knowledge of turtles at a population level (turtle migration, behaviour and the related marine environment) may all be important in ensuring the continuation of cultural functions and activities that remain valuable to Indigenous people (Fijn 2021:47; Delisle *et al.* 2018).
Fish and cephalopods	Fishes, stingrays and squids are commonly identified through consultation with Indigenous people as a culturally important species, with fish generally being identified as a resource. Indigenous people may identify cultural values associated with fish species as important to maintaining both tangible (physical sites) and intangible (knowledge) cultural heritage. Tangible cultural heritage associated with fish can include important cultural sites such as midden sites, fish traps and thalu sites. There are increase ceremonies for species of squid and octopus to enhance or maintain populations. Thalu are places where these increase ceremonies are performed.
Seabirds	Seabirds, particularly shags, are commonly identified through literature as a culturally significant species (Malgana Land and Sea Management *et al.* 2021) and a resource (seabird eggs; Smyth 2007).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Value	Details
Benthic habitats	Indigenous peoples identify benthic habitats as valuable for both their ecological and aesthetic values. Corals attract fish and seagrass provide shelter for fauna, as well as an important resource for dugongs.
Shoreline habitats	Indigenous peoples identify shoreline habitats as valuable for their ecological values, including mangroves for providing shelter to marine invertebrates, which are identified resources, and potential nursery for turtles. Literature notes mangroves are also valued for the flora and fauna they are associated with and support (Commonwealth of Australia 2002) and Smyth (2007) reports that Ngarda-Ngarli use mangrove seeds as a resource.

13.1.4 Marine parks

Woodside acknowledges Commonwealth and State marine park management plans have sought to recognise cultural values and responsibilities of Indigenous groups. AMPs describe this framework in the following way: “when making decisions about what can occur in marine parks and what action we will take to protect AMPs, we take values into account”. AMPs summarise these values as natural, cultural, heritage and socioeconomic values (see Section 12.5).

13.1.5 Indigenous Protected Areas

IPAs are areas of land and sea managed by Indigenous groups as protected areas for biodiversity conservation through voluntary agreements with the Australian Government. IPAs are an essential component of Australia’s National Reserve System, which is the network of formally recognised parks, reserves and protected areas across Australia (DCCEEW 2026b).

IPAs play a critical role in conserving Australia’s marine environments by enabling Aboriginal and Torres Strait Islander peoples to continue their long-standing stewardship of Sea Country. These Indigenous-led governance systems strengthen environmental management, uphold cultural responsibilities, and provide effective, place-based frameworks for caring for coastal and marine ecosystems. IPAs also support greater recognition of Indigenous rights and knowledge in marine management and offer pathways for improving co-management across Australia’s protected areas (Isaac *et al.* 2024).

As of March 2026, there are 95 dedicated IPAs spanning over 108.5 million hectares, with 6.8 million hectares of sea covered by IPAs. These account for more than 54% of the National Reserve System (DCCEEW 2026b). As of the 1 April 2026, DCCEEW will administer the IPA program.

There are 11 IPAs identified within the NWMR; ten overlap the Browse activity area and two overlap the NWS/Scarborough activity area, with the Yawuru IPA overlapping both the Browse and NWS/Scarborough activity areas, as listed in Table 13-2 and shown in Figure 13-4. IPAs in the NWMR are described in the next subsections.

Table 13-2: Indigenous Protected Areas within the NWMR

IPA	Woodside activity area		
	Browse	NWS/Scarborough	North West Cape
Balanggarra	✓	-	-
Bardi Jawi	✓	-	-
Dambimangari	✓	-	-
Karajarri	✓	-	-
Karajarri Jurarr Ngurra – Sea Country	-	✓	-
Mayala	✓	-	-
Nyangumarta Warrarn	✓	-	-
Nyul Nyul	✓	-	-
Uunguu	✓	-	-
Wilinggin	✓	-	-
Yawuru	✓	✓	-

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

13.1.5.1 Balanggarra

The Balanggarra IPA was dedicated on 7 August 2013. It spans over one million hectares of land and Sea Country in the Kimberley region and has been home to the Balanggarra people for thousands of years. The five big rivers of the north Kimberley intersect on Balanggarra Country. These are the King River, Forest River, Pentecost River, Durack River and Ord River. The region also borders the Cambridge Gulf and Timor Sea. Three species of vulnerable sawfish are found in the waters of this region (Kimberley Land Council n.d.).

Nine targets identified in the Balanggarra Healthy Country Plan 2012–2022 are:

- Balanggarra law and culture
- our *Gra* (Country, including land, sea, rivers and islands)
- cultural sites (rock art sites, burial sites, heritage places)
- native animals
- accessible bush tucker and medicine plants
- right-way fire
- freshwater (places and freshwater fish)
- saltwater fish and seafood
- migratory saltwater species (turtle, dugong, whales, dolphins).

The Balanggarra Rangers manage 1,000 km of river and sea frontage on their Country to manage, protect and enhance its unique biodiversity values (Balanggarra Aboriginal Corporation 2011).

13.1.5.2 Bardi Jawi

Bardi Jawi IPA is 160 km north of Broome and covers 1,269.9 km² of land and Sea Country (National Indigenous Australians Agency (NIAA), n.d.-c). The main communities on Bardi Country are Djarindjin, Lombadina and Ardyaloon (One Arm Point). Bardi people live on the mainland of the Dampier Peninsula and islands immediately offshore from Ardyaloon. Jawi people call the islands further east, including Iwany (Sunday Island), their Country. Today people live in outstations spread along the mainland Peninsula coastline (Kimberley Land Council/Bardi Jawi Niimidiman Aboriginal Corporation RNTBC 2013).

During the IPA consultation process, the Bardi Jawi Rangers guided meetings with individual family groups to identify what they considered important to look after. An IPA steering committee was formed, who contributed cultural knowledge to the Bardi Jawi Indigenous Protected Area Management Plan (2013–2023). They were assisted by The Nature Conservancy in conservation action planning. This plan highlights targets to be protected on Country:

- marnany (fringing reefs)
- aarli (fish)
- odorr (dugong) and goorlil (turtle)
- significant sites, language, law and culture
- traditional oola (water) places
- Indigenous plant resources (Kimberley Land Council/Bardi Jawi Niimidiman Aboriginal Corporation RNTBC 2013).

Jardagarr (coastal Country) is classed under IUCN Category 4, and Niimidiman (inland Country) is classed under Category 6. Niimidiman harbours many plant and animal species of high cultural value. For example, irrgil trees are used for making boomerangs and marrga, joolgirr and bilimangard trees are used for making shields. Some Niimidiman areas feature traditional oola (water) places and the stories attached to these places are culturally important. Ecological values of the Jardagarr (coastal) Country include many species of native garrabal (birds), including eastern curlews and fork-tailed swifts (Kimberley Land Council/Bardi Jawi Niimidiman Aboriginal Corporation RNTBC 2013).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

13.1.5.3 Dambimangari

Dambimangari IPA is between Broome and Darwin, stretching east to the Prince Regent area. It covers 6,422.94 km² of landscape, including open grasslands, eucalyptus woodlands, intertidal flats and rocky reefs and shoals (NIAA, n.d.-d). Dambimangari is the traditional home of the Worrarra people. Dambimangari peoples' identity is interwoven with the sea and its reefs and islands. Reefs are important hunting grounds for jaya (saltwater fish) and warliny (dugongs).

The targets for protection are identified in the Dambimangari Healthy Country Plan 2012–2022 as:

- cultural sites
- reefs, beaches and islands
- saltwater fish
- turtles and dugongs
- whales and dolphins
- rivers, waterholes, waterfalls and wetlands (freshwater systems)
- culturally important native animals
- bush fruits and medicine plants
- right-way fire (Dambimangari Aboriginal Corporation 2012).

Jurluwarra (saltwater turtles) and warliny (dugongs) are culturally important to Dambimangari people as a food source. Cultural sites include rock art sites, stone arrangements, burial sites and important camping beaches that were used for resting when travelling through saltwater Country (Dambimangari Aboriginal Corporation 2012).

13.1.5.4 Karajarri

Karajarri IPA was dedicated in 2014 to manage, protect and enhance Karajarri Country. The IPA covers nearly 25,000 km² of land in the southern Kimberley, including 130 km of coastline stretching from Gordon Bay to Cape Missiessy. It comprises extensive coastlines, tidal creeks and wetlands as well as arid Country that stretches into the Great Sandy Desert (NIAA n.d.-a).

Karajarri people want to ensure areas of cultural and natural significance are looked after correctly according to their own protocols, and they view their environmental responsibilities as Palanapayana Tukjana Ngurra, meaning "everybody looking after Country properly" (Karajarri Traditional Lands Association (KTLA) 2014a).

The IPA includes two zoning categories to help manage Country: IUCN Category 2 (national park) and Category 6 (protected area with sustainable use of resources). The Category 2 zoning allows for the area to become part of an integrated system of protected areas, with Eighty Mile Beach to the south and Roebuck Bay to the north of the IPA (KTLA 2014a).

To assist in planning and developing the IPA, KTLA developed a Healthy Country Plan, which provides direction for addressing threats and for working on priorities for land and cultural site management (KTLA 2014b).

The Tukujana pa Karajarri Kura Jurrar IPA has been announced under the Sea Country IPA program, extending from the existing Karajarri IPA into the sea off the south-west Kimberley coast (DCCEEW 2023b). The area includes a network of coastal habitats, such as intertidal and subtidal reefs, mangrove systems, lagoons and tidal creeks, and connects the Ramsar sites of Roebuck Bay and Eighty Mile Beach (DCCEEW 2023b).

13.1.5.5 Karajarri Jurarr Ngurra – Sea Country

On 3 March 2026, the Karajarri Jurarr Ngurra Sea Country IPA was declared near Bidyadanga, Kimberley, WA. The Sea Country IPA spans over 237,489 ha and sits next to the Karajarrii native title area and the already declared Karajarri IPA. It includes Eighty Mile Beach State and Commonwealth marine parks and links land and marine protected areas across the south-west Kimberley region (DCCEEW 2026b).

The Karajarri Jurarr Ngurra Sea Country IPA holds a range of cultural and ecological values, including important species, habitats, places, and unique cultural knowledge and practices. Threatened and culturally

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

important species include turtles, dugongs, sawfish, dolphins and migratory shorebirds. The IPA contains important habitats that support high biodiversity that store large amounts of blue carbon, and include beaches, dunes, tidal creeks, estuaries, kunturunkarra/mangroves, mudflats, reefs, seagrass beds and rocky headlands. There are also culturally significant areas that provide food, wild oyster farming, and riji (carved pearl shell) traditions, which are recognised in the National Heritage listing of the West Kimberley (DCCEEW 2026b).

13.1.5.6 Mayala

The Mayala IPA spans most of Mayala Country, with over 375,848 ha that overlaps the Mayala Marine Park and part of the Kimberley Marine Park. The Country features extensive networks of hundreds of islands, reefs, submerged lands, sandbars, seabeds and saltwater in the Buccaneer Archipelago and King Sound of the West Kimberly region. The area contains culturally significant places for ceremony, sites for stone tools, middens, ochres and clays used for ceremonial purposes, engravings, stone arrangements and fish traps. The large tidal ranges in the region create unique marine environments that contain unique high biodiversity values. Sea Country values include large coral reefs, sea turtles, humpback whales, sharks, sailfish and whale sharks. There are large estuaries and mangrove communities that are important nursery grounds for marine life. The IPA also contains habitat and breeding grounds for migratory and threatened ocean species, including sea turtles, dugongs and sawfish (Mayala Inninalang Aboriginal Corporation RNTBC 2024).

13.1.5.7 Nyangumarta Warrarn

The Nyangumarta Warrarn IPA comprises four areas totalling about 28,675 km², including parts of the Great Sandy Desert, Walyarta Conservation Reserve, Kujungurru Warrarn Conservation Reserve Area and the Eighty Mile Beach Marine Park Intertidal Area. The Traditional Owners of the designated IPA self-identify as and are identified by other Pilbara Indigenous people as Nyangumarta people. Nyangumarta people are the native title holders of the land and waters.

Ecological values in the IPA include a complex wetland system associated with Mandora Marsh, known to Nyangumarta people as Nyamaring. Walyarta (or Salt Creek). The Mandora Marsh area holds the most inland distribution of mangroves in Australia and the mound springs associated with Mandora Marsh area, such as Yalayala (Eil Eil), are recognised as important bird nesting sites (Nyangumarta Warrarn Aboriginal Corporation & Yamatji Marlpa Aboriginal Corporation, 2015).

13.1.5.8 Nyul Nyul

The Nyul Nyul IPA was officially dedicated in May 2025, spanning 144,493 ha of land that is rich in cultural and ecological value. The IPA protects important freshwater springs, monsoon vine thickets, and threatened species such as the greater bilby and short-nosed sea snake. The IPA provides important cultural connection and wellbeing to the Indigenous people of the Nyul Nyul Country (Australian Public Service Commission 2025).

13.1.5.9 Uunguu

Stage one of the Uunguu IPA was declared on 23 May 2011, coinciding with the native title determination and release of the Healthy Country Plan. The IPA covers 7,598.06 km². It has been home to the Wunambal Gaambera people for many thousands of years and is part of the Wanjina Wunggurr culture. Wunambal Gaambera people call their Country Uunguu – “our living home”. Two of the reserves extend to the low water mark at Bougainville Peninsula, Vansittart Bay, Anjo Peninsula, Napier Broome Bay and islands in Rothsay Water (Wunambal Gaambera Aboriginal Corporation (WGAC) 2017). A Saltwater IPA Plan of Management was created in 2017 as a sub-plan to the Wunambal Gaambera Healthy Country Plan (WGAC 2017).[20]

Ten targets identified in the Wunambal Gaambera Healthy Country Plan are:

- Wanjina Wunggurr law – our culture
- right-way fire
- aamba (kangaroos and wallabies) and other meat foods
- wulo (rainforest)

[20] Marine areas were proposed to be added to the Uunguu IPA as an IUCN Category VI (Managed Resource) Protected Area, early in 2018.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

- yawal (waterholes)
- bush plants
- rock art
- cultural places on islands
- fish and other seafoods
- mangguru (marine turtles) and balguja (dugongs) (WGAC 2010).

The Uunguu Rangers look after land and Sea Country through pest control, visitor management, cultural heritage conservation, flora and fauna monitoring and fire management (NIAA n.d.-d).

13.1.5.10 Wilinggin

The Wilinggin IPA spans over 2.4 million hectares of remote Country in the central north Kimberley region and was declared in 2013. It includes basalt ranges and sandstone cliffs that rise 250 m high. The area has wooded grasslands, pockets of rainforest, extensive mangrove systems, tidal mudflats, rivers, creeks and billabongs. The Ngarinyin people are the Traditional Owners of this area and have lived on Wilinggin Country for thousands of years (NIAA n.d.-e). Wilinggin Country is mostly landlocked, apart from two small saltwater areas: Walcott Inlet and Prince Frederick Harbour.

Seven targets identified in the Wilinggin Healthy Country Plan 2023–2032 are:

- becoming strong on Country
- food and medicine plants
- bushfire
- law and culture sites
- law and culture
- freshwater places
- wildlife and bush meats.

The Wunggurr Rangers are caretakers of the unique natural and cultural values of Wilinggin Country (Wilinggin Aboriginal Corporation 2022).

13.1.5.11 Yawuru

The Yawuru IPA was dedicated by Yawuru people in 2017, covering 2,109 km² of Yawuru coastal and inland Country (Yawuru RNTBC 2014). The Yawuru people are the native title holders of their land and sea – their ancestors have lived along the foreshores of Roebuck Bay, across the Pindan Plains and inland along the fringes of the Great Sandy Desert for thousands of years (NIAA n.d.-b).

The Yawuru IPA is managed under the Walyjalajala nagulagabu birrangun buru Plan of Management for 2017–2026 (Yaruwu RNTBC 2014). The plan includes eight targets for management:

- Yawuru cultural knowledge and practice
- Yawuru significant areas
- Yawuru rights and responsibilities
- niyamarri – sand dunes
- bilarra – wetlands
- birra – bush and pindan Country
- nagulagun – saltwater Country (deep water and intertidal)
- seasonal resources and biodiversity.

Cultural values include Yawuru named sites, tracks and areas, historical sites associated with pearling and pastoral industries, archaeological sites and traditional bush/sea resources. Ecological values include reefs

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

and seagrass beds that provide habitat for dugongs (*Dugong dugon*) and EPBC Act listed threatened sea turtle species, including hawksbill turtles (*Eretmochelys imbricata*), loggerhead turtles (*Caretta caretta*), green turtles (*Chelonia mydas*) and flatback turtles (*Nataden depressus*). Roebuck Bay is a Ramsar site and has a known population of snubfin dolphins (*Orcaella heinsohni*) (Figure 8-6). Other ecological values include pearl shell beds for pearl oysters and habitat for a range of EPBC Act listed threatened species (Yaruwu RNTBC 2014).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

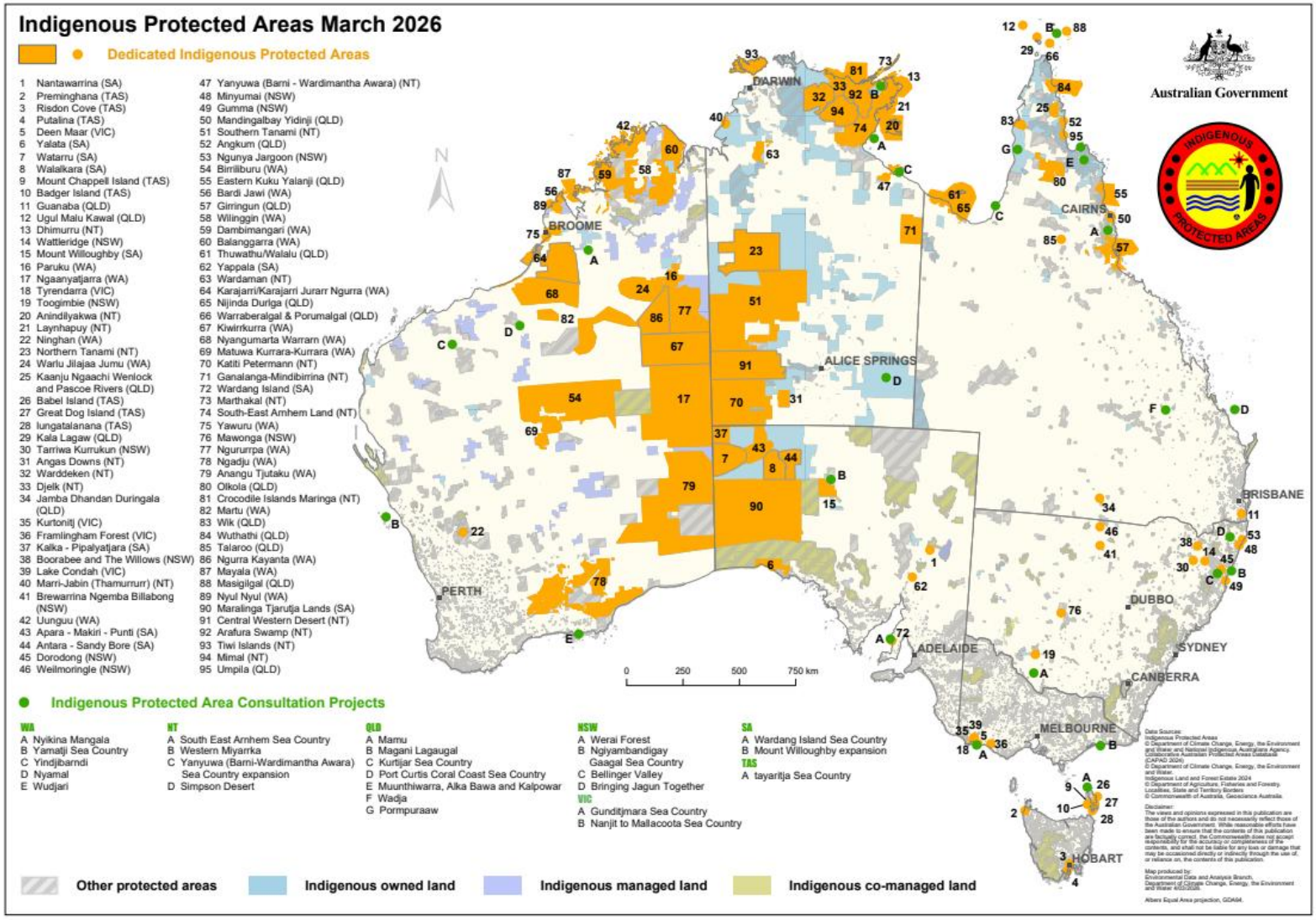


Figure 13-4: Indigenous Protected Areas in Australia

Source: DCCEEW (2026c)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

13.1.6 Indigenous cultural heritage

On 15 November 2023, the *Aboriginal Heritage Act* (WA) was restored as the legislation that manages Aboriginal heritage in WA (DPLH 2024). Under section 17 of that Act it is an offence to excavate, destroy, damage, conceal or alter any Aboriginal site without authorisation. Where there is a risk of injury or desecration to a significant Aboriginal area, even where permitted under the Act, any Aboriginal person may apply to the federal Environment Minister for a declaration under sections 9 or 10 of the *Aboriginal and Torres Strait Islander Heritage Protection Act* (Commonwealth) to protect and preserve that area.

Woodside understands communal cultural connection exists between Traditional Custodians and land and waters. It is understood from the onshore archaeological record that Indigenous people have occupied the Australian continent for at least 65,000 years (Clarkson *et al.* 2017) and in many places maintain a strong continuing connection that is said to extend back in Indigenous cosmology to the beginning of time.

Archaeological sites identified onshore that have the potential to be preserved in intertidal or submerged locations include petroglyphs, fish traps and artefact scatters or burials contained within sand dunes. As archaeological sites, these features have archaeological value that relate to preserving their fabric (as in, the tangible features) and their context (as in, their location and relationship to other archaeological and natural features). Archaeological sites may also have intangible dimensions (ICOMOS 2013), cultural values that exist in addition to their archaeological or scientific value.

Intangible values are a living expression of cultural heritage that is prevalent across generations. These values can be traditional. They can also be new and living at the same time. An understanding of the intangible cultural heritage of different Indigenous communities helps with intercultural dialogue and encourages mutual respect (UNESCO 2011). Intangible cultural heritage is safeguarded through practicing and passing on knowledge or expressions by the people to whom it belongs (UNESCO 2003). Table 13-3 provides context to common intangible themes that exist in Indigenous communities.

Table 13-3: Intangible heritage values associated with Sea Country

Value	Details
Songlines	Indigenous people often describe oral songlines as the law of the land and make up part of the Dreaming (Neale and Kelly 2020:30). Songlines are viewed in western academia as a framework for relating people to land. They consist of a series of invisible, interconnected routes across the landscape that mark significant sites for Indigenous people (Higgins 2021:723). Songlines demonstrate Indigenous peoples' strong connections to land by revealing sacred knowledge that is place specific (Roberts 2023:5). The land's physical features are instrumental in maintaining songlines because this is how ancestral spirits journeyed through and interacted with the physical landscape, leaving sacred knowledge behind. The interconnection between the physical and spiritual is where songlines become intrinsically tied to significant places across Country. As a result, geographical landforms are recorded within songlines and become sacred places. Such landforms can include rocks, mountains, rivers, caves and hills (Higgins 2021:724). Songlines can become lost, fragmented or broken when there is a loss of Country or forced removal from Country (Neale and Kelly 2020:30). It is important to protect physical sites identified as comprising a component of a songline, to prevent the fragmenting or breaking apart of songlines and loss of sacred cultural knowledge. In Australia, songlines can stretch thousands of kilometres, making up a complex and organic network of stories containing cultural knowledge of Indigenous communities across the land (Neale and Kelly 2020:35). Songlines can also extend out to Sea Country and contain cultural knowledge that is tied to geographic features, atmospheric phenomena and marine plants and animals. Often songlines containing references to a seascape or Sea Country mention mythical events around marine life, fishing areas, submerged rocks or coral. Songlines that embody seascapes can reflect how a group may relate to, or value, Sea Country. For example, connections to nearby islands they once inhabited in their songlines (Smyth and Isherwood 2016:307). Songlines can also be used as proof of long-standing connection to land and support a legal entitlement to land rights (Higgins 2021:74). Examples where songlines contain strong references to Sea Country are more common in Pacific Islander and Torres Strait Islander communities, who often refer to seascapes and skylines in their songlines to communicate sacred knowledge that assists in safe navigation of the ocean (Neale and Kelly 2020:83-84).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Value	Details
Creation/Dreaming sites, sacred sites and ancestral beings	The only published sources Woodside found with detailed descriptions of the location of ancestral beings or Creation/Dreaming or sacred sites place these on land, or within inland water sources such as rivers and pools. However, some ancestral beings are noted to live within or originate from the sea generally, and some Creation stories talk to the creation of features from or in the sea. Additionally, every place on shore or at sea must be assumed to have been created on some level in Indigenous cosmology.
Cultural obligations to care for Country	Caring for Country collectively refers to the cultural obligations of individuals and groups, as well as rituals and ceremonies required for the physical and spiritual health of the environment. In the literature Woodside reviewed, caring for Country was noted to include maintenance of the physical environment and ecosystem. It may also have cultural, spiritual and ritual dimensions, such as caring for ancestral beings or ensuring cultural safety. Thalu are places where what are known as 'increase ceremonies' are performed to enhance or maintain populations of plants, animals or phenomena. All mentions of active ceremonial sites were confined to onshore locations, though the values may extend offshore where, for example, a thalu relates to marine species populations.
Knowledge of Country/customary law and transfer of knowledge	Knowledge of and familiarity with the features of Sea Country are itself a value. The inherent potential for restricted or secret knowledge makes this difficult to assess, even through consultation with Traditional Custodians. However, aspects such as limitations on access to sites or disruption or relocation of Indigenous communities may have implications for preserving Indigenous knowledge. Further, connection to Country may be damaged where people are displaced or disrupted (such as during colonisation) or where there is a loss of technical skills or environmental knowledge (McDonald and Phillips 2021). Transfer of knowledge includes continuing traditional practices to pass on practical skills. This transfer of knowledge may be integral to managing a group's intangible cultural heritage (UNESCO 2003).
Connection to Country	This describes the multi-faceted relationship between Indigenous people and the landscape, which is envisioned as having personhood and spirit. It is also an aspect of personal identity for many Indigenous people. In the case of Sea Country, this can mean identifying as a Saltwater person, where "essence of being a 'Saltwater' person is ontological… it is about how people relate spiritually to the sea and engage with spiritual forces that created it, the marine flora and fauna and people" (McDonald and Phillips 2021).
Access to Country, including Sea Country	Access is necessary for continuing other values, including caring for Country, carrying out cultural practices and transferring traditional knowledge. Being on Country can be an important way of expressing or maintaining connection to Country (Australian Indigenous HealthInfoNet n.d.). Access is also a value in its own right, as a continuation of traditional Sea Country access and use.
Kinship systems and totemic species	Individuals may have kinship to specific species (Smyth 2008; Juluwarlu 2004) and a responsibility to care for species (Muller 2008). Kinship arises from totemic associations within Indigenous 'skin group' systems. It is forbidden for an individual to kill or eat a species who is from the same 'skin group' (Juluwarlu 2004). They may also have certain obligations linked to the discussion of caring for Country above. It is assumed marine species may have kinship/totemic relationships to Traditional Custodians, but it is understood these relationships do not prohibit people outside of that 'skin group' from hunting or eating that same species (Juluwarlu 2004).
Resource collection	Multiple marine species are identified through consultation and literature as important resources, particularly as food sources (see Section 13.1.4). In addition to their immediate value as sustenance, gathering and preparing these resources are informed by cultural knowledge, and an inability to use these resources may result in a loss of ability to transfer that knowledge to future generations.

13.1.6.1 Underwater cultural heritage

It is understood the sea level has risen significantly during the 65,000 years of Indigenous occupation, and areas that were once inhabited are now submerged on the continental shelf (Veth *et al.* 2019; University of Western Australia (UWA) 2021). Sea levels began to rise about 18,000 years ago, which flooded the coastal plain and forced further inland those who dwelled on the coast (Smyth 2007). At its lowest level during Indigenous occupation, the sea was between 125 m (O'Leary *et al.* 2020; Veth *et al.* 2019; Williams *et al.* 2018) and 130 m below current levels (Benjamin *et al.* 2020; Benjamin *et al.* 2023; UWA 2021). Oral traditions in Australia have mapped maritime activity and changes in coastal environments back to the Holocene period, with many Indigenous stories along the northern Australia coast highlighting seafaring,

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

voyages, and the coastal environments that were encountered and created in the area. These oral traditions form the intangible cultural heritage of Sea Country, which also holds knowledge of the sea level rise and change in marine environments (Farr 2025).

Archaeological material preserved on the Ancient Landscape has the potential to provide more information about the earliest periods of human occupation (Veth *et al.* 2019; UWA 2021).

Recent archaeological discoveries demonstrate the now submerged landscape was occupied and inhabited and may retain archaeological material from this time (Benjamin *et al.* 2020; Benjamin *et al.* 2023; see Ward *et al.* 2022 for an opposing view).

Certain landscapes have been identified as archaeologically prospective on the submerged Ancient Landscape, including:

- submerged water sources (rivers, waterholes, tidal channels and seeps) that have an increased likelihood of use or habitation as past generations used the associated resources (UWA 2021)
- submerged calcarenite ridges younger than human occupation of the continent, which may have formed over and protected artefacts *in situ* (Veth 2019)
- prominent landscape features (such as hills, particularly of igneous rock formations) that may have been focus areas for cultural activity (UWA 2021)
- karst depressions and other ‘catch points’ where artefacts may accumulate after disturbances caused by inundation (UWA 2021; Nutley 2022; Nutley 2023a)
- Madeleine Shoals, specifically identified by MAC as an archaeologically prospective feature due to its igneous rock formations, which have the potential to contain petroglyphs.

The sites considered most likely to survive inundation, based on the review of existing literature, were logically the more robust forms, including:

- midden and artefacts within cemented dunes, relict water holes, and beach rock deposits
- quarry outcrops, extraction pits, and associated reduction debris in fine-grained volcanic outcrops
- curvilinear stone structures and standing stones sitting on volcanic pavements and jammed into volcanic rock piles
- lag deposits of artefacts and possibly midden on hardpan in suitable landscape contexts with good preservation conditions; for example, shallow declination shorelines in sheltered passages of the inner archipelago or on the leeward side of hard-rock/fringing reef causeways adjacent to the outer islands
- small overhangs and shelters with preserved deposits, facing away from the dominant wave and wind action (Veth *et al.* 2019).

Recognising this, Woodside considers the Ancient Landscape between the mainland and the ancient coastline at 125 m depth contour KEF (Figure 13-5) as an area where potential Indigenous archaeological material may exist on the seabed, as this covers the full extent of this possible occupation. Known places, including archaeological sites, may be protected subject to declarations under the *Aboriginal and Torres Strait Islander Heritage Protection Act*, *Underwater Cultural Heritage Act 2018* or EPBC Act. However, these Acts only extend protection to Indigenous heritage places specified by declaration or otherwise included on a statutory list. Woodside understands there is currently no Indigenous archaeology known to exist within Commonwealth waters and no areas subject to declarations or prescriptions under these Acts.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

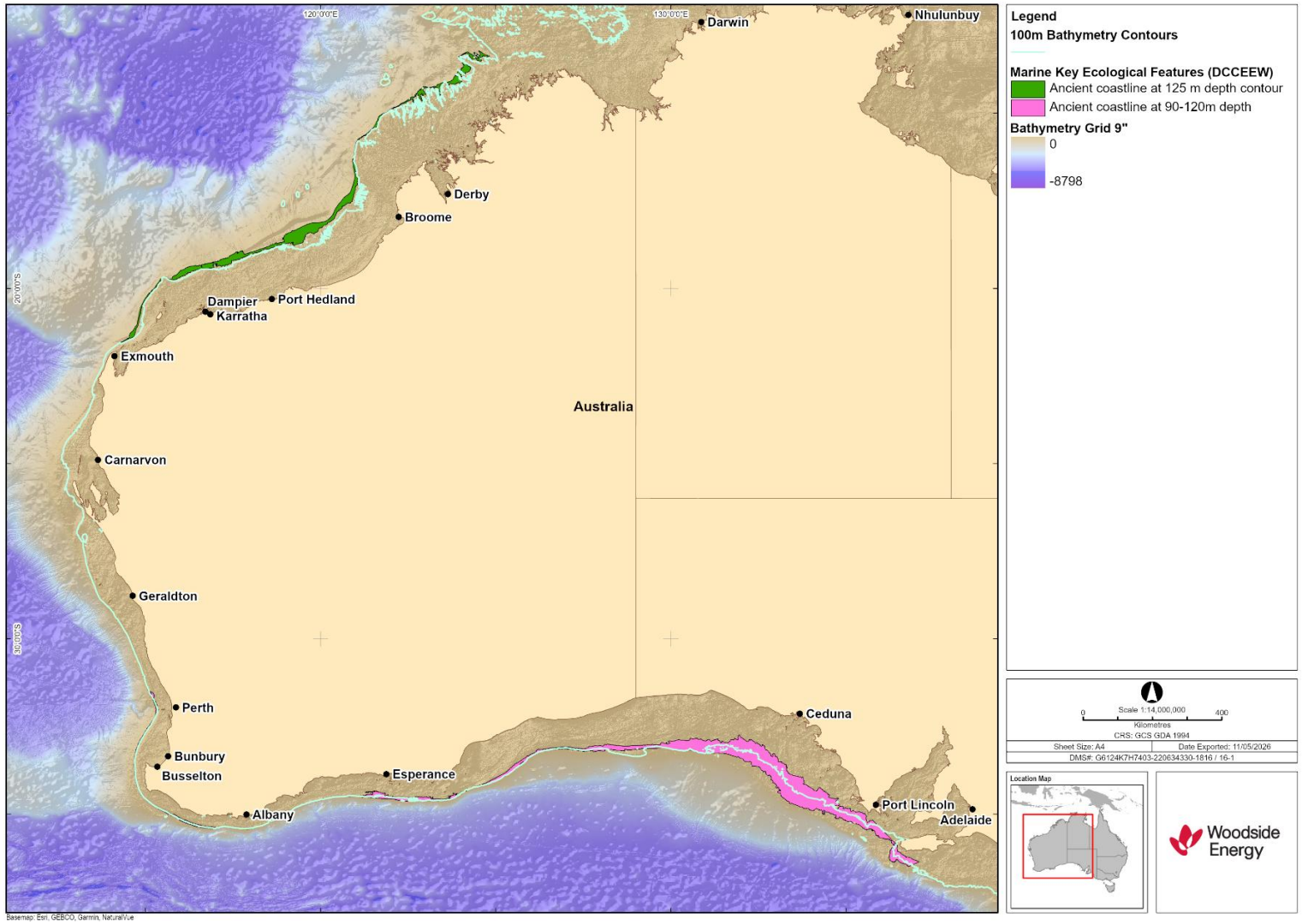


Figure 13-5: Indicative bathymetry of the ancient submerged landscape

Source: Geoscience Australia (2026); DCCEEW (2024b)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

13.1.6.2 Indigenous sites of significance

Murujuga (the Burrup Peninsula) has a very high density of significant Indigenous heritage sites and places with tangible and intangible heritage values. These places are linked to Indigenous cosmology, Dreaming stories and songs through the stories, knowledge and customs that are still held by Traditional Custodians.

The MCL is a UNESCO World Heritage inscribed property. The Dampier Archipelago (including the Burrup Peninsula) was included on the National Heritage List in 2007 due to outstanding heritage values relating to Australia's cultural history contained in the large number, density, diversity, distribution and fine execution of rock art. The values of MCL and the Dampier Archipelago National Heritage place are described in Section 12.2.1 and Section 12.9.

DPLH maintains an Aboriginal Cultural Heritage Register of registered sites and heritage places on the Aboriginal Cultural Heritage Inquiry System. There are over 1,600 registered sites on Murujuga and the Dampier Archipelago, with around 1,100 other heritage places. This register is not comprehensive and will be complemented by heritage surveys where necessary. Protection of National and World Heritage values is also legislated through various provisions of the EPBC Act. Murujuga National Park is managed under the *Conservation and Land Management Act* (WA).

13.1.7 Historic sites of significance

Places of historic cultural significance are protected under Commonwealth, State and local regimes. Places inscribed on the National or World Heritage List are protected through various provisions of the EPBC Act. Historic places may also be protected under the *Heritage Act 2018* (WA); under section 129 of this Act, the prohibited alteration, demolition, damage, despoilment or removal of objects from a registered place may result in a fine of A$1 million. Protection of heritage by local government typically emanates from local planning schemes produced under Part 5 of the *Planning and Development Act 2005* (WA).

Historical sites of significance and heritage value are found along adjacent foreshores of the NWMR, SWMR and NMR.

13.1.8 Historic underwater heritage

The remains of vessels and aircraft in Commonwealth waters, along with any associated article, are automatically protected under the *Underwater Cultural Heritage Act* (Commonwealth) after 75 years. This is applicable whether the existence or location of the article is known or unknown, as per section 16 of the Act. Other articles of underwater cultural heritage may be declared for protection as outlined in section 17 of the Act. Remains and relics of any ship lost, wrecked or abandoned in WA waters before the year 1900 are protected by the *Maritime Archaeology Act 1973* (WA).

There are no known National Heritage listed shipwrecks in the NWMR or NMR (Figure 13-6). The only known National Heritage listed shipwrecks are within the SWMR and include:

- the HMAS Sydney II
- the HSK Kormoran
- the Batavia.

Known historical shipwreck sites in WA waters are listed in the WA Maritime Museum Shipwreck Database (Western Australian Museum 2026). Known historical shipwreck sites in Commonwealth waters are listed in Australasian Underwater Cultural Heritage Database (DCCEEW 2026d). These databases only cover known historical sites. Figure 13-6 shows known shipwrecks for the NWMR as listed in these databases.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

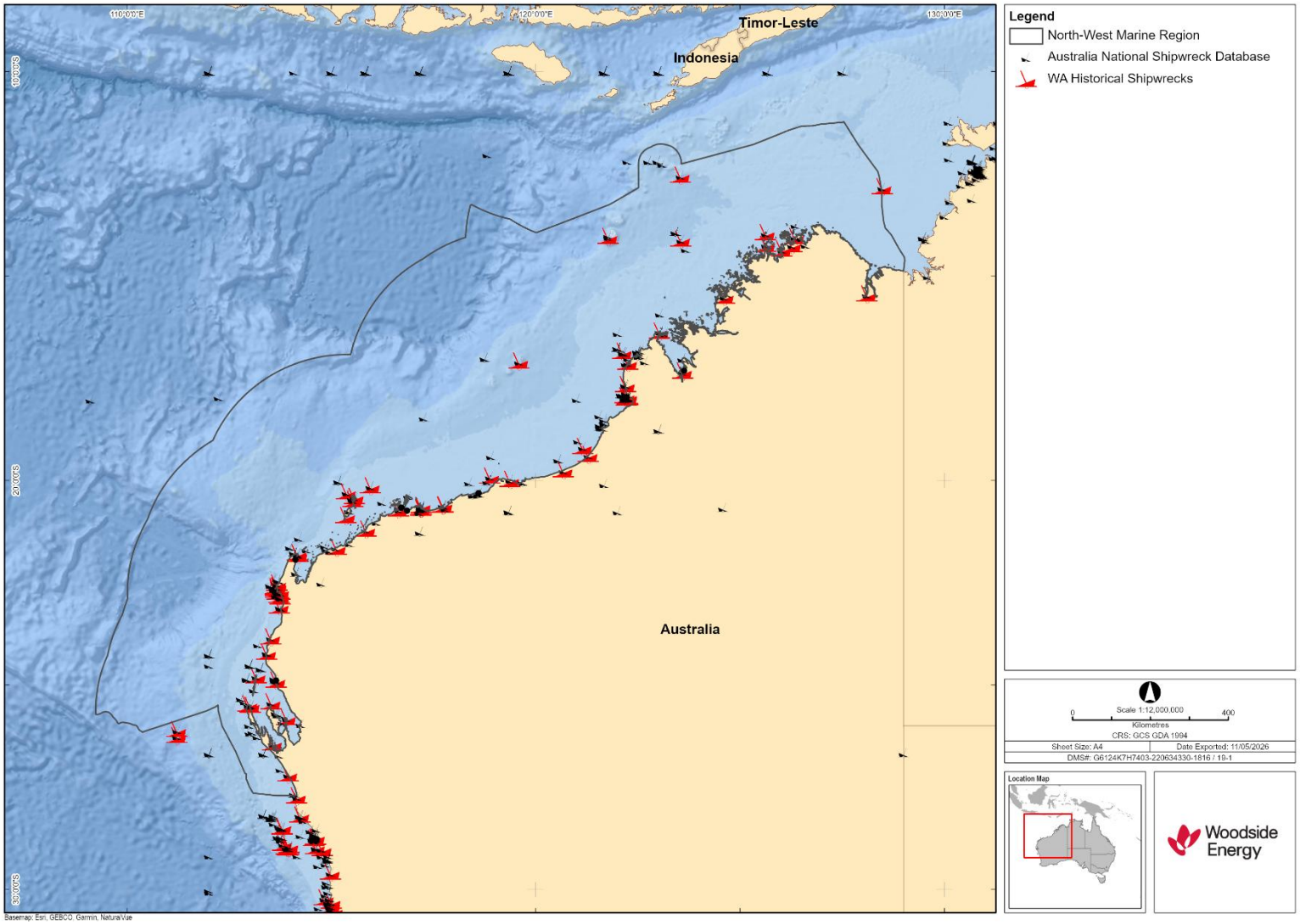


Figure 13-6: Shipwrecks in the NWMR

Source: Western Australian Museum (2026); DCCEEW (2026d)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

13.2 Socioeconomic values

Socioeconomic values include commercial and traditional fishing, tourism, recreation, shipping, oil and gas activities and defence activities.

13.2.1 Commercial fisheries – Commonwealth and State

The Australian Fisheries Management Authority (AFMA) manages fisheries on behalf of the Commonwealth Government and is bound by objectives under the *Fisheries Management Act 1991* (Commonwealth).

WA State commercial fisheries are managed by the WA Department of Primary Industries and Regional Development (WA DPIRD) under the *Fish Resources Management Act 1994* (WA), Fisheries Resources Management Regulations 1995 (WA), relevant gazetted notices and licence conditions, and applicable fishery management plans.

Commonwealth and State managed fisheries that are licenced to operate within the NWMR are summarised in Table 13-4 and Table 13-5, respectively. Commercial fisheries with activity in the NRMW are shown in Figure 13-7 to Figure 13-11.

Western Australia demersal fishing reforms

From January 2026, the Government of Western Australia has introduced demersal fishing reforms to manage and protect at-risk demersal fish species, to help stocks recover for future generations within the boundaries of the fishing bioregions, as defined by DPIRD (2025a). These demersal fishing reforms may affect the commercial and recreational fisheries interacting with Woodside activity areas, as described below.

North Coast bioregion

The DPIRD North Coast fishing bioregion includes the Pilbara and Kimberley regions and runs from Ashburton River south of Onslow to the border of WA and the NT (DPIRD 2026c).

Kimberley region

- Recreational and charter fishing will remain open.
- A 50% catch reduction for commercial fisheries applies from 1 January 2026 (DPIRD 2025a).

Pilbara region

- Recreational and charter fishing will remain open.
- A 50% catch reduction for commercial fisheries applies from 1 January 2026.
- Permanent closure of commercial trawl fishing for demersal scalefish applies from 1 January 2026 (DPIRD 2025a).

Gascoyne Coast bioregion

The DPIRD Gascoyne Coast fishing bioregion runs from the Zuytdorp Cliffs north of Kalbarri to the Ashburton River south of Onslow (DPIRD 2026c).

- Recreational, charter and commercial fishing will remain open (DPIRD 2025a).

West Coast bioregion

The DPIRD West Coast fishing bioregion runs from Black Point east of Augusta to the Zuytdorp Cliffs north of Kalbarri. This area includes the Houtman Abrolhos Islands (DPIRD 2026c).

- Recreational boat-based fishing for demersals did not reopen on 16 December 2025 and is scheduled to reopen in spring 2027 as an exclusively recreational fishing zone.
- Charter fishing for demersals in the metropolitan area closed from 16 December 2025, but charter fishing for demersals under the tag system will continue in the remainder of the West Coast bioregion under a reduced annual catch limit of 25 tonnes.
- Commercial fishing for demersals closed from 1 January 2026. This includes a permanent closure of gillnet fisheries and commercial line fishing south of Kalbarri, supported by a compulsory buyback of commercial fishing licences (DPIRD 2025a).

Table 13-4: Commonwealth managed fisheries

<table>
<tr><th rowspan="2">Fishery</th><th colspan="3">Woodside activity area</th><th colspan="4" rowspan="2">Description</th></tr>
<tr><th>Browse</th><th>NWS/ Scarborough</th><th>North West Cape</th></tr>
<tr><td rowspan="5">North-west Slope Trawl Fishery</td><td rowspan="5">✓</td><td rowspan="5">✓</td><td rowspan="5"></td><td>Management area</td><td colspan="3">The North-west Slope Trawl Fishery extends from 114 °E to 125 °E, from the 200 m isobath to the outer limit of the Australian Fishing Zone (AFZ) (200 nm from the coastline, which is the boundary of the Australian EEZ) (Keller et al. 2025b; Smith et al. 2025).</td></tr>
<tr><td colspan="2">Species targeted</td><td>Fishing methods</td><td>Fishing depth</td></tr>
<tr><td colspan="2">Australian scampi (Metanephrops australiensis) and smaller quantities of velvet and Boschma’s scampi (M. velutinus and M. boschmai). A quantity of prawns is harvested each season, and squids are becoming an increasingly significant component of the catch.
Mixed snappers (Lutjanidae) and redspot emperor (Lethrinus lentjan) have historically been an important component of the catch (Blake et al. 2021).</td><td>Fishing for scampi occurs over soft, muddy sediments or sandy habitats, using demersal trawl gear on the continental slope (Patterson et al. 2017).</td><td>Typically depths of 350 to 600 m (Patterson et al. 2017).</td></tr>
<tr><td>Fishing effort</td><td colspan="3">The North-west Slope Trawl Fishery began in 1985 and the number of active vessels peaked at 21 in the 1986–87 season, decreasing to between one and six vessels per year since 2005–06 (Keller et al. 2025b).
A total catch of 85.94 t was recorded in 2023–24, an increase from 85.34 t in 2022–23 (Keller et al. 2025b). Of the total catch, the Australian scampi made up about 65.3% in 2023–24 (56 t), up from 52% in 2022–23 (44 t). Other scampi species made up only 0.4% (369 kg) of the total catch in 2023–24, down from 10% in 2022–23 (9 t) (Keller et al. 2025b).
The stock assessment of scampi in the fishery is classified as not subject to overfishing (Keller et al. 2025b).</td></tr>
<tr><td>Active licences/ vessels</td><td colspan="3">Three vessels operated in each of the 2022–23 and 2023–24 seasons. Trawl-hours increased from 4,351 in 2022–23 to 4,555 in 2023–24 (Keller et al. 2025b).</td></tr>
</table>

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

<table>
<tr><th rowspan="2">Fishery</th><th colspan="3">Woodside activity area</th><th colspan="4" rowspan="2">Description</th></tr>
<tr><th>Browse</th><th>NWS/ Scarborough</th><th>North West Cape</th></tr>
<tr><td rowspan="5">Southern Bluefin Tuna Fishery</td><td rowspan="5">✓</td><td rowspan="5">✓</td><td rowspan="5">✓</td><td>Management area</td><td colspan="3">The Southern Bluefin Tuna Fishery covers the entire EEZ around Australia, out to 200 nm from the coast. They do not fish in the Woodside activity areas.</td></tr>
<tr><td colspan="2">Species targeted</td><td>Fishing methods</td><td>Fishing depth</td></tr>
<tr><td colspan="2">Southern bluefin tuna (Thunnus maccoyii).</td><td>Longline, purse seine fishing, and minor line (troll and poling).</td><td>Southern bluefin tuna is a pelagic species that can be found to depths of 500 m (AFMA 2021a).</td></tr>
<tr><td>Fishing effort</td><td colspan="3">Most of the Australian fishing effort is by purse-seine vessels in the Great Australian Bight and waters off SA during summer months, and by longline off the New South Wales coastline during winter months (Patterson et al. 2025a).
The Southern Bluefin Tuna Fishery is shared among countries. Australia currently has a 35% share of the total global allowable catch. While wild capture fishing in Australia to sell directly to market can occur anywhere throughout the fishery’s range, currently most of that quota is value-added through ranching (on-growing the wild captured fish for an extra five to six months). Ranching requires significant infrastructure, a resident labour force, plus proximity to a fishery able to supply a large quantity of natural feed or sardines (40,000+ tonnes). North-west WA is critically important, regardless of how the quota is fished, because of the proximity to the single spawning ground of this global roaming species. Young fish (one to four years of age) move from the spawning ground in the north-east Indian Ocean into the Australian EEZ and southwards along the WA coast (Patterson et al. 2025a).
The stock is classified as not overfished (Patterson et al. 2025a).
A total of 6,325 t bluefin tuna catch was recorded for the 2023–24 fishing season, an increase from 6,034 t in the 2022–23 period (Patterson et al. 2025a). Of the total catch, 4,525 t were collected using purse seine and 1,799 t from pelagic longline.</td></tr>
<tr><td>Active licences/ vessels</td><td colspan="3">Five purse seine vessels and 27 longline vessels in the 2023–24 period, a decrease from six purse seine vessels and an increase from the 24 longline vessels in the 2022–23 period (Patterson et al. 2025a).</td></tr>
</table>

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

<table>
<tr><th rowspan="2">Fishery</th><th colspan="3">Woodside activity area</th><th colspan="4" rowspan="2">Description</th></tr>
<tr><th>Browse</th><th>NWS/ Scarborough</th><th>North West Cape</th></tr>
<tr><td rowspan="5">Western Deepwater Trawl Fishery</td><td rowspan="5"></td><td rowspan="5"></td><td rowspan="5">✓</td><td>Management area</td><td colspan="3">The Western Deepwater Trawl Fishery is in deep water off WA, from the line approximating the 200 m isobath to the edge of the AFZ (Blake et al. 2021).</td></tr>
<tr><td colspan="2">Species targeted</td><td>Fishing methods</td><td>Fishing depth</td></tr>
<tr><td colspan="2">More than 50 species, historically dominated by six commercial finfish species or species groups:
• orange roughy (Hoplostethus atlanticus)
• oreos (Oreosomatidae)
• boarfish (Pentacerotidae)
• eteline snapper (Lutjanidae: Etelinae)
• apsiline snapper (Lutjanidae: Apsilinae)
• sea bream (Lethrinidae).</td><td>Demersal trawl.</td><td>Water deeper than 200 m (Blake et al. 2021).</td></tr>
<tr><td>Fishing effort</td><td colspan="3">The number of vessels active in the fishery and total hours trawled have fluctuated from year to year. Notably, total hours trawled were relatively high for a brief period during the early 2000s when fishers targeted ruby snapper and deepwater bugs (Patterson et al. 2020).
Total trawl hours have been variable but relatively low since 2005–06. In 2023–24, 15 trawl-hours were recorded in the fishery, up from 2022–23 when no effort was recorded, but down from the 76 trawl-hours recorded in 2021–22 (Keller et al. 2025a).
A total of 3.39 t of catch was landed in the Western Deepwater Trawl Fishery in 2023–24, comprising various finfish species including amberjack (29%), rubyfish – mixed (Plagiogeneion spp.; 24%) and rosy snapper (13%). No catch was recorded in 2022–23 and no deepwater bugs have been landed since 2019–20 (Keller et al. 2025a).
Ruby snapper and deepwater bugs stock are considered not subject to overfishing but the biomass status of deepwater bugs is classified as uncertain (Keller et al. 2025a).</td></tr>
<tr><td>Active licences/ vessels</td><td colspan="3">Since 2004–05, one to three vessels have been active in the fishery, with one active vessel in 2023–24 (Keller et al. 2025a).</td></tr>
</table>

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

<table>
<tr><th rowspan="2">Fishery</th><th colspan="3">Woodside activity area</th><th colspan="4" rowspan="2">Description</th></tr>
<tr><th>Browse</th><th>NWS/ Scarborough</th><th>North West Cape</th></tr>
<tr><td rowspan="5">Western Skipjack Tuna Fishery</td><td rowspan="5">✓</td><td rowspan="5">✓</td><td rowspan="5">✓</td><td>Management area</td><td colspan="3">The combined western and eastern skipjack tuna (Katsuwonus pelamis) fisheries encompass the entire Australian EEZ. The Western Skipjack Tuna Fishery extends westward from the SA/Victorian border across the Great Australian Bight and around the west coast of WA to the Cape York Peninsula.</td></tr>
<tr><td colspan="2">Species targeted</td><td>Fishing methods</td><td>Fishing depth</td></tr>
<tr><td colspan="2">Western skipjack tuna (Katsuwonus pelamis).</td><td>Fishers use purse seine gear (about 98% of catch) and sometimes pole and line when fishing for skipjack tuna.</td><td>Western skipjack tuna is a pelagic species that can be found to depths of 260 m (AFMA 2021b).</td></tr>
<tr><td>Fishing effort</td><td colspan="3">The Western Skipjack Tuna Fishery has not been actively fished since the 2008–09 season (Patterson and Dylewski 2024). The management arrangements for this fishery will be reviewed if active boats re-enter the fishery.</td></tr>
<tr><td>Active licences/ vessels</td><td colspan="3">No active vessels operating since 2009 (Patterson and Dylewski 2024).</td></tr>
<tr><td rowspan="5">Western Tuna and Billfish Fishery</td><td rowspan="5">✓</td><td rowspan="5">✓</td><td rowspan="5">✓</td><td>Management area</td><td colspan="3">The Western Tuna and Billfish Fishery extends to the Australian EEZ boundary in the Indian Ocean.</td></tr>
<tr><td colspan="2">Species targeted</td><td>Fishing methods</td><td>Fishing depth</td></tr>
<tr><td colspan="2">Key species caught in the fishery are bigeye tuna (Thunnus obesus), yellowfin tuna (T. albacares) and swordfish (Xiphias gladius). Striped marlin (Kajikia audax) is a minor component of the catch. Catch of albacore (T. alalunga), a non-quota species, can approach levels similar to yellowfin tuna catch in some years (Blake et al. 2022).</td><td>Fishers mainly use pelagic longline fishing gear to catch the targeted species. Minor line (including handline, troll, rod and reel) can also be used, and purse seine.</td><td>Species have a broad depth distribution, with tuna occurring at 150 to 300 m, striped marlin at 150 m and swordfish at up to 600 m (Bureau of Rural Sciences 2007).</td></tr>
<tr><td>Fishing effort</td><td colspan="3">The fishery operates in Australia’s EEZ and high seas of the Indian Ocean. Fishing effort in recent years has been concentrated off south-west WA, with occasional activity off SA (Patterson et al. 2025b).
A total of 208 t catch was landed in the 2023–24 season, remaining the same from the 2022–23 period (Patterson et al. 2025b).
Striped marlin, bigeye tuna and yellowfin tuna are classified as subject to overfishing (Patterson et al. 2025b).</td></tr>
</table>

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Fishery	Woodside activity area			Description	
	Browse	*NWS/ Scarborough*	*North West Cape*		
				Active licences/ vessels	Four pelagic longline and three minor line vessels were active during the 2023–24 season (Patterson *et al.* 2025b).

Table 13-5: State managed fisheries

Fishery	Woodside activity area			Description	Fishery		
	Browse	*NWS/ Scarborough*	*North West Cape*				
Abrolhos Islands and Mid-West Trawl Fishery			✓	***Management area***	The Abrolhos Islands and Mid-West Trawl Fishery operates around the Abrolhos Islands within the SWMR.		
				Species targeted	***Fishing methods***	***Fishing depth***	
				Saucer scallops (*Ylistrum balloti*, formerly *Amusium balloti*).	Otter trawl.	Saucer scallops occur in inshore waters around 40 m depth at the Abrolhos Islands (Wilkin *et al.* 2024).	
				Fishing effort	Previous years' catch based on State of the Fisheries annual reports provided by DPIRD: The total landings in the 2023 season was 467 t meat weight (2,333 t whole weight) (Wilkin *et al.* 2024). The Abrolhos Islands and Mid-West Trawl Fishery did not fish in 2022 due to the stock being environmentally limited (Wilkin *et al.* 2023a). The fishery landed 123.1 t meat weight (615.1 t whole weight) in 2021.		
				Active licences/ vessels	The number of vessels is unreported. There were ten licences in 2021 (Kangas *et al.* 2023b).		

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Fishery	Woodside activity area			Description	Fishery		
	Browse	*NWS/ Scarborough*	*North West Cape*				
Broome Prawn Managed Fishery	✓			***Management area***	The Broome Prawn Managed Fishery operates off Broome and forms part of the North Coast Prawn Fishery.		
				Species targeted		***Fishing methods***	***Fishing depth***
				Western king prawn (*Penaeus latisulcatus*), brown tiger prawns (*Penaeus esculentus*) and blue endeavour prawns (*Metapenaeus endeavouri*).		Low opening, otter prawn trawl systems.	Trawling is generally in waters between 30 and 60 m deep, but can occur down to 100 m (Department of Environment and Heritage 2004).
				Fishing effort	The total landings of the Broome Prawn Managed Fishery in the 2023 season were negligible (Koefoed *et al.* 2024a). The DPIRD State of the Fisheries annual reports indicate that no fishing efforts occurred in 2022 and extremely low fishing effort occurred in 2021, 2020 and 2019 (Wilkin *et al.* 2023b). The stock status of western king prawns is considered sustainable – adequate (Koefoed *et al.* 2024a).		
				Active licences/ vessels	Two boats undertook trial fishing activities in 2023 (Koefoed *et al.* 2024a).		
Exmouth Gulf Prawn Managed Fishery			✓	***Management area***	The Exmouth Gulf Prawn Managed Fishery operates within the sheltered waters of Exmouth Gulf. The fishery occupies a total area of 4,000 km², with only half of this area being trawled (Fletcher and Santoro 2015).		
				Species targeted		***Fishing methods***	***Fishing depth***
				Western king prawn (*Penaeus latisulcatus*), brown tiger prawn (*Penaeus esculentus*), blue endeavour prawn (*Metapenaeus endeavouri*) and banana prawn (*Penaeus merguinensis*).		The fishery uses low opening, otter prawn trawl systems (Koefoed *et al.* 2024b).	Information not available.
				Fishing effort	Previous years' catch based on State of the Fisheries annual reports provided by DPIRD: The Exmouth Gulf Prawn Managed Fishery landed 653 t in 2023, 898 t in 2022, 777 t in 2021, 673 t in 2020, 821 t in 2019, 880 t in 2018, 713 t in 2017 and 822 t in 2016 (Koefoed *et al.* 2024b). The total catch comprised 306 t of brown tiger prawns, 200 t of western king prawns, and 147 t of blue endeavour prawns (Koefoed *et al.* 2024b). Stock status of landed species is considered sustainable – adequate (Koefoed *et al.* 2024b).		

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

<table>
<tr><th rowspan="2">Fishery</th><th colspan="3">Woodside activity area</th><th rowspan="2">Description</th><th colspan="3">Fishery</th></tr>
<tr><th>Browse</th><th>NWS/ Scarborough</th><th>North West Cape</th></tr>
<tr><td></td><td></td><td></td><td></td><td>Active licences/ vessels</td><td colspan="3">The number of participating vessels is six (Koefoed et al. 2024b).</td></tr>
<tr><td rowspan="5">Gascoyne Demersal Scalefish Managed Fishery</td><td rowspan="5"></td><td rowspan="5"></td><td rowspan="5">✓</td><td>Management area</td><td colspan="3">The Gascoyne Demersal Scalefish Managed Fishery is between the southern Ningaloo Coast to south of Shark Bay, with a closure area at Point Maud to Tantabiddi (Western Australian Fishing Industry Council).[21]</td></tr>
<tr><td colspan="2">Species targeted</td><td>Fishing methods</td><td>Fishing depth</td></tr>
<tr><td colspan="2">Pink snapper (Chrysophrys auratus) and goldband snapper (Pristipomoides multidens).
Other demersal species caught include:
• tropical snappers
• emperors
• cods
• mulloway trevallies.</td><td>Mechanised handlines.</td><td>The target species inhabit waters deeper than 20 m (Jackson et al. 2021a).</td></tr>
<tr><td>Fishing effort</td><td colspan="3">Previous years’ catch based on State of the Fisheries annual reports provided by DPIRD: The Gascoyne Demersal Scalefish Managed Fishery reported a total commercial catch of 145 t in 2023, 166 t in 2022, 164 t in 2020–21, 207 t in 2019–20, 173 t in 2018–19 and 210 t in 2017–18 (Jackson et al. 2024).
The total of commercial catches comprised 48 t of pink snapper, 69 t of goldband snapper, and 28 t of other mixed species (Jackson et al. 2024).
The stock status for pink snapper is considered recovering, with goldband snapper considered sustainable – adequate (Jackson et al. 2024).</td></tr>
<tr><td>Active licences/ vessels</td><td colspan="3">Eight vessels fished during 2023, seven of which fished for more than ten days during peak pink snapper season (Jackson et al. 2024).</td></tr>
</table>

[21] https://www.wafic.org.au/fishery/gascoyne-demersal-scalefish-fishery/.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Fishery	Woodside activity area			Description	Fishery		
	Browse	*NWS/ Scarborough*	*North West Cape*				
Kimberley Crab Managed Fishery (formerly Kimberley Developing Mud Crab Fishery)	✓			***Management area***	The Kimberley Crab Managed Fishery is one of two small trap-based crab fisheries that exist in the North Coast bioregion between Cambridge Gulf and Broome (Gaughan and Santoro 2018). In November 2018, the fishery transitioned from developing to fully managed (Johnston *et al.* 2020b).		
					Species targeted	***Fishing methods***	***Fishing depth***
					Brown mud crab (*Scylla olivacea*) and green mud crab (*Scylla serrata*).	Trap. Exemption holders use crab traps and drop nets in waters adjacent to native title lands (Johnston *et al.* 2023).	Information not available.
				Fishing effort	Previous years' catch based on State of the Fisheries annual reports provided by DPIRD: The total crab landed was 0.45 t in 2023, 13.6 t in 2022, 9.7 t in 2021, 1.5 t in 2020, 3.2 t in 2018 and 7.4 t in 2019. In 2023, Kimberley Crab Managed Fishery landed a total catch of 0.45 t of brown mud crab, which represented the entire reported commercial mud crab catch (Harris *et al.* 2024). Mud crab species in the managed fishery is considered sustainable – adequate (Harris *et al.* 2024).		
				Active licences/ vessels	There is an allocation of 1,200 units (equivalent to 600 traps) to licence holders (Johnston *et al.* 2023). An equivalent allocation of 600 traps for commercial purposes was provided to Traditional Owner groups through the granting of non-transferable Instruments of Exemption under the *Fish Resources Management Act*.		
Mackerel Managed Fishery	✓	✓	✓	***Management area***	The commercial fishery extends from the West Coast bioregion to the WA/NT border. There are three managed fishing areas: Area 1: Kimberley (121ºE to the WA/NT border); Area 2: Pilbara (114ºE to 121ºE) and Area 3: Gascoyne (27ºS to 114ºE) and West Coast (Cape Leeuwin to 27ºS) (Lewis *et al.* 2020).		
					Species targeted	***Fishing methods***	***Fishing depth***
					Spanish mackerel (*Scomberomorus commerson*), grey mackerel (*S. semifasciatus*) and other species from the genus *Scomberomorus*.	Trolling, baits or lures cast, jigging (Lewis *et al.* 2020).	Information not available.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Fishery	Woodside activity area			Description	Fishery		
	Browse	*NWS/ Scarborough*	*North West Cape*				
				Fishing effort	Most of the catch is taken from waters off the Kimberley and Pilbara coasts (Lewis *et al.* 2020), reflecting the tropical distribution of mackerel species (Molony *et al.* 2015). Most fishing activity occurs around the coastal reefs of the Dampier Archipelago and Port Hedland area, with the seasonal appearance of mackerel in shallower coastal waters most likely associated with feeding and gonad development before spawning (Mackie *et al.* 2003). Previous years' catch based on State of the Fisheries annual reports provided by DPIRD: 242 t in 2023, 213 t in 2022, 310 t in 2021, 290 t in 2020, 291 t in 2019, 214 t in 2018, 283 t in 2017, 276 t in 2016, 302 t in 2015 and 322 t in 2014 (Lewis and Rynvis 2024). The landed catch in 2023 was 225 t for Spanish mackerel and 16 t for grey mackerel (Lewis and Rynvis 2024). The commercial landings for other large pelagic species, such as the amberjack and cobia, were 19.7 t and 18.2 t, and other species contributed to the remaining <10 t of the total catch (Lewis and Rynvis 2024). All species stocks are sustainable – adequate (Lewis and Rynvis 2024).		
				Active licences/ vessels	There were 15 vessels in 2023, primarily from May to November (Lewis and Rynvis 2024).		
Marine Aquarium Fish Managed Fishery	✓	✓	✓	***Management area***	The Marine Aquarium Fish Managed Fishery can operate throughout WA State waters. The fishery is typically more active in waters south of Broome and higher levels of effort around the Capes region, Perth, Geraldton, Exmouth, Dampier and Broome (Newman *et al.* 2021b). There has been recent effort in the waters from Broome northwards to the NT border (Newman *et al.* 2024b).		
				Species targeted		***Fishing methods***	***Fishing depth***
				Finfish, hard coral, soft coral, tridacnid clams, syngnathids (seahorses and pipefish), other invertebrates (including molluscs, crustaceans, echinoderms), algae, seagrasses and 'live rock'. The resource potentially includes over 1,500 species of marine aquarium fishes (Newman *et al.* 2024b).	The fishery is diver-based, which typically restricts effort to safe diving depths (less than 30 m).	Information not available.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Fishery	Woodside activity area			Description	Fishery		
	Browse	*NWS/ Scarborough*	*North West Cape*				
				Fishing effort	Total catch for the Marine Aquarium Fish Managed Fishery in 2023 was 107,786 fishes and invertebrates, 18 t of coral, live rock and living sand, and 272 L of marine plants and live feed (Newman *et al.* 2024b). In 2022, the total catch for the Marine Aquarium Fish Managed Fishery was 98,694 fishes and invertebrates, 17.83 t of coral, live rock and living sand, and 39 L of marine plants and live feed (Newman *et al.* 2024b). Dominant fish species caught in 2022 include spotted blenny (*Istiblennius meleagris*), scribbled angelfish (*Chaetodontoplus duboulayi*), black-axil chromis (*Chromis atripectoralis*), stripey (*Microcanthus strigatus*), Vachell's glassfish (*Ambassis vachellii*), margined coralfish (*Chelmon marginalis*), black-axil chromis (*Chromis atripectoralis*), and blue and yellow wrasse (*Anampses lennardi*) (Newman *et al.* 2024b). The breeding stocks of landed species are classified as sustainable – adequate (Newman *et al.* 2024b).		
				Active licences/ vessels	Twelve licences were active in 2023 across the Marine Aquarium Fish Managed Fishery and the Hermit Crab Fishery (Newman *et al.* 2024b).		
Nickol Bay Prawn Managed Fishery		✓		***Management area***	The Nickol Bay Prawn Managed Fishery operates in nearshore and offshore waters of the Pilbara region along the NWS. Trawling has been reported to occur at several locations along the Pilbara coast to the east of the Burrup Peninsula, including within the waters of Nickol Bay (Fletcher and Santoro 2015).		
				Species targeted		***Fishing methods***	***Fishing depth***
				Banana prawn (*Penaeus merguiensis*), western king prawn (*Penaeus latisulcatus*), brown tiger prawn (*Penaeus esculentus*) and blue endeavour prawn (*Metapenaeus endeavouri*).		Low opening, otter prawn trawl systems.	Information not available.
				Fishing effort	Previous years' catch based on State of the Fisheries annual reports provided by DPIRD: The Nickol Bay Prawn Managed Fishery landed 89 t in 2023, 51 t in 2022, 123.4 t in 2021, 202.4 t in 2020, 254 t in 2019 and 81 t in 2018 (Koefoed *et al.* 2024a). Of the total landings in 2023, landings were dominated by 68 t banana, 15 t brown tiger, 4 t western king and 1 t blue endeavour prawns (Koefoed *et al.* 2024a). The banana prawn stock status within the Nickol Bay Prawn Managed Fishery is considered sustainable – adequate (Koefoed *et al.* 2024a).		

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Fishery	Woodside activity area			Description	Fishery		
	Browse	*NWS/ Scarborough*	*North West Cape*				
				Active licences/ vessels	There were five participating vessels in 2023 (Koefoed *et al.* 2024a).		
Northern Demersal Scalefish Managed Fishery	✓			***Management area***	The Northern Demersal Scalefish Managed Fishery is divided into two fishing areas: an inshore sector (Area 1) and an offshore sector (Area 2) (Newman *et al.* 2018). Area 1 permits line fishing only, between the high water mark and the 30 m isobath. Area 2 permits handline, dropline and fish trap fishing methods and is further divided into zones. Zone A is an inshore area, Zone B comprises the area with most historical fishing activity, and Zone C is an offshore deep slope area representing waters deeper than 200 m (Fletcher *et al.* 2017; Smith, *et al.* 2025).		
				Species targeted		***Fishing methods***	***Fishing depth***
				Goldband snapper (*Pristipomoides multidens*), blue-spotted emperor (*Lethrinus punctulantus*), red emperor (*Lutjanus sebae*) and rankin cod (*Epinephelus multinotatus*).		Handline, dropline and fish trap.	Information not available.
				Fishing effort	Previous years' catch based on State of the Fisheries annual reports provided by DPIRD: The Northern Demersal Scalefish Managed Fishery landed 1,450 t in 2023, 1,458 t in 2022, 1,544 t in 2021, 1,419 t in 2020, 1,507 t in 2019, and 1,297 t in 2018 (Wakefield *et al.* 2024). In 2023, most of the catch was landed from Zone B, with 1,233 t in 2023. The 2023 catch of jobfish group (*Pristipomoides spp*.) was 503 t, 91% of which was goldband snapper (Wakefield *et al.* 2024). The stock status of landed species in the managed fishery is classified as sustainable – adequate (Wakefield *et al.* 2024).		
				Active licences/ vessels	Eight active vessels in 2023 (Wakefield *et al.* 2024).		
Octopus Interim Managed Fishery	-	-	-	***Management area***	The Octopus Interim Managed Fishery operates from Kalbarri Cliffs in the north to Esperance in the south.		
				Species targeted		***Fishing methods***	***Fishing depth***
				Octopus djinda, which is closely related to *Octopus tetricus*.		Primary method is baited octopus trap (combination of active trapping via trigger mechanisms, and passive trapping – shelter traps) (Strain *et al.* 2024d).	Catches typically occur in nearshore waters of less than 20 m depths, but traps may be deployed in depths of up to 50 m (Desfosses *et al.* 2024.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Fishery	Woodside activity area			Description	Fishery		
	Browse	*NWS/ Scarborough*	*North West Cape*				
				Fishing effort	Previous years' catch based on State of the Fisheries annual reports provided by DPIRD: Commercial catch for the Octopus Interim Managed Fishery was 777 t in 2023, 744 t in 2022, 487 t in 2021, 254 t in 2020, 453 t in 2019, 314 t in 2018, 257 t in 2017 and 252 t in 2016 (Strain *et al.* 2024d). In 2023, the total catch of octopus of 777 t live weight was a 4.4% increase from 2022 with a total catch of 744 t, due to one new vessel and increased use of trap allocations (Strain *et al.* 2024d). Octopus stock status in 2023 is considered sustainable – adequate (Strain *et al.* 2024d).		
				Active licences/ vessels	Twenty-eight active vessels in 2023 (Strain *et al.* 2024d).		
Onslow Prawn Managed Fishery		✓		***Management area***	The Onslow Prawn Managed Fishery encompasses a portion of the continental shelf off the Pilbara.		
				Species targeted		***Fishing methods***	***Fishing depth***
				Western king prawns (*Penaeus esculentus*), brown tiger prawns (*Penaeus esculentus*), blue endeavour prawns (*Metapenaeus endeavouri.*		Low opening, otter prawn trawl systems.	Fishery and or fishing activity overlaps the Beadon Creek dredging scope (Sporer *et al.* 2015).
				Fishing effort	The total landings for the Onslow Prawn Managed Fishery for the 2023 and 2022 seasons are not available due to data confidentiality (Koefoed *et al.* 2024a). In 2021, the total catch was less than the target catch range of 60 t (Kangas *et al.* 2023a). Thirty-seven days of fishing took place in 2021, compared to 13 days in 2020 (Kangas *et al.* 2023a). The breeding stocks of banana, brown tiger and western king prawns are considered sustainable – adequate (Koefoed *et al.* 2024a).		
				Active licences/ vessels	One vessel was active in 2023 (Koefoed *et al.* 2024a).		

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Fishery	Woodside activity area			Description	Fishery		
	Browse	*NWS/ Scarborough*	*North West Cape*				
Pearl Oyster Managed Fishery	✓	✓	✓	***Management area***	The Pearl Oyster Managed Fishery is in shallow coastal waters, designated by four zones extending from Exmouth to Kununurra and the seaward boundary demarcated by the 200 nm EEZ. The fishery is currently managed under the *Pearling Act 1990* (Koefoed *et al.* 2024a).		
					Species targeted	***Fishing methods***	***Fishing depth***
					Silver lipped pearl oysters (*Pinctada maxima*).	Drift diving.	Fishing effort is mostly focused in shallow coastal waters (10 to 15 m depth), with a maximum depth of 35 m (Lulofs *et al.* 2002).
				Fishing effort	In 2023, catch was taken from Zones 2 and 3 only with no fishing in Zone 1, which has not been fished from 2017 to 2023 (Koefoed *et al.* 2024a). In 2023, the number of wild-caught pearl oysters was 798,217 (Koefoed *et al.* 2024a). Total dive hours increased in 2023 from 10,641 hours in 2022 to 10,906 hours due to a 28% increase in harvest (Hart *et al.* 2023b). Zones 1 to 3 are all considered to be sustainable – adequate (Koefoed *et al.* 2024a).		
				Active licences/ vessels	Five active vessels in 2023 (Koefoed *et al.* 2024a).		
Pilbara Crab Managed Fishery		✓	✓	***Management area***	The Pilbara Crab Managed Fishery covers inshore waters from Onslow to Port Hedland (between longitudes 115° 5’ 60”E and 120°E), with most activity around Nickol Bay (Newman *et al.* 2024a). Areas of the fishery north and east of Exmouth and nearshore are currently closed as per Schedule 2 of the Draft Management Plan for the Pilbara Crab Managed Fishery (DPIRD 2018).		
					Species targeted	***Fishing methods***	***Fishing depth***
					Blue swimmer crab (*Portunus armatus)* (Johnston *et al.* 2021).	Hourglass traps (Johnston *et al.* 2021).	Up to 50 m deep (Harris *et al.* 2024).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Fishery	Woodside activity area			Description	Fishery		
	Browse	*NWS/ Scarborough*	*North West Cape*				
				Fishing effort	Previous years' catch based on State of the Fisheries annual reports provided by DPIRD: Catch for the Pilbara Crab Managed Fishery was 23.8 t in 2023, 11.2 t in 2022, 9.7 t in 2021, 0.6 t in 2020 and 19.3 t in 2019 (Harris *et al.* 2024). The total catch in 2023 was a substantial increase from the 2.1 t caught in 2020, which was the lowest landed catch in 20 years (Harris *et al.* 2024). In 2023 the blue swimmer crab catch accounted for about 5% of the State commercial catch, all taken by this fishery (Harris *et al.* 2024). The blue swimmer crab stock status is considered sustainable – adequate (Harris *et al.* 2024).		
				Active licences/ vessels	No information currently available.		
Pilbara Trawl (Interim) Managed Fishery		✓		***Management area***	The Pilbara Trawl (Interim) Managed Fishery is a high-intensity fishery divided into two zones and an area governed by Schedule 5 (prohibited to trawling). In addition to the Prohibited Trawl Fishing area, no fish trawl units are allocated for use in Zone 1 or Areas 3 and 6 of Zone 2 (which comprises six management areas) (Newman *et al.* 2024; Smith, *et al.* 2025).		
				Species targeted		***Fishing methods***	***Fishing depth***
				The fishery targets more than 50 scalefish species. The main demersal scalefish species landed by the fisheries in the Pilbara region are bluespotted emperor, red emperor and rankin cod (Newman *et al.* 2021a). The key species caught by the Pilbara Trawl (Interim) Managed Fishery include crimson snapper, bluespotted emperor trevally and threadfin bream (Trinnie *et al.* 2025).	Demersal trawl. The fishery operates with standard stern trawling gear (single net with extension sweeps) (Wakefield *et al.* 2024).	The fishery operates in waters between 50 and 200 m depth (Allen *et al.* 2014; Newman *et al.* 2015).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Fishery	Woodside activity area			Description	Fishery		
	Browse	*NWS/ Scarborough*	*North West Cape*				
				Fishing effort	Based on State of the Fisheries annual reports provided by DPIRD, catch trends were seen to be increasing over the past reporting years, until the past two seasons. The Pilbara Trawl (Interim) Managed Fishery catch was 1,907 t in 2023, 1,784 t in 2022,1,928 t in 2021, 2,087 t in 2020, 2,142 t in 2019, 1,996 t in 2018, 1,780 t in 2017, 1,529 t in 2016, 1,172 t in 2015 and 1,105 t in 2014 (Wakefield *et al.* 2024). The fishery landed 74% of total commercial catches of the demersal scale fish in the Pilbara in 2023. Increasing catch rates and fishing mortality spawning biomass estimates indicate imposed effort reductions since 2008 have resulted in increased fish abundance and stock rebuilding in the fishery (Wakefield *et al.* 2024). In 2023, the total catch of the indicator species red emperor in the Pilbara Demersal Scalefish Fishery (includes the Pilbara trawl, trap and line fisheries) was 150 t, which is within the acceptable catch range (Wakefield *et al.* 2024). The biological stocks for the Pilbara Demersal Scalefish Fishery are classified as unsustainable – inadequate (Wakefield *et al.* 2024).		
				Active licences/ vessels	Four active vessels in the trawl sector in 2023 (Wakefield *et al.* 2024).		
Pilbara Line Managed Fishery		✓	✓	***Management area***	The Pilbara Line Managed Fishery boat licences are permitted to operate anywhere within 'Pilbara water', bounded by a line starting at the intersection of 21° 56'S latitude and the high water mark on the western side of the North West Cape on the mainland of WA, west along the parallel to the intersection of 21° 56'S latitude and the boundary of the AFZ, and north to longitude 120°E (Wakefield *et al.* 2024; Smith *et al.* 2025).		
				Species targeted		***Fishing method***	***Fishing depths***
				The Pilbara Line Managed Fishery catch is made up around 45 to 50 fish species. The fishery targets similar demersal species to the Pilbara Trap and Trawl fisheries, as well as some deeper offshore species such as ruby snapper and eightbar grouper (Trinnie *et al.* 2025).		Demersal long line.	Information not available.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Fishery	Woodside activity area			Description	Fishery		
	Browse	*NWS/ Scarborough*	*North West Cape*				
				Fishing effort	Based on State of the Fisheries annual reports provided by DPIRD: The Pilbara Line Managed Fishery caught 114 t in 2023, 104 t in 2022, 124 t in 2021, 167 t in 2020, 148 t in 2019, 93 t in 2018, 143 t in 2017, 126 t in 2016, 97 t in 2015 and 40 t in 2014 (Wakefield *et al.* 2024). The total catch of 104 t in 2023 made up 4% of the total catch by the Pilbara Demersal Scalefish Fishery and was within the acceptable catch range (Wakefield *et al.* 2024).		
				Active licences/ vessels	Six active vessels in 2023 (Wakefield *et al.* 2024).		
Pilbara Trap Managed Fishery		✓	✓	***Management area***	The Pilbara Trap Managed Fishery covers the area from Exmouth northwards and eastwards to the 120° line of longitude, and offshore as far as the 200 m isobath. Like the trawl fishery, the trap fishery is also managed using input controls in the form of individual transferable effort allocations, monitored with a satellite-based vessel management system. The fishery includes six licences allocated to three vessels, operating principally from Onslow (Wakefield *et al.* 2024; Smith *et al.* 2025).		
				Species targeted		***Fishing methods***	***Fishing depths***
				The catch is made up of around 45 to 50 fish species. The fishery generally targets long-lived, high-value demersal scalefish such as red emperor and rankin cod, but also lands significant catches of shorter-lived species such as blue spotted emperor (Trinnie *et al.* 2025).		Demersal fish traps.	About 30 m isobath to 200 m isobath (DPIRD n.d.).
				Fishing effort	Previous years' catch based on State of the Fisheries annual reports provided by DPIRD: The Pilbara Trap Managed Fishery caught 573 t in 2023, 597 t in 2022, 662 t in 2021, 584 t in 2020, 680 t in 2019, 563 t in 2018, 573 t in 2017, 495 t in 2016, 510 t in 2015 and 268 t in 2014 (Wakefield *et al.* 2024). The total catch of 573 t in 2023 made up 22% of the total catch by the Pilbara Demersal Scalefish Fishery and exceeded the acceptable catch range for the total catch (Wakefield *et al.* 2024).		
				Active licences/ vessels	Three active vessels in the trap sector in 2023 (Wakefield *et al.* 2024).		

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Fishery	Woodside activity area			Description	Fishery		
	Browse	*NWS/ Scarborough*	*North West Cape*				
Shark Bay Beach Seine and Mesh Net Managed Fishery	-	-	-	***Management area***	The Shark Bay Beach Seine and Mesh Net Managed Fishery operates from Denham.		
				Species targeted		***Fishing methods***	***Fishing depth***
				Whiting (yellowfin *Sillago schomburgkii*), sea mullet (*Mugil cephalus*), tailor (*Pomatomus saltatrix*) and western yellowfin bream (*Acanthopagrus australis*).		Beach seine and mesh net.	Information not available.
				Fishing effort	Previous years' catch based on State of the Fisheries annual reports provided by DPIRD: Total catch was 131 t in 2023, 131 t in 2022,135 t in 2021, 171 t in 2020, 175 t in 2019 and 176 t in 2018 (Jackson and Nolan 2024). Of the total catch in 2023, 80 t consisted of whiting, 25 t of sea mullet, 13 t of western yellowfin bream, 8 t of tailor, and 0.5 t of pink snapper (Jackson and Nolan 2024). The stock status of targeted species is sustainable – adequate (Jackson and Nolan 2024).		
				Active licences/ vessels	Four vessels were active in 2022 (Jackson and Nolan 2024).		
Shark Bay Crab Managed Fishery	-	-	-	***Management area***	The Shark Bay Crab Managed Fishery operates within the NWMR. It is based primarily in Carnarvon but operates throughout the waters of Shark Bay.		
				Species targeted		***Fishing methods***	***Fishing depth***
				Blue swimmer crab (*Portunus armatus*).		Trap and trawl.	Information not available.
				Fishing effort	Previous years' catch based on State of the Fisheries annual reports provided by DPIRD: The fishery landed 369 t in 2023, 401 t in 2022, 549 t in 2020–21, 638 t in 2019–20, 529 t in 2018–19 and 518 t in 2017–18 (Chandrapavan *et al.* 2024). The fishery closed for 18 months in 2012 and 2013 to promote stock recovery after a series of adverse environmental conditions between 2010 and 2011 (Chandrapavan *et al.* 2024). Limited commercial fishing resumed under a national quota management system between 2013 and 2017 (Chandrapavan *et al.* 2024). The current stock status is sustainable – adequate (Chandrapavan *et al.* 2024).		
				Active licences/ vessels	In the trawl sector in 2023 there were three trap vessels and 21 trawl vessels (Chandrapavan *et al.* 2023a).		

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

<table>
<tr><th rowspan="2">Fishery</th><th colspan="3">Woodside activity area</th><th rowspan="2">Description</th><th rowspan="2" colspan="3">Fishery</th></tr>
<tr><th>Browse</th><th>NWS/ Scarborough</th><th>North West Cape</th></tr>
<tr><td rowspan="5">Shark Bay Prawn and Scallop Managed Fishery</td><td rowspan="5">-</td><td rowspan="5">-</td><td rowspan="5">-</td><td>Management area</td><td colspan="3">The Shark Bay Prawn Managed Fishery is the highest producing WA fishery for prawns. The Shark Bay Scallop Managed Fishery is usually WA’s most valuable scallop fishery (Kangas et al. 2021).</td></tr>
<tr><td colspan="2">Species targeted</td><td>Fishing methods</td><td>Fishing depth</td></tr>
<tr><td colspan="2">Western king prawn (Penaeus latisulcatus), brown tiger prawn (Penaeus esculentus), endeavour prawn (Metapenaeus endeavouri), coral prawn (Metapenaeopsis sp.) and saucer scallop (Amusium balloti).</td><td>Low-opening otter trawls.</td><td>Information not available.</td></tr>
<tr><td>Fishing effort</td><td colspan="3">Previous years’ catch based on State of the Fisheries annual reports provided by DPIRD: The Shark Bay Prawn Managed Fishery landed 866 t in 2023, 831 t in 2022, 1,303 t in 2021, 1,268 t in 2020, 1,214 t in 2019, 1,091 t in 2018 and 1,608 t in 2017 (Koefoed et al. 2024c).
Of the total landings, 640 t comprised of western king, 226 t of brown tiger, and 1 t of blue endeavour prawns (Koefoed et al. 2024c).
The Shark Bay Scallop Managed Fishery has been managed under a quota management framework since the fishery reopened in 2015 (Wilkin et al. 2024). Scallop landings for Shark Bay were 172 t (861 t meat weight) in 2023, 35 t (177 t meat weight) in 2022, 123.6 t meat weight (618.2 t whole weight) in 2021, 177.1 t meat weight (885.5 t whole weight) in 2020 and 339 t meat weight (1,694 t whole weight) in 2019.
All stocks for target species are considered sustainable – adequate (Koefoed et al. 2024c; Wilkin et al. 2024).</td></tr>
<tr><td>Active licences/ vessels</td><td colspan="3">There were 12 licenced vessels in the 2023 season, a decrease from the 2022 season which had 18 licenced vessels (Koefoed et al. 2024c).
In the Shark Bay Scallop Managed Fishery there are boats licenced to take scallops (11 Class A licences) and boats that also fish for prawns (18 Class B licences). There were nine active vessels (Wilkin et al. 2024).</td></tr>
</table>

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

<table>
<tr><th rowspan="2">Fishery</th><th colspan="3">Woodside activity area</th><th rowspan="2">Description</th><th colspan="3">Fishery</th></tr>
<tr><th>Browse</th><th>NWS/ Scarborough</th><th>North West Cape</th></tr>
<tr><td rowspan="5">South Coast Crustacean Managed Fishery</td><td rowspan="5">-</td><td rowspan="5">-</td><td rowspan="5">-</td><td>Management area</td><td colspan="3">The South Coast Crustacean Managed Fishery comprises four fisheries: the Windy Harbour/Augusta Rock Lobster Managed Fishery, the Esperance Rock Lobster Managed Fishery, the Southern Rock Lobster Pot Regulation Fishery, and the South Coast Deep-Sea Crab Fishery.</td></tr>
<tr><td colspan="2">Species targeted</td><td>Fishing methods</td><td>Fishing depth</td></tr>
<tr><td colspan="2">Southern rock lobster (Jasus edwardsii), western rock lobster (Panulirus cygnus), giant crab (Pseudocarcinus gigas), crystal crab (Chaceon albus) and champagne crab (Hypothalassia acerba).</td><td>Pots.</td><td>Information not available.</td></tr>
<tr><td>Fishing effort</td><td colspan="3">Previous years’ catch based on State of the Fisheries annual reports provided by DPIRD: The South Coast Crustacean Managed Fishery reported a total catch of 34.8 in 2023, 23.8 t in 2022, 27.4 t in 2020–21, 52.5 t in 2019–20, 67.5 t in 2018–19 and 101.2 t in 2017–18 season.
In 2023, the total crustacean landings comprised champagne crabs (2.5 t), southern rock lobsters (13.8 t), giant crabs (5.2 t), western rock lobsters (5.5 t), and crystal crabs (7.8 t) (How et al. 2023d).
The stock status is sustainable – adequate (Truffley and Wiberg 2024a).</td></tr>
<tr><td>Active licences/ vessels</td><td colspan="3">The South Coast Crustacean Managed Fishery is based on mobile vessels that employ a skipper and one to three crew. In 2023, there were nine participating vessels (Truffley and Wiberg 2024a).</td></tr>
</table>

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

<table>
<tr><th rowspan="2">Fishery</th><th colspan="3">Woodside activity area</th><th rowspan="2">Description</th><th colspan="3">Fishery</th></tr>
<tr><th>Browse</th><th>NWS/ Scarborough</th><th>North West Cape</th></tr>
<tr><td rowspan="5">South Coast Purse Seine Managed Fishery</td><td rowspan="5">-</td><td rowspan="5">-</td><td rowspan="5">-</td><td>Management area</td><td colspan="3">The South Coast Purse Seine Managed Fishery is active in coastal waters between Cape Leeuwin and the SA border. Landings are primarily off Albany, Bremer Bay and Esperance (Norriss and Blazeski 2020). The managed fishery has five management zones: centred on King George Sound (Zone 1), Albany (Zone 2), Bremer Bay (Zone 3), Esperance (Zone 4) and a developmental zone near Cape Leeuwin (Zone 5) where catches have been negligible (Norriss and Moses 2024a).</td></tr>
<tr><td colspan="2">Species targeted</td><td>Fishing methods</td><td>Fishing depth</td></tr>
<tr><td colspan="2">Small pelagic finfish.
Australian sardine (pilchards, Sardinops sagax), yellowtail scad (Trachurus novaezelandiae), Australian anchovy (Engraulis australis), scaly mackerel (Sardinella lemuru) and maray (Etrumeus jacksoniensis).
Entitled to take sandy sprat (Hyperlophus vittatus) and blue sprat (Spratelloides robustus), but not reported caught since 1993–94.</td><td>Purse seine nets from vessels.</td><td>Information not available.</td></tr>
<tr><td>Fishing effort</td><td colspan="3">Previous years’ catch based on State of the Fisheries annual reports provided by DPIRD: The South Coast Purse Seine Managed Fishery landed 1,622 t in 2023, 1,636 t in 2022, 1,255 t in 2020–21, 1,498 t in 2019–20, 1,064 t in 2018–19 and 2,168 t in the 2017–18 season.
The total catch in 2023, consisted of >99% of Australian sardines (Norriss and Moses 2024a). Fishing effort in 2023 was 460 boat days (Norriss and Moses 2024a).
The stock status for the Australian sardine is considered sustainable – adequate (Norriss and Moses 2024a).</td></tr>
<tr><td>Active licences/ vessels</td><td colspan="3">Six active vessels in 2022 (Norriss and Moses 2024a).</td></tr>
</table>

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Fishery	Woodside activity area			Description	Fishery		
	Browse	*NWS/ Scarborough*	*North West Cape*				
South West Coast Salmon Managed Fishery	✓	✓	✓	***Management area***	The South West Coast Salmon Managed Fishery operates on various beaches south of the metropolitan area and includes all WA waters north of Cape Beaufort except Geographe Bay.		
				Species targeted		***Fishing methods***	***Fishing depth***
				Western Australian salmon (*Arripis truttaceus*).		Beach seine nets.	Information not available.
				Fishing effort	No fishing occurs north of the Perth metropolitan area, despite the managed fishery boundary extending to Cape Beaufort (WA/NT border), as advised by Western Australian Fishing Industry Council. The commercial catch for the entire West Coast Nearshore and Estuarine Finfish resource was 267.5 t in 2023. The total catch of WA salmon was 28.4 t in 2023, a decrease from 82.9 t in 2022. The WA salmon stock status is considered sustainable – adequate (Yeoh *et al.* 2024).		
				Active licences/ vessels	The number of active vessels or licences in 2023 is unknown, but there were about 12 commercial fishers employed in 2018 (Yeoh *et al.* 2024).		
South-west Trawl Managed Fishery	-	-	-	***Management area***	The South-west Trawl Managed Fishery is a multi-species fishery and includes two of WA's smaller scallop fishing grounds at Fremantle and north of Geographe Bay (Fairclough and Walters 2018).		
				Species targeted		***Fishing methods***	***Fishing depth***
				Scallops (*Ylistrum balloti,* formerly *Amusium balloti*) and associated byproducts. In years of low scallop catches, licensees may use trawl gear to target finfish species.		Trawl.	Information not available.
				Fishing effort	Catch levels are unavailable for recent years. The fishery was not active in 2015 or 2016 (Fairclough and Walters 2018). Effort in the fishery is highly variable and typically fluctuates in response to recruitment variability in saucer scallops and prawns. In 2023, the South-west Trawl Managed Fishery reported 62 t (Fisher *et al.* 2024). The stock status of scallops is considered sustainable – adequate (Wilkin *et al.* 2023a).		
				Active licences/ vessels	Five vessels fished in 2023 (Fisher *et al.* 2024).		

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

<table>
<tr><th rowspan="2">Fishery</th><th colspan="3">Woodside activity area</th><th rowspan="2">Description</th><th colspan="3">Fishery</th></tr>
<tr><th>Browse</th><th>NWS/ Scarborough</th><th>North West Cape</th></tr>
<tr><td rowspan="5">Specimen Shell Managed Fishery</td><td rowspan="5">✓</td><td rowspan="5">✓</td><td rowspan="5">✓</td><td>Management area</td><td colspan="3">The Specimen Shell Managed Fishery encompasses the entire WA coastline, but effort is concentrated in areas adjacent to population centres such as Broome, Exmouth, Shark Bay, Geraldton, Perth, Mandurah, the Capes area and Albany (Bruce et al. 2024). There are several closed areas where the fishery is not permitted to operate. These include various marine parks and aquatic reserves, such as Ningaloo Marine Park. The Perth metropolitan area is also important because of its populations of two rare cowrie species (Bruce et al. 2024).</td></tr>
<tr><td colspan="2">Species targeted</td><td>Fishing methods</td><td>Fishing depth</td></tr>
<tr><td colspan="2">The Specimen Shell Managed Fishery targets specimen shells for display, collection, cataloguing and sale.
About 200 species of specimen shell are collected each year. Some effort focuses on mollusc families that are most popular with shell collectors, such as cowries, cones, murexes and volutes (Bruce et al. 2024).</td><td>Collection is predominantly by hand when diving or wading in shallow coastal waters, though in deeper water collection may be conducted by remotely operated vehicles (limited to one per licence).</td><td>For collection by hand (diver-based), this typically restricts effort to safe diving depths (less than 30 m).
Remotely operated vehicle collection could enable depths up to 300 m (Bruce et al. 2024).</td></tr>
<tr><td>Fishing effort</td><td colspan="3">A total of 5,807 specimen shells were collected in 2023, distributed over 140 species (Bruce et al. 2024). A total of 5,074 specimen shells were collected in 2021, distributed over 200 species (Hart et al. 2023b). Total number of specimen shells collected in 2020 was 4,258 shells across 206 species (Hart et al. 2021).
Stocks of landed species in the Specimen Shell Managed Fishery are classified as sustainable – adequate (Bruce et al. 2024).</td></tr>
<tr><td>Active licences/ vessels</td><td colspan="3">An exemption for the trial of remotely operated underwater vehicles (limited to one per licence) was in place during 2023 (Bruce et al. 2024).
There was a total of 30 licences in the fishery, of which 18 licences were fished in 2023 (Bruce et al. 2024). Effort in 2023 was 452 days, which was 64 fishing days more than reported in 2022 (Bruce et al. 2024).</td></tr>
</table>

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Fishery	Woodside activity area			Description	Fishery		
	Browse	*NWS/ Scarborough*	*North West Cape*				
The South Coast Salmon Managed Fishery	-	-	-	***Management area***	The South Coast Salmon Managed Fishery is one of two fisheries operating in the South Coast bioregion that target nearshore and estuarine finfish.		
				Species targeted		***Fishing methods***	***Fishing depth***
				WA salmon (*Arripis truttaceus*), southern school whiting (*Sillago bassensis*), Australian herring (*Arripis georgianus*), King George whiting (*Sillaginodes punctatus*), sea mullet (*Mugil cephalus*), estuary cobbler (*Cnidoglanis macrocephalus*) and black bream (*Acanthopagrus butcheri*).		Beach seines, haul nets and gill nets.	Information not available.
				Fishing effort	Previous years' catch based on State of the Fisheries annual reports provided by DPIRD: Total catch for the South Coast Estuarine and Nearshore Scalefish and Invertebrates resource was 238.6 t in 2023, 267.6 t for 2022, 275.1 t in 2021 and 334 t in 2020. Of this, the South Coast Salmon Managed Fishery landed 6.7 t of WA salmon in 2023, 54.5 t in 2022, 48.5 t in 2021, 76 t in 2020 and 56.5 t in 2019. The stock status of target species is sustainable – adequate (Yeoh *et al.* 2024).		
				Active licences/ vessels	Catch was recorded against eight licences in 2023 (Yeoh *et al.* 2024).		
Western Australian Abalone Managed Fishery	✓	✓	✓	***Management area***	The Western Australian Abalone Managed Fishery includes all coastal waters from the WA/SA border to the WA/NT border. The fishery is concentrated on the south coast and the west coast. It is divided into eight management areas. The fishery for greenlip and brownlip abalone operates in areas 1 to 4 and the Roe's abalone fishery operates in areas 1, 2, 5, 6, 7 and 8 (Strain *et al.* 2024c).		
				Species targeted		***Fishing methods***	***Fishing depth***
				Greenlip abalone (*Haliotis laevigata*), brownlip abalone (*Haliotis conicopora*) and Roe's abalone (*Haliotis roei*).		Divers.	Distribution to 5 m depth for Roe's abalone and 40 m depth for greenlip/brownlip abalone (Strain *et al.* 2024c).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Fishery	Woodside activity area			Description	Fishery		
	Browse	*NWS/ Scarborough*	*North West Cape*				
				Fishing effort	Previous years' catch based on State of the Fisheries annual reports provided by DPIRD: The total catch for greenlip and brownlip abalone in 2023 was 41.4 t whole weight (27.3 t greenlip and 14.4 t brownlip), (Strain *et al.* 2024b), a decrease from 2022 which was 54.5 t whole weight (37.2 greenlip t and 17.3 t brownlip) (Strain *et al.* 2024b). The total catch in 2021 was the lowest catch recorded for greenlip/brownlip in 53 years (Strain *et al.* 2023). The Roe's abalone resource catch for 2023 was 25.9 t, a 10.4% decrease from the previous season (Strain *et al.* 2024c). In 2022 was 28.9 t whole weight, an increase from 25.6 t whole weight in 2021 (Strain *et al.* 2024c). The stock status of greenlip abalone is considered inadequate and brownlip abalone is adequate (Strain *et al.* 2024b). The stock status of the Roe's abalone is considered adequate (Strain *et al.* 2024c).		
				Active licences/ vessels	There were 15 registered vessels in 2023 for greenlip and brownlip abalone (Strain *et al.* 2024b) and 21 for Roe's abalone, but only a small proportion was active (Strain *et al.* 2024c).		
West Coast Beach (Beach Bait Fish Net) Managed Fishery	-	-	-	***Management area***	Primarily active in the Bunbury areas in the SWMR, operates between 26° and 33°S.		
				Species targeted		***Fishing methods***	***Fishing depth***
				Whitebait.		Beach-based haul nets.	Information not available.
				Fishing effort	Previous years' catch based on State of the Fisheries annual reports provided by DPIRD: The total catch of whitebait in 2023 was 18 t, a decrease from 23.3 t in 2022 (Yeoh *et al.* 2024). The fishery continues to be environmentally limited, with stocks still recovering from the 2010–11 marine heat wave (Yeoh *et al.* 2024). The stock status is inadequate – environmentally limited (Yeoh *et al.* 2024).		
				Active licences/ vessel:	The number of active vessels in 2023 is unknown, but five licensees reported landings of whitebait in 2011 (Yeoh *et al.* 2024).		

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

<table>
<tr><th rowspan="2">Fishery</th><th colspan="3">Woodside activity area</th><th rowspan="2">Description</th><th colspan="3">Fishery</th></tr>
<tr><th>Browse</th><th>NWS/ Scarborough</th><th>North West Cape</th></tr>
<tr><td rowspan="5">West Coast Deep Sea Crustacean Managed Fishery</td><td rowspan="5">✓</td><td rowspan="5">✓</td><td rowspan="5">✓</td><td>Management area</td><td colspan="3">The West Coast Deep Sea Crustacean Managed Fishery extends north from Cape Leeuwin to the WA/NT border in water depths greater than 150 m within the AFZ.</td></tr>
<tr><td colspan="2">Species targeted</td><td>Fishing methods</td><td>Fishing depth</td></tr>
<tr><td colspan="2">The fishery targets deepwater crustaceans:
crystal (snow) crab (Chaceon albus)
giant (king) crab (Pseudocarcinus gigas)
champagne (spiny) crabs (Hypothalassia acerba).
Catches are dominated by crystal crabs, of which 99% of their total allowable catch was landed in 2020 (Tuffley and Wiberg 2024b).</td><td>Baited pots, or traps, are operated in long lines that have between 80 and 180 pots attached to a main line marked by a float at each end.</td><td>Deeper than 150 m (and mostly at depths of between 500 and 800 m). Most of the commercial crystal crab catch is taken in depths of 500 to 800 m (Western Australian Fishing Industry Council). [22]</td></tr>
<tr><td>Fishing effort</td><td colspan="3">Previous years' catch based on State of the Fisheries annual reports provided by DPIRD: The total landings were 124.8 t in 2023, 133.5 t in 2022, 155.5 t in 2021, 156.1 t in 2020, 155.7 t in 2019 and 168 t in 2018.
The total landings of crustaceans in 2023 were dominated by crystal crabs (123.1 t). A further 1.7 t of champagne crabs and 136.5 kg of giant crab were also landed in 2023 (Tuffley and Wiberg 2024b).
The stock status for crystal crab is considered adequate. However, it is likely the stock biomass is near or below its threshold level, but above its limit level (Tuffley and Wiberg 2024b).</td></tr>
<tr><td>Active licences/ vessel</td><td colspan="3">There were seven licence holders with three vessels active in 2023 (Tuffley and Wiberg 2024b).</td></tr>
</table>

[22] https://www.wafic.org.au/fishery/west-coast-deep-sea-crustacean-fishery/

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

<table>
<tr><th rowspan="2">Fishery</th><th colspan="3">Woodside activity area</th><th rowspan="2">Description</th><th colspan="3">Fishery</th></tr>
<tr><th>Browse</th><th>NWS/ Scarborough</th><th>North West Cape</th></tr>
<tr><td rowspan="5">West Coast Demersal Gillnet and Demersal Longline (Interim) Managed Fishery</td><td rowspan="5">-</td><td rowspan="5">-</td><td rowspan="5">-</td><td>Management area</td><td colspan="3">The West Coast Demersal Gillnet and Demersal Longline (Interim) Managed Fishery is part of the Temperate Demersal Gillnet and Demersal Longline Fishery, which operates between 26° and 33°S, and the Joint Authority Southern Demersal Gillnet and Demersal Longline Managed Fishery, which operates from 33°S to the WA/SA border (Braccini and Blay 2020).</td></tr>
<tr><td colspan="2">Species targeted</td><td>Fishing methods</td><td>Fishing depth</td></tr>
<tr><td colspan="2">Gummy shark (Mustelus antarcticus), dusky shark (Carcharhinus obscurus), whiskery shark (Furgaleus macki) and sandbar shark (C. plumbeus). Scalefish are a byproduct.</td><td>Gillnet and longline.</td><td>Information not available.</td></tr>
<tr><td>Fishing effort</td><td colspan="3">Catches of elasmobranchs and fishing effort for the West Coast Demersal Gillnet and Demersal Longline (Interim) Managed Fishery peaked during the late 1980s and early 1990s and have stabilised at lower levels in recent years (Braccini and Watt 2021).
Previous years’ values from State of the Fisheries annual reports provided by DPIRD: Estimated annual value to the fishery was $0.19 million for 2022–23, $0.23 million for 2021–22, $0.17 million for 2020–21, $0.11 million for 2019–20, $0.2 million for 2018–19 and $0.3 million for 2017–18.
Stock status for the gummy and whiskery shark is considered sustainable – adequate, with the dusky and sandbar shark status sustainable – recovering (Braccini and Rynvis 2024).</td></tr>
<tr><td>Active licences/ vessel:</td><td colspan="3">Vessel and licence data are not available. There were about five to six skippers and crew employed during 2022–23 (Braccini and Rynvis 2024).</td></tr>
</table>

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

<table>
<tr><th rowspan="2">Fishery</th><th colspan="3">Woodside activity area</th><th rowspan="2">Description</th><th colspan="3">Fishery</th></tr>
<tr><th>Browse</th><th>NWS/ Scarborough</th><th>North West Cape</th></tr>
<tr><td rowspan="6">West Coast Demersal Scalefish Interim Managed Fishery</td><td rowspan="6">-</td><td rowspan="6">-</td><td rowspan="6">-</td><td>Management area</td><td colspan="3">The West Coast Demersal Scalefish Interim Managed Fishery is the main commercial fishery that targets demersal species in the West Coast bioregion. It encompasses the waters from just south of Shark Bay down to just east of Augusta and extends seaward to the 200 nm boundary. The fishery is divided into four inshore management areas and one offshore management area.</td></tr>
<tr><td colspan="2">Species targeted</td><td>Fishing methods</td><td>Fishing depth</td></tr>
<tr><td colspan="2">The resource comprises over 100 species, including:
baldchin groper (Choerodon rubescens)
dhufish (Glaucosoma hebraicum)
pink snapper (Pagrus auratus).</td><td>Lines.</td><td>Information not available.</td></tr>
<tr><td>Fishing effort</td><td colspan="3">Previous years’ catch based on State of the Fisheries annual reports provided by DPIRD: The West Coast Demersal Scalefish Interim Managed Fishery retained 233 t in 2023, 240 t in 2022, 259 t in 2021, 227 t in 2020, 254 t in 2019 and 230 t in 2018.
Management began to recover stocks for the West Coast Demersal Scalefish resource in 2008. Landings since 2008 have been below the stock recovery benchmark of 450 t (Fisher et al. 2024).</td></tr>
<tr><td>Active licences/ vessels</td><td colspan="3">Twenty-eight licenced vessels operated in 2023 (Fisher et al. 2024).</td></tr>
</table>

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Fishery	Woodside activity area			Description	Fishery		
	Browse	*NWS/ Scarborough*	*North West Cape*				
West Coast Purse Seine Managed Fishery	-	-	-	***Management area***	Most of the catch in the West Coast Purse Seine Managed fishery is taken from between Cape Leeuwin and Geraldton. This region is separated into three zones: Northern Development, Perth Metropolitan, and Southern Development zones (Norriss and Moses 2024b).		
				Species targeted		***Fishing methods***	***Fishing depth***
				Small pelagic finfish such as: • scaly mackerel (*Sardinella lemuru*) • pilchards (*Sardinops sagax*) • Australian anchovy (*Engraulis australis*) • yellowtail scad (*Trachurus novaezelandiae*) • maray (*Etrumeus teres*).	Purse seine.	Information not available.
				Fishing effort	Previous years' catch based on State of the Fisheries annual reports provided by DPIRD: The total combined catch taken by the West Coast Purse Seine Managed Fishery and developmental licences was 214 t in 2023, 259 t in 2022, 504 t in 2021, 493 t in 2020, 527 t in 2019 and 340 t in 2018. In 2023, the total catch consisted of 66% scaley mackerel and 31% Australian sardine (Norriss and Moses 2024b). Both the scaley mackerel and Australian sardine have a stock status classified as sustainable – adequate (Norriss and Moses 2024b).		
				Active licences/ vessels	Three active vessels in 2022 (Norriss and Blazeski 2023d).		
West Coast Rock Lobster Managed Fishery			✓	***Management area***	The West Coast Rock Lobster Managed Fishery operates from Shark Bay south to Cape Leeuwin. The fishery is managed using zones, seasons and total allowable catch. The recreational fishery targets the western rock lobsters using baited pots and by diving between North West Cape and Augusta.		
				Species targeted		***Fishing methods***	***Fishing depth***
				Western rock lobster (*Panulirus cygnus).*		Baited pots.	Information not available.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Fishery	Woodside activity area			Description	Fishery		
	Browse	*NWS/ Scarborough*	*North West Cape*				
				Fishing effort	Previous years' catch based on State of the Fisheries annual reports provided by DPIRD: The total catch for the West Coast Rock Lobster Managed Fishery was 4,361 t in 2023 (de Lestang and Walsh 2024). Due to COVID-19 related logistics and marketing issues, the 2020–21 season was extended from 12 to 18 months. Since the current extended season is still in progress, data has been reported on a 12-month period (15 Jan 2021 to 14 Jan 2022) (How and Wiberg 2023a). Landings for the 12-month (2021–22) season was 6,334 t and the 18-month 2020–21 season was 9,132 t. Commercial landings over the traditional 12-month season (15 Jan 2020 to 14 Jan 2021) were 5,696 t. The fishery landed 6,397 t in 2019 and 6,400 t in 2018 and 2017. The stock status for the western rock lobster is classified as sustainable – adequate (de Lestang and Walsh 2024).		
				Active licences/ vessel:	Two hundred and eighteen vessels were active in the 2023 season (de Lestang and Walsh 2024).		
Western Australia Joint Authority Northern Shark Fishery	✓			***Management area***	The Western Australia Joint Authority Northern Shark Fishery extends from longitude 12'° 45'E to the NT border.		
				Species targeted		***Fishing methods***	***Fishing depth***
				Blacktip shark (*Carcharhinus tilstoni*) and spot-tail shark (*Carcharhinus sorrah*).		Gillnets and longlines.	Information not available.
				Fishing effort	Since 2005, 60% of the waters have been closed to finishing and limited on the number of fishing days. No catch has been reported since 2008–09 (Braccini and Watt 2023; Newman *et al.* 2024a).		
				Active licences/ vessels	Information not available.		

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

<table>
<tr><th rowspan="2">Fishery</th><th colspan="3">Woodside activity area</th><th rowspan="2">Description</th><th colspan="3">Fishery</th></tr>
<tr><th>Browse</th><th>NWS/ Scarborough</th><th>North West Cape</th></tr>
<tr><td rowspan="5">Western Australian Sea Cucumber Fishery (formerly Beche-de-mer Fishery)</td><td rowspan="5">✓</td><td rowspan="5">✓</td><td rowspan="5">✓</td><td>Management area</td><td colspan="3">Fishing occurs mostly in the northern half of WA from Exmouth Gulf to the NT border and is managed under Ministerial Exemptions. Shark Bay was fished for the first time in 2020 (Hart et al. 2023a) and again in 2021 (Newman et al. 2022). In 2023, Shark Bay was fished for the fourth consecutive year (Strain et al. 2024a).</td></tr>
<tr><td colspan="2">Species targeted</td><td>Fishing methods</td><td>Fishing depth</td></tr>
<tr><td colspan="2">Two main species: sandfish (Holothuria scabra) and redfish (Actinopyga echinites).</td><td>Diving and wading. Collected by hand.</td><td>The targeted species typically inhabit nearshore in shallow depths.</td></tr>
<tr><td>Fishing effort</td><td colspan="3">Previous years’ catch based on State of the Fisheries annual reports provided by DPIRD: The Western Australian Sea Cucumber Fishery caught 126.1 t in 2023, 56.5 t in 2022, 41.3 t in 2021 3.6 t in 2020, 6.9 t in 2019, 62 t in 2018 (Gaughan and Santoro, 2020), 135 t in 2017, 93 t in 2016 and 38 t in 2015 (Strain et al. 2024a).
Sandfish were collected from the Kimberley only, which was last fished in 2017 (Hart et al. 2023a).
Deepwater redfish and black teatfish were harvested from Shark Bay (under an exception licence granted to native title holders), which was the second time this stock had been fished (Hart et al. 2023a).
The stock status of sandfish, in the Kimberly, and red fish species landed are considered sustainable – adequate, while the sandfish in the Pilbara are not sustainable – inadequate, thus a closure of the Pilbara Sandfish fishery was implemented for 2023 to 2026 (Strain et al. 2024a).</td></tr>
<tr><td>Active licences/ vessels</td><td colspan="3">Three vessels operating in 2023 (Strain et al. 2024a).</td></tr>
</table>

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

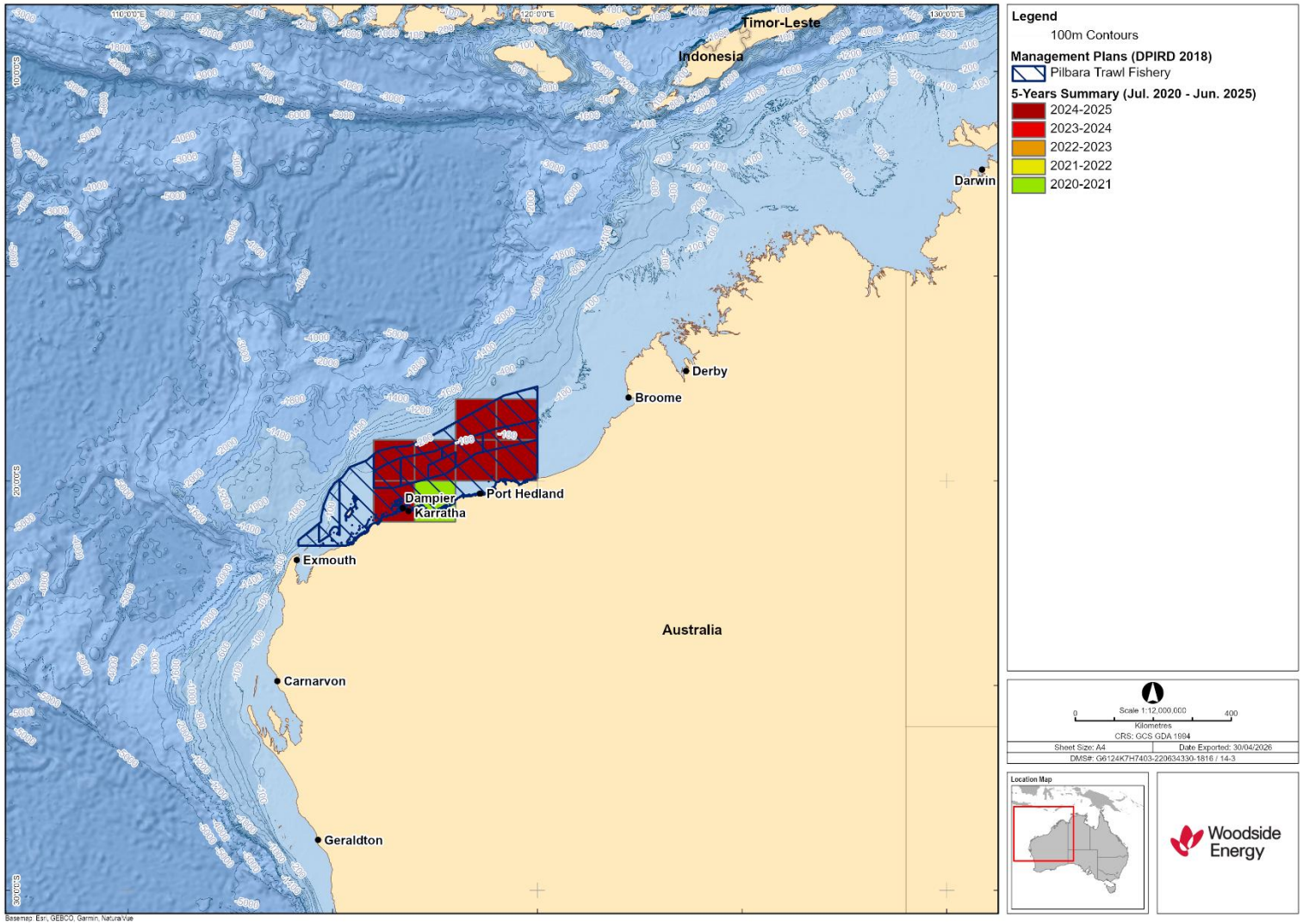


Figure 13-7: Pilbara Fish Trawl (Interim) Managed Fishery five-year average

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

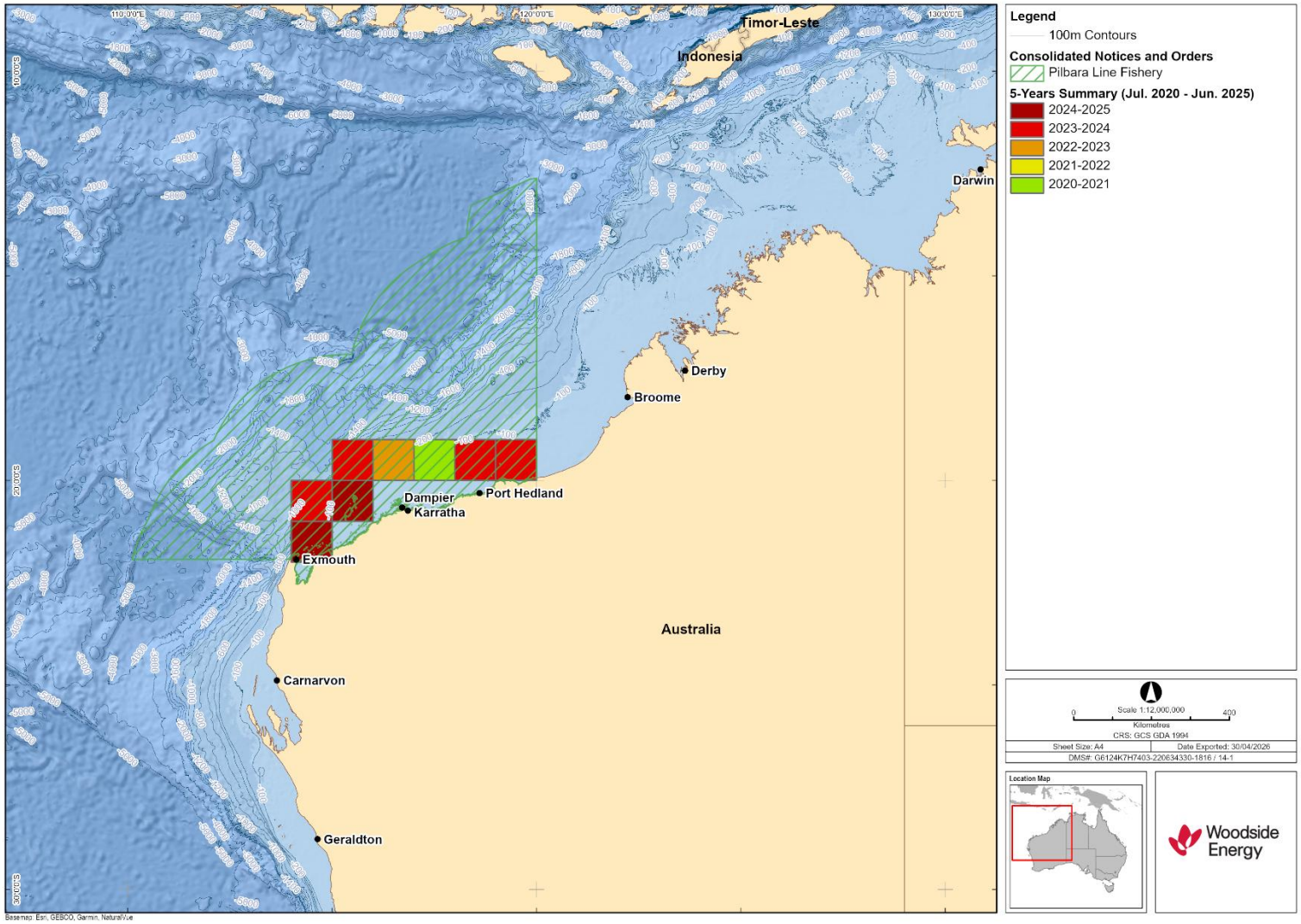


Figure 13-8: Pilbara Line Managed Fishery five-year average

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

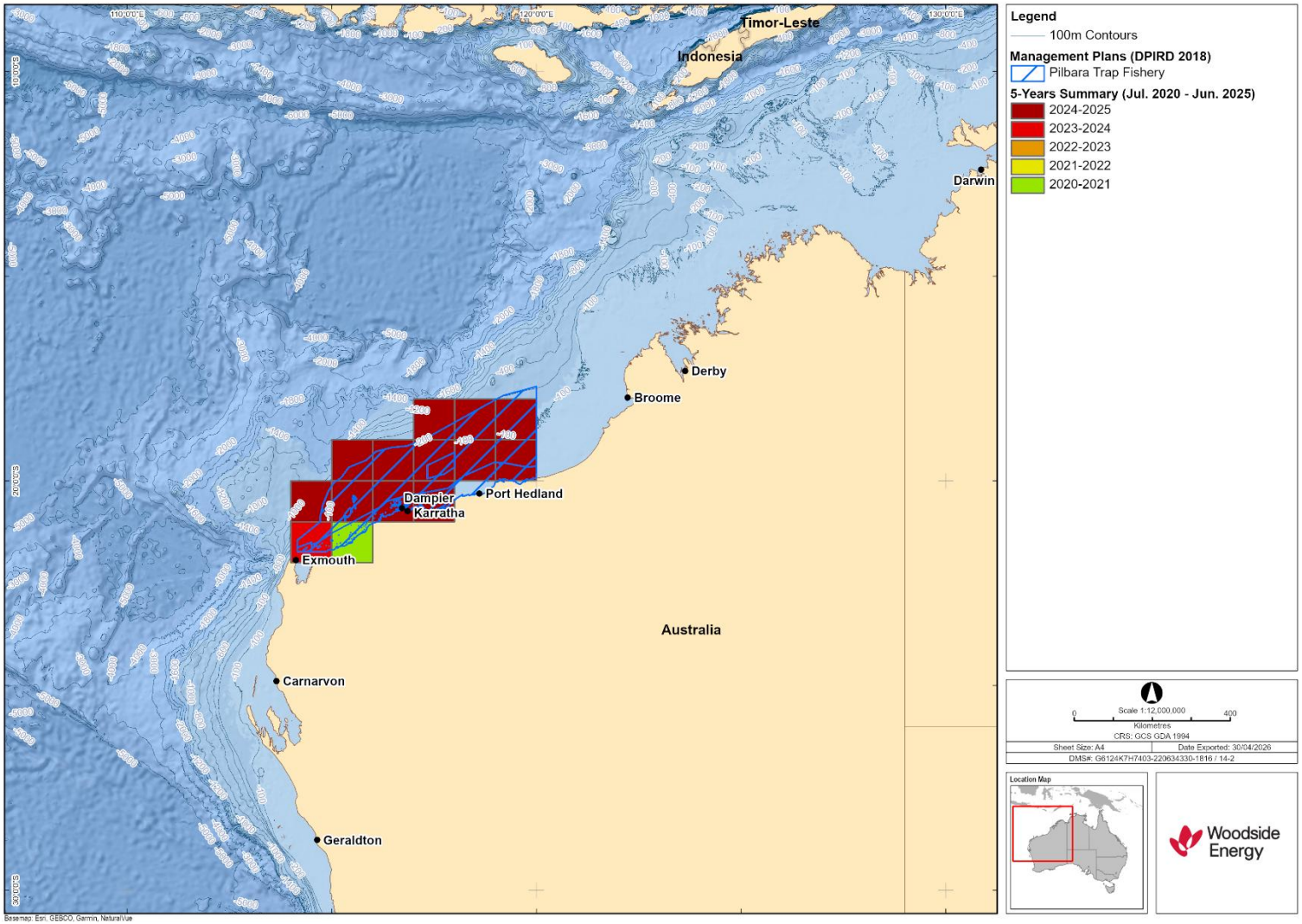


Figure 13-9: Pilbara Trap Managed Fishery five-year average

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

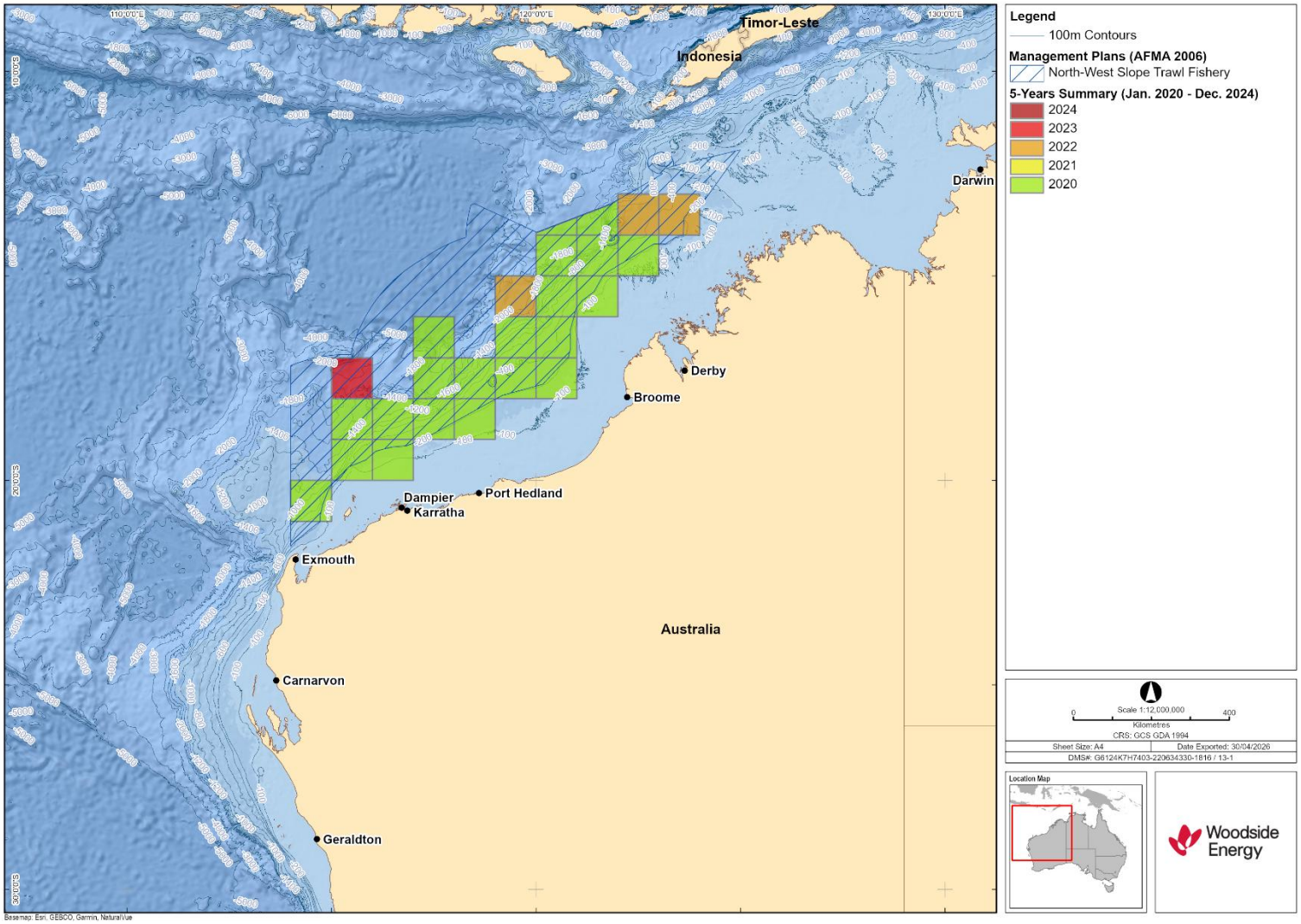


Figure 13-10: North West Slope Trawl Fishery five-year average

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

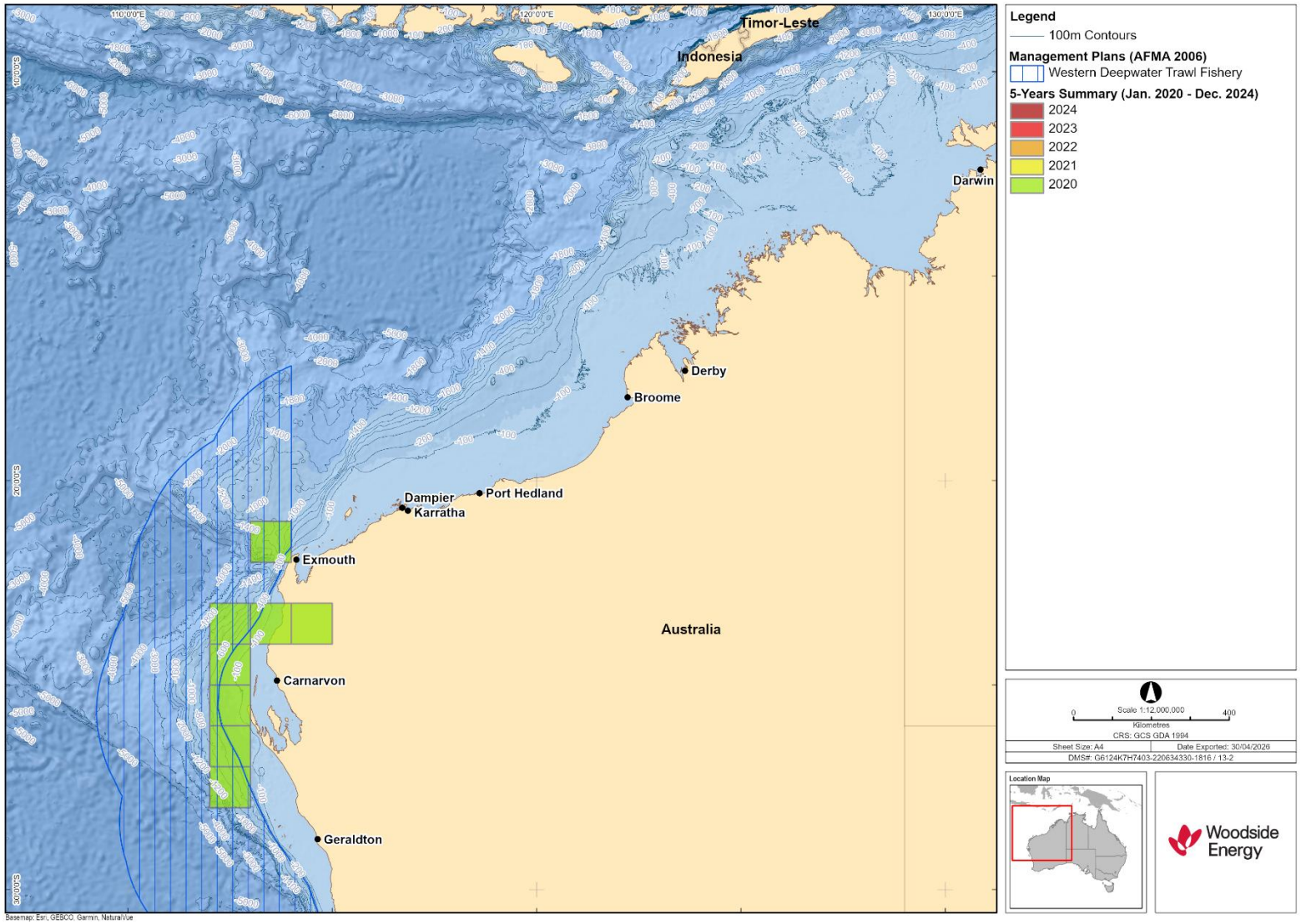


Figure 13-11: Western Deepwater Trawl Fishery five-year average

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

13.2.2 Fish habitat protection areas

Fish habitat protection areas (FHPAs) are areas of special protection and management in WA waters. There are six FHPAs established in areas identified as having a particular value for protecting fish and their habitats, as well as providing areas for education or aquaculture, and which are considered to require a higher level of protection than other parts of the marine environment (DPIRD 2026a). They are set under section 115 of the *Fish Resources Management Act* (WA) for:

- the conservation and protection of fish, fish breeding areas, fish fossils or the aquatic ecosystem
- the culture and propagation of fish and experimental purposes related to that culture and propagation, or
- the management of fish and activities relating to the appreciation or observation of fish.

Under the Act, fish can include a range of organisms, including finfish, crustaceans, molluscs, corals, seagrass and algae at all stages of their life cycles. FHPAs and a marine reserve declared under the *Conservation and Land Management Act* (WA) cannot exist in the same area (DPIRD 2026a).

Management of an FHPA is designed and carried out to achieve the purposes outlined in a Plan of Management. FHPAs may restrict non-fishing-related activities, such as the use of anchors, if they are considered inconsistent with the purpose of the FHPA; for example, if there is a risk of damage to fragile marine formations such as coral reefs. Protection may also involve managing human activities, such as dredging, draining wetlands, and fishing or diving near sensitive marine habitats (DPIRD 2026a).

FHPAs within the NWMR include:

- Miaboolya Beach
- Point Quobba.

FHPAs within the SWMR include:

- Cottesloe Reef
- Houtman Abrolhos Islands
- Kalbarri Blue Holes
- Lancelin Island Lagoon.

There are no FHPAs within the NMR.

13.2.2.1 Fish habitat protection areas within the NWMR

FHPAs within the NWMR are described here.

Miaboolya Beach

Miaboolya Beach is an area of the Gascoyne River delta near Carnarvon. The FHPA covers the nearshore waters and extends north to South Bejaling and south to the northern side of the Gascoyne River mouth. It also includes the adjoining mangrove system, associated seasonal creeks and salt marshes (DPIRD 2025c).

The Miaboolya system has regional importance as a fish nursery and general fish habitat. Native fauna include juvenile finfish species such as tailor (*Pomatomus saltatrix*), mulloway (*Argyrosomus spp.*) and sand whiting (*Sillago ciliata*), and various crab species including mud crabs, blue swimmer and green mud crabs (family Portunidae). The fish and crab stocks use this environment for breeding, growth and development. Resident and migratory populations of birds, marine turtles and dolphins also exist within the area and contribute to its environmental value (DPIRD 2025c).

The Miaboolya area is of important cultural and historical value to the Gnulli native title group. The area is a place for collecting traditional food and gathering for social occasions (DPIRD 2025c).

Recreational fishing is permitted but there are restrictions in place by DPIRD (Alymore and Anderson 2003).

Point Quobba

The Point Quobba FHPA adjoins the well-known ‘Blowholes’ tourist attraction at Quobba Station, 75 km north-west of Carnarvon WA, at the northernmost point of Shark Bay (DPIRD 2004).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

The marine life and habitats of the area are of considerable scientific and recreational interest and are highly valued in the local community. However, the area is at risk from a high level of use and conflict between users, due to the area's proximity to popular tourism sites, the boat ramp, camping and settlement areas (DPIRD 2004).

The marine habitat at Point Quobba is in a transition zone between tropical and temperate climatic zones and is therefore highly diverse. It contains a mix of endemic temperate south-west Australian species and tropical and temperate Indo-Pacific species. The FHPA provides relatively sheltered breeding and feeding habitat for more than 100 species of fish (DPIRD 2025d)

Point Quobba lies within the traditional area of the Baiyungu people, who are members of the Gnulli Group. The Baiyungu people use the area regularly, sometimes to collect trochus for consumption at Point Quobba and Black Rock (DPIRD 2004).

There is a designated 'restricted area' within the FHPA to protect vulnerable habitats and fish species from human activity. Within this area commercial and recreational fishing and jet-skiing are prohibited. Restrictions on fishing in the rest of the FHPA are defined by the Department of Fisheries (DPIRD 2025d).

13.2.3 Aquaculture

Aquaculture operations in the north-west are typically restricted to inland and shallow coastal waters. The aquaculture bioregions within the NWMR include the Gascoyne Coast bioregion, the North Coast bioregion and the West Coast bioregion. These fishing bioregion boundaries are defined by DPIRD as the government body responsible for managing primary industries in WA.

Aquaculture operations within the NWMR are described below.

13.2.3.1 Gascoyne Coast bioregion

The Gascoyne Coast recreational fishing bioregion runs from the Zuytdorp Cliffs north of Kalbarri to the Ashburton River south of Onslow (DPIRD 2026c).

In the Gascoyne Coast bioregion, aquaculture activities are focused on the blacklip oyster (*Pinctada margaritifera*). Other aquaculture developments in the Gascoyne Coast bioregion include emerging producers of coral and live rock species for aquariums. There is some recent interest in the development of rock oysters in the Exmouth Gulf (Newman *et al.* 2024a).

13.2.3.2 North Coast bioregion

The North Coast recreational fishing bioregion includes the Pilbara and Kimberley regions and runs from Ashburton River south of Onslow to the WA/NT border (DPIRD 2026c).

Aquaculture activities in the North Coast bioregion are dominated by the production of pearls (from the *Pinctada maxima* oyster). Many pearl oysters for seeding are obtained from wild stocks and supplemented by hatchery-produced oysters, with major hatcheries operating at Broome and around the Dampier Peninsula (Newman *et al.* 2024a). Primary spawning of the pearl oyster occurs from mid-October to December. A smaller secondary spawning occurs in February and March (Newman *et al.* 2024a).

Finfish aquaculture in the Kimberley region is dominated by barramundi farming in the Kimberley Aquaculture Development Zone, which lies around 200 km north-east of Broome. Rock oyster trials are nearing completion near Karratha in the Pilbara region, but there is no commercial production of the species in this region at this stage (Newman *et al.* 2024a).

There is one Indigenous project at One Arm Point that operates a marine hatchery that focuses on a variety of ornamental and edible marine species (Newman *et al.* 2024a).

13.2.3.3 West Coast Bioregion

The West Coast recreational fishing bioregion runs from Black Point east of Augusta to the Zuytdorp Cliffs north of Kalbarri. This area includes the Houtman Abrolhos Islands (DPIRD 2026c).

Aquaculture activities in the West Coast bioregion, defined by DPIRD are focused on finfish, edible oysters (mainly in Cockburn Sound) and marine algae for production of beta-carotene, used as a food additive and as a nutritional supplement.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

There is also an emerging black pearl industry (from the *Pinctada margaritifera* oyster) in the Abrolhos Islands, as well as expansion in the production of Akoya pearls (small white pearls from *Pinctada fucata martensi*), *Pinctada albina* (small, yellow pearls) and *Pteria penguin*, which are often used to produce half (Mabe) pearls in pink and bluish shades.

Aquaculture licences for producing coral and live rock (pieces of old coral reefs colonised by marine life, such as beneficial bacteria, for aquariums) at the Abrolhos Islands have also been issued and other applications are being assessed (Newman *et al.* 2024a).

13.3 Fisheries – traditional

Traditional or customary fisheries are typically restricted to shallow coastal waters and areas with structures such as reef. The Western Australia Recreational Fishing Guide (DPIRD 2025b) states that Indigenous people do not need a recreational fishing licence in any waters if it is in accordance with continuing tradition and for individual or familial consumption, not for a commercial purpose.

Dugongs, fish and marine turtles that move between coastal and Commonwealth waters are important components of the Indigenous people's culture and diet. Indigenous people continue to actively manage their Sea Country in coastal waters of WA to protect and manage the marine environment, its resources and cultural values.

Indonesian fishers can fish within designated areas under the Australia–Indonesia regarding the Operations of Indonesian Traditional Fishermen in Areas of the Australian Fishing Zone and Continental Shelf – 1974 (MoU Box). Traditional fishing is allowed within the MoU Box (Figure 13-12), which encompasses Ashmore Reef (Pulau Pasir), Cartier Island (Pulau Baru), Seringapatam Reef (Afringan), Scott Reef (Pulau Dato) and Browse Island (Berselan). Restrictions have since been introduced around Ashmore Reef and Cartier Island after their designation as nature reserves under the Commonwealth *National Parks and Wildlife Conservation Act* in 1983 and 2000, respectively.

The MoU allows Indonesian fishers to fish in designated areas using traditional methods only. These methods include reef gleaning, free-diving, hand lining and other non-mechanised methods. Scott Reef is currently the principal reef in the MoU Box and Indonesian fishers use it seasonally to harvest trepang, trochus shells and other reef species. The peak season is July to October due to more favourable wind conditions, and to allow fishers to sun dry their catch on their boat decks (Environmental Resources Management 2009). Browse Island is also frequently visited by shark fishers who mostly fish along the eastern margin of the MoU Box.

The Agreement between the Government of Australia and the Government of the Republic of Indonesia Relating to Cooperation in Fisheries (1992 Fisheries Cooperation Agreement) provides the framework for fisheries and marine cooperation between Australia and Indonesia. Cooperation under the Agreement today takes place under the auspices of the Working Group on Marine Affairs and Fisheries. Research reports on reef-top species in the MoU Box indicate that stocks in the area are severely depleted. In 2009 the Working Group on Marine Affairs and Fisheries agreed to a Roadmap for MoU Box Cooperative Management (DAWE 2020).

Figure 13-12 shows the operations of Indonesian traditional fishers in the MoU Box in the NWMR.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

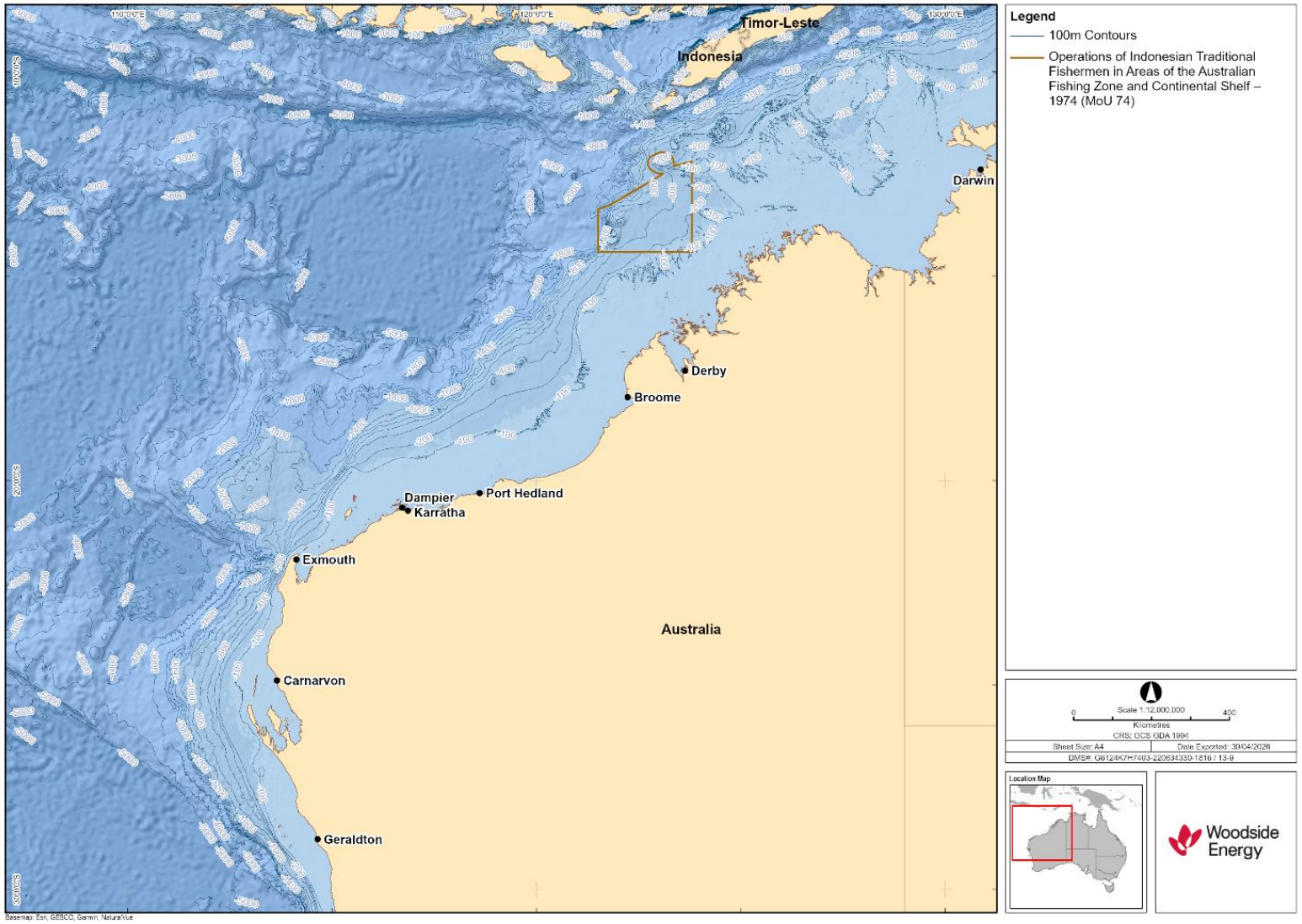


Figure 13-12: Memorandum of Understanding 74 Box – operations of Indonesian traditional fishermen in areas of the Australian Fishing Zone and Continental Shelf, 1974

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

13.4 Tourism and recreation

WA's tourism sector is important to industry and the economy. In 2023–24, tourism accounted for 7.2% of WA's total jobs and generated a gross total value added of $138 billion (Tourism Western Australia 2025).

The Kimberley, Pilbara and Ningaloo-Leeuwin regions are popular destinations for Australian and international tourists. Tourism is concentrated in the vicinity of population centres. Including Broome, Dampier, Exmouth, Coral Bay and Shark Bay. Recreational and tourism activities include charter fishing, recreational fishing, diving, snorkelling, marine fauna watching and yachting (Tourism Western Australia 2024).

In 2025, visitation in the regions generated a spend of $758 million in Australia's Coral Coast and $1.4 million in the North West (Tourism Western Australia 2026).

13.4.1 Kimberley region

Tourism is one of the main industries in the Kimberley region, alongside resources, energy construction, aquaculture, agriculture and the services sector. The Kimberley Development Commission is focusing on maximising these sectors and the growing visitor economy by enhancing Aboriginal cultural experiences, adventure tourism, and eco and food tourism in the Kimberley region (Kimberley Development Commission 2025).

The Dampier Peninsula Activation Project progressed in the 2024–25 period, with upgrades to day-use facilities, communication systems and cultural heritage protection and signage, and upgrades to accommodation and resorts in the area to meet the needs of the community and tourism (Kimberley Development Commission 2025).

Recreation and tourism activities in the Kimberley region occur predominantly in WA State waters (extending offshore 3 nm from the mainland), adjacent to coastal population centres such as Broome, with a peak in activity during the winter months (dry season). These activities include recreational fishing, diving, snorkelling, wildlife watching and boating (Newman *et al.* 2023b).

Primary dive locations in the Kimberley region include the Rowley Shoals, including Mermaid Reef AMP, Scott Reef, Seringapatam Reef, Ashmore Reef AMP and Cartier Island (Newman *et al.* 2023b).

13.4.2 Pilbara region

Recreation and tourism activities within the Pilbara are of high social value. Tourism is a key economic driver for the Pilbara, with more than one million visitors to the region every year. There were over 590,000 Karijini National Park visitors recorded in the 2024–25 season (Pilbara Development Commission (PDC) 2025). Multi-year tourism infrastructure development funding has been provided for the Niminjarra Highway to provide easier access to the Karlamilyi National Park and enhance cultural tourism opportunities, and to the Whim Creek Hotel to re-establish a tourism destination between Karratha and Hedland (PDC 2024).In 2024, Mackerel Islands Pty received a grant in funding from the State Government to progress with the development of a tourism resort featuring eco-cabins, a restaurant and eco-tents on Thevenard Island. The initiative will also offer the 'Outback Ranges to Reef' tourism packages, combing visitation eco-tourism and exclusive accommodation on Thevenard and Direction islands, Onslow Beach Resort and Karijini Eco Retreat (PDC 2025).

Pilbara Dive Tours based in Karratha has grown significantly over the past 16 years, offering unique dive trips, snorkelling tours and certifications for divers in the Pilbara and Dampier Archpelago. The company also began collaborating with Flinders University in 2023 to train MAC Rangers to become dive certified, which will allow them to assist with submerged archaeological surveys on Murujuga Country (PDC 2025).

Recreational fishing within the Pilbara region tends to be concentrated in State waters adjacent to population centres. Recreational fishing is known to occur around the Dampier Archipelago, with boats launched from boat ramps around Dampier and Karratha. Once at sea, charter vessels may also frequent the waters surrounding the Montebello Islands (Williamson *et al.* 2006).

13.4.3 Ningaloo-Leeuwin region

Tourism is a major economic driver across the connected Gascoyne, Ningaloo and Shark Bay regions. Tourism has the fourth largest economic output of all the major industries of the Gascoyne region (Gascoyne Development Commission (GDC) 2023). It contributes significantly to the local economy in terms of both

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

income and employment. In the 2024–25 period, the Gascoyne region had more than 267,000 overnight visitors. The total visitor spend, including daytrips in the region, equated to $385 million, with tourism accounting for 21% of employment in the region (GDC 2025).

The main attraction of the coastline for tourists is the quality of marine life. The region supports extensive scuba diving, snorkelling and fishing; specialised eco-tourism activities include whale shark and manta ray observation at Ningaloo, and dolphin and dugong viewing in Shark Bay (Newman *et al.* 2023b). In 2018–19, the Ningaloo region – Ningaloo Reef and the surrounding coastal region of Exmouth Gulf, communities of Exmouth and Coral Bay, and adjacent proposed southern coastal reserves and pastoral leases – contributed an estimated $110 million in value to the WA economy (DBCA 2020). Ningaloo's economic contribution to WA is attributed to four key types of economic activity: tourism expenditure by international, interstate and WA visitors to the Ningaloo region, commercial fishing in the Exmouth Gulf, recreation activity involving the reef by residents of the Ningaloo region, and management and research relating to the reef (DBCA 2020). More than 90% of this value added is attributed to the domestic and international tourists who visit Ningaloo each year (DBCA 2020). Dark-sky tourism flourished in 2023 with an influx of visitors coming together in Exmouth to witness a rare hybrid solar eclipse (GDC 2023). The natural phenomena brought thousands of visitors both interstate and international to the region in April 2023.

The first Cultural Tour experience was launched in 2022 on the Ningaloo Coast. Departing from Coral Bay, the Cultural Tour provides visitors the opportunity to experience a unique perspective on the coastline's rich cultural heritage and unique environment. The main marine nature-based tourist activities are concentrated around and within the Ningaloo World Heritage Area (GDC 2022). The Aboriginal AstroTourism Project was launched where Indigenous people were consulted on night-sky constellations and trained in dark-sky tourism. Through this program, star gazing experiences were successfully delivered to about 665 visitors over ten nights during the Ningaloo Eclipse (GDC 2023).

Demersal-focused recreational fishing contributes to the Gascoyne region's marine-based tourism, with about 8,500 recreational licenced fishers recorded to participate in the Gascoyne Coast demersal fishery per year (Ryan *et al.* 2025). These fishers are typically regional residents and a broad mix of age groups. Participation levels in Gascoyne fisheries have shown sensitivity to external factors, such as COVID-19 travel restrictions, which caused a marked temporary decline in 2020 before rebounding again in 2021 (Ryan *et al.* 2025).

13.5 Shipping

Commercial shipping traffic is high within the NWMR, with vessel activities including commercial fisheries, tourism such as cruises, international shipping, and oil and gas operations. There are 12 ports adjacent to the NWMR, including the major ports of Dampier, Port Hedland and Broome, which are operated by their port authorities. These ports handle large tonnages of iron ore and petroleum exports in addition to salt, manganese, feldspar, chromite and copper (DEWHA 2008a).

Heavy vessel traffic exists within the Pilbara Ports Authority management area, which recorded 3,638 vessel visits in the Port of Dampier, 3,363 vessel movements in the Port of Port Hedland, 1,214 vessel movements in the Port of Ashburton, and 265 at the Port of Varanus Island in the 2024–25 reporting period (Pilbara Ports Authority 2025). Twenty-six designated anchorages for bulk carriers, petroleum and gas tankers, drilling rigs, offshore platforms and pipelay vessels are located offshore of Rosemary Island.

In 2012, Australian Maritime Safety Authority established a network of shipping fairways off the north-west coast of Australia. The shipping fairways, while not mandatory, aim to reduce the risk of collision between transiting vessels and offshore infrastructure. The fairways are intended to direct large vessels, such as bulk carriers and liquified natural gas (LNG) ships, trading to the major ports into pre-defined routes to keep them clear of existing and planned offshore infrastructure (Australian Maritime Safety Authority 2013).

13.6 Petroleum basins

The NWMR supports multiple industries, including petroleum exploration and production.

Within the NWMR there are seven sedimentary petroleum basins: Northern and Southern Carnarvon basins, Perth, Browse, Roebuck, Offshore Canning and Bonaparte basins (Geoscience Australia 2026). Of these, the Northern Carnarvon, Browse and Bonaparte basins hold large quantities and comprise most of Australia's reserves of natural gas (DEWHA 2008a), which is reflected by the level of development in the area. In addition to existing facilities, there are proposed developments in the region. This includes proposals to develop gas and condensate from fields within the NWMR.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

In addition to the oil and gas industry, other land-based industries depend upon the marine environment in the nearshore area. These include ports, salt mines such as Karratha and Onslow, LNG onshore processing facilities such as Burrup Hub, Thevenard Island, Barrow Island, Varanus Island, and small-scale desalination plants at Barrow Island, Burrup, Cape Preston and Onslow.

Figure 13-13 shows the basins of WA and Woodside's hydrocarbon fields.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

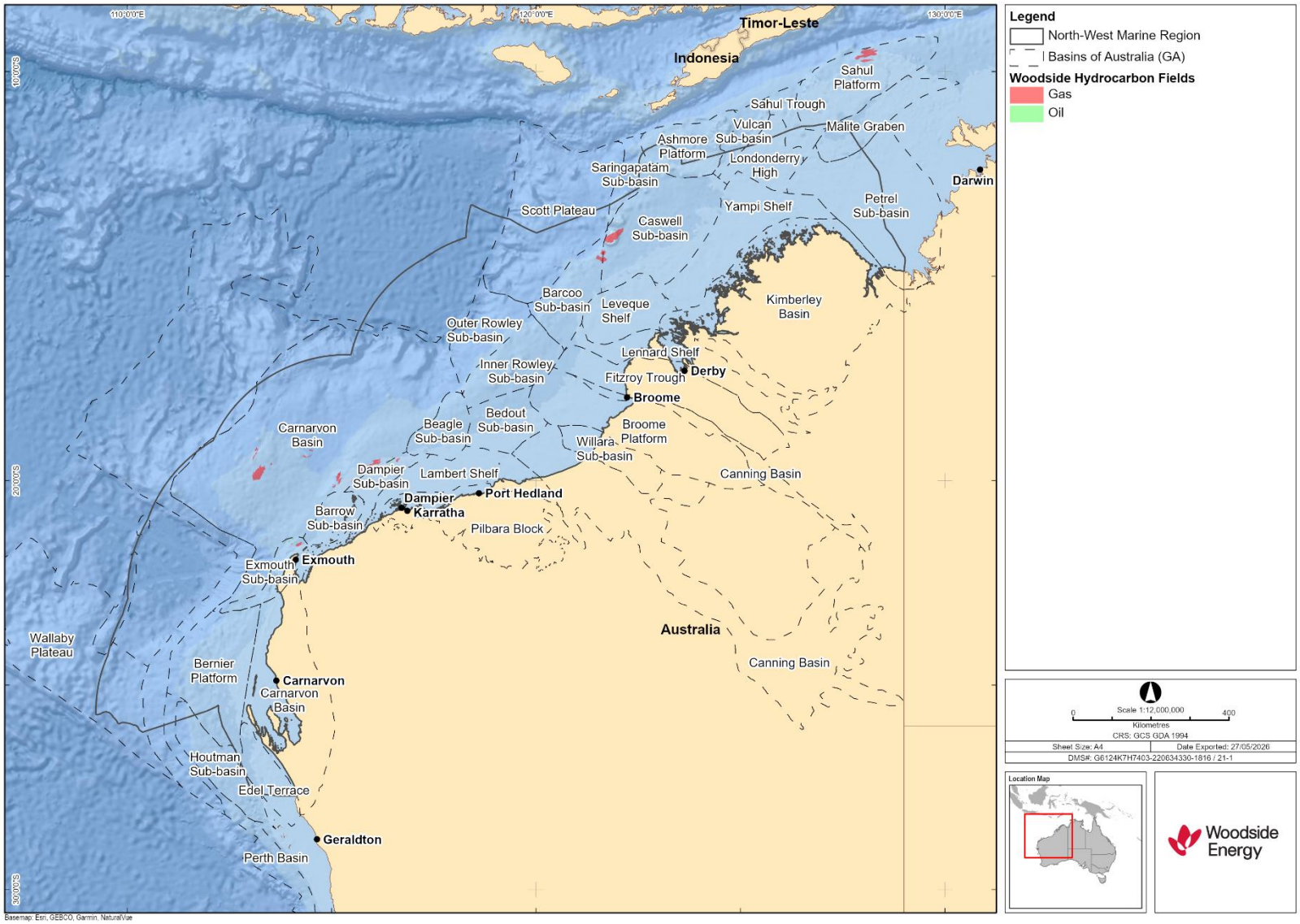


Figure 13-13: Petroleum basins within the NWMR

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

13.7 Defence

Key Australian Department of Defence operational areas and facilities in the NWMR for training and operational activities include the following:

- An operating logistics base has been established in Dampier to support vessels patrolling the waters around offshore oil and gas facilities. A dedicated Navy administrative support facility is also being constructed at the nearby township of Karratha (DEWHA 2008a).
- The Taylor Barracks are the headquarters of the Pilbara regiment, one of three Regional Force Surveillance Units conducting surveillance and reconnaissance of remote areas of northern Australia. This base is in Karratha (Department of Defence n.d.).
- The Royal Australian Air Force currently maintains two 'bare bases' in remote areas of WA that are used for military exercises. One of these is the Royal Australian Air Force Base in Learmonth. The Royal Australian Air Force maintains the Commonwealth Heritage listed Learmonth Air Weapons Range Facility, which is between Ningaloo Station and the Cape Range National Park. The air training area associated with the Learmonth base extends over the offshore region.
- The Royal Australian Air Force Base Curtin is located on the north coast of WA, south-east of Derby and 170 km east of Broome. It supports land, air and sea operations aimed at supporting Australia's northern approaches.
- The Naval Communications Station Harold E. Holt is about 6 km north of Exmouth. The main role of the station is to communicate at very low frequencies (19.8 kHz) with Australian and United States submarines and ships in the eastern Indian Ocean and the western Pacific Ocean (DEWHA 2008a).
- Areas may be subject to unexploded ordnance because of military activities. These are offshore sites where ammunition and explosives have been dumped, or have been used as live bombing or firing ranges. Department of Defence maintains a record of sites confirmed as, or reasonably suspected of, being affected by unexploded ordnance. There are several suspected unexploded ordnance sites in the NWMR (Australian Government Defence n.d.).
- Three plutonium-based nuclear tests were completed at the Montebello Islands in 1952 and 1956. Sediments in the Montebello Islands Marine Park still show radionuclide levels up to 4,500 times higher than the wider WA coast, with the highest concentrations near the original blast sites. A recent study identified a radioactive site in the southern Lowendal Islands. Elevated plutonium and americium suggest potential remobilisation or transport of historic defence materials beyond known boundaries (Williams-Hoffman *et al.* 2025).

Figure 13-14 shows defence areas within the NWMR.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

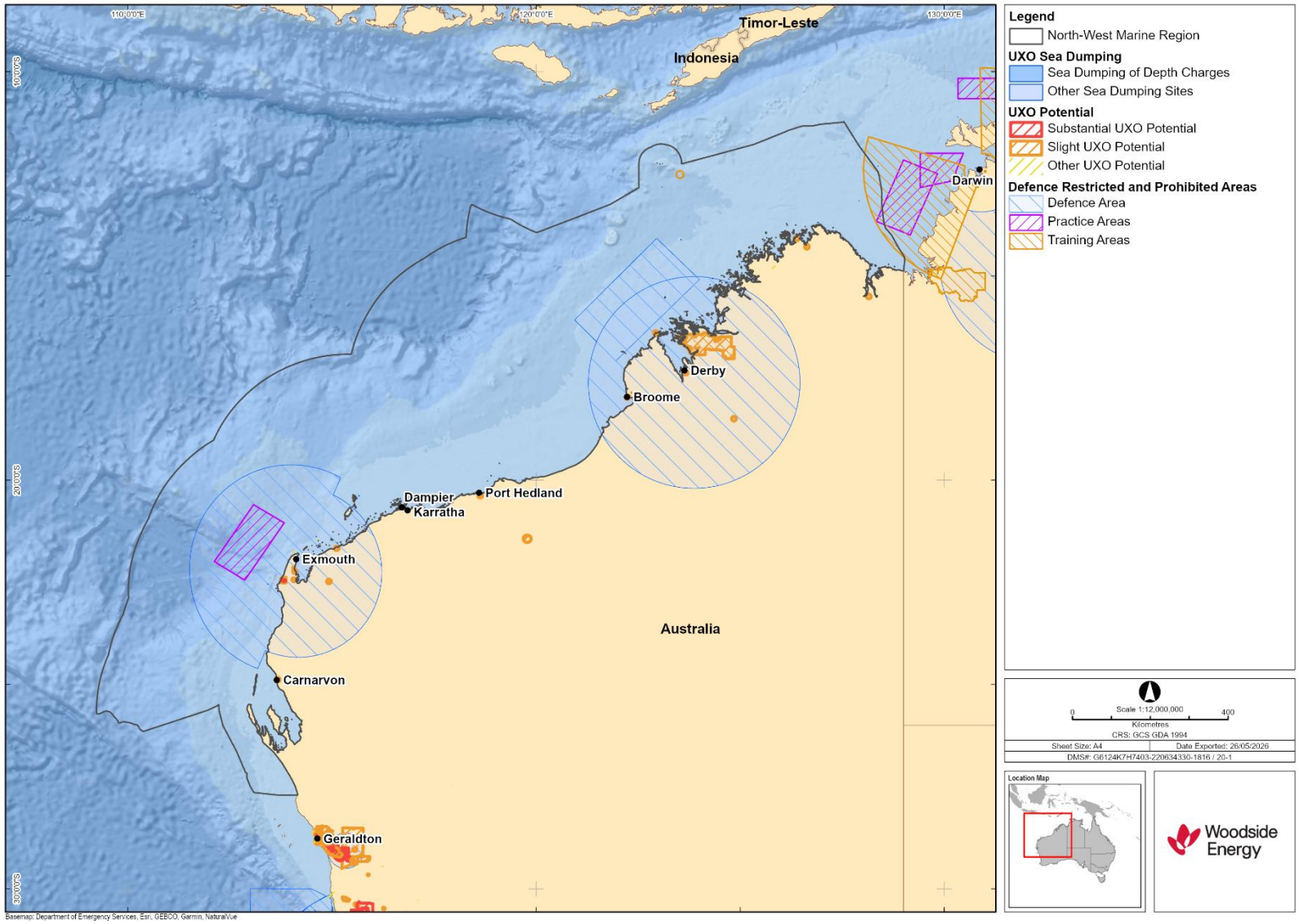


Figure 13-14: Defence areas within the NWMR

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

14. REFERENCES

[AFMA] Australian Fisheries Management Authority, 2021a. Southern Blue Fin Tuna. Available at: www.afma.gov.au/fisheries-management/species/southern-bluefin-tuna [Accessed 11 May 2026].

[AFMA] Australian Fisheries Management Authority, 2021b. Western Skipjack Tuna. Available at: www.afma.gov.au/fisheries-management/species/skipjack-tuna [Accessed 11 May 2026].

[AIMS] Australian Institute of Marine Science, 2014. AIMS 2013 Biodiversity Survey of Glomar Shoal and Rankin Bank. Report prepared by the Australian Institute of Marine Science for Woodside Energy Ltd. Australian Institute of Marine Science, Townsville, Queensland July 2014 Rev 0, 153 pp.

[BOM] Bureau of Meteorology, 2022a. Atmospheric high-resolution reanalysis. Available from: Atmospheric high-resolution reanalysis | The Bureau of Meteorology [Accessed 20 March 2026].

[BOM] Bureau of Meteorology, 2022b. BARRA2: Regional atmospheric reanalysis for Australia. Available from: https://www.bom.gov.au/government-and-industry/research-and-development/research-and-development-projects/atmospheric-reanalysis#bom-anchor-list__item-available-barra-data [Accessed 24 April 2026].

[BOM] Bureau of Meteorology, 2024. Maps of average conditions. Available from: https://www.bom.gov.au/climate/maps/averages/ [Accessed 09 July 2026].

[BOM] Bureau of Meteorology, 2026a. The Australian Monsoon. Australian Government. Available from: https://www.bom.gov.au/climate/about/?bookmark=monsoon [Accessed 16 May 2026].

[BOM] Bureau of Meteorology, 2026b. Climatology of tropical cyclones in Western Australia. Australian Government. Available from: https://www.bom.gov.au/cyclone/tropical-cyclone-knowledge-centre/history/climatology/ [Accessed 16 May 2026].

[BOM] Bureau of Meteorology, 2026c. Climate statistics for Troughton Island, monthly climate statistics for Period: 1991–2020. Australian Government. http://www.bom.gov.au/climate/averages/tables/cw_001007.shtml [Accessed 06 May 2026].

[BOM] Bureau of Meteorology, 2026d. Climate statistics for Learmonth Airport, monthly climate statistics for Period: 1991–2020. Australian Government. Available from http://www.bom.gov.au/climate/averages/tables/cw_005007_All.shtml [Accessed 06 May 2026].

[CALM] Department of Conservation and Land Management, 1992. Marmion Marine Park Management Plan 1992–2002, Management Plan No 23. Department of Conservation and Land Management. Available from: https://library.dbca.wa.gov.au/FullTextFiles/014385.pdf [Accessed 11 May 2026].

[CALM] Department of Conservation and Land Management, 1994. A Representative Marine Reserve System for Western Australia: Report of the Marine Parks and Reserves Selection Working Group. Como, WA: Department of Conservation and Land Management. https://library.dbca.wa.gov.au/FullTextFiles/015846.pdf.

[CALM] Department of Conservation and Land Management, 1996. Shark Bay Marine Reserves Management Plan 1996–2006, Department of Conservation and Land Management.

[CALM] Department of Conservation and Land Management, 1999. Swan Estuary Marine Park and Adjacent Nature Reserves Management Plan 1999–2009, Management Plan No 41. Department of Conservation and Land Management.

[CALM] Department of Conservation and Land Management, 2003a. Eighty Mile Beach, Western Australia. Information Sheet on Ramsar Wetlands. Available from: https://www.environment.gov.au/water/topics/wetlands/database/pubs/34-ris.pdf [Accessed 11 May 2026].

[CALM] Department of Conservation and Land Management, 2003b. Roebuck Bay, Western Australia. Information Sheet on Ramsar Wetlands. Available from: https://www.environment.gov.au/water/topics/wetlands/database/pubs/33-ris.pdf [Accessed 07 May 2026].

[CALM] Department of Conservation and Land Management 2005a, Management Plan for the Ningaloo Marine Park and Muiron Islands Marine Management Area 2005–2015. Department of Conservation and Land Management.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

[CALM] Department of Conservation and Land Management, 2005b. Indicative Management Plan for the Proposed Dampier Archipelago Marine Park and Cape Preston Marine Management Area. Department of Conservation and Land Management.

[DAWE] Department of Agriculture, Water and the Environment, 2020. Indonesia–Australia Fisheries Cooperation. Available at: https://www.awe.gov.au/agriculture-land/fisheries/international/cooperation/indonesia#:~:text=Established%20in%202001%2C%20the%20Working,the%20Arafura%20and%20Timor%20seas [Accessed 08 May 2026].

[DAWE] Department of Agriculture, Water and the Environment, 2022. Listing Advice *Megaptera novaeangliae* Humpback whale. Prepared under the *Environment Protection and Biodiversity Conservation Act 1999.* Canberra: Department of Agriculture, Water and the Environment. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/38-listing-advice-26022022.pdf [Accessed 11 May 2026].

[DBCA] Department of Biodiversity, Conservation and Attractions 2019. *Murujuga World Heritage Nomination: About World Heritage*. Government of Western Australia.

[DBCA] Department of Biodiversity, Conservation and Attractions, 2020. Economic contribution of Ningaloo: one of Australia's best kept secrets, Canberra: Department of Biodiversity, Conservation and Attractions. Deloitte Access Economics.

[DBCA] Department of Biodiversity Conservation and Attractions, 2020a. Pilbara inshore islands nature reserves and proposed additions – draft management plan 2020. Available at: https://www.dbca.wa.gov.au/media/2894/download [Accessed 11 May 2026].

[DBCA] Department of Biodiversity, Conservation and Attractions, 2021. Annual Ningaloo Turtle Program, Exmouth, Western Australia.

[DBCA] Department of Biodiversity, Conservation and Attractions, 2022a. Bardi Jawi Gaarra Marine Park Joint Management Plan 2022. Available from: https://www.dbca.wa.gov.au/management/plans/bardi-jawi-gaarra-marine-park [Accessed 11 May 2026].

[DBCA] Department of Biodiversity, Conservation and Attractions, 2022b. Lalang-gaddam Marine Park Joint Management Plan 2022. Available from: https://www.dbca.wa.gov.au/management/plans/lalang-gaddam-marine-park [Accessed 07 May 2026].

[DBCA] Department of Biodiversity, Conservation and Attractions, 2022c. Mayala Marine Park Joint Management Plan 2022. Available from: https://www.dbca.wa.gov.au/management/plans/mayala-marine-park [Accessed 08 May 2026].

[DBCA] Department of Biodiversity, Conservation and Attractions, 2022d. Nyinggulu (Ningaloo) coastal reserves: Red Bluff to Winderbandi. Joint Management Plan No. 101. Parks and Wildlife Service, Department of Biodiversity, Conservation and Attractions, Perth, Western Australia.

[DBCA] Department of Biodiversity, Conservation and Attractions, 2025. Ningaloo Turtle Program Annual Report 2024–2025. Department of Biodiversity, Conservation and Attractions and the Ningaloo Turtle Program, Exmouth, Western Australia. Available from: https://ningalooturtles.org.au/?page_id=181 [Accessed 18 May 2025].

[DCCEEW] Department of Climate Change, Energy, the Environment and Water, 2007. Dampier Archipelago (including Burrup Peninsula) Karratha Dampier Rd, Dampier, WA, Australia. National Heritage List. Available from: https://www.environment.gov.au/cgi-bin/ahdb/search.pl?mode=place_detail;place_id=105727 [Accessed 08 May 2026].

[DCCEEW] Department of Climate Change, Energy, the Environment and Water, 2021a. Australian Convict Sites. Australian Government. Available from: https://www.dcceew.gov.au/parks-heritage/heritage/places/world/convict-sites#more-information [Accessed 08 May 2026].

[DCCEEW] Department of Climate Change, Energy, the Environment and Water, 2021b. Marine Bioregional Plans. Australian Government. Available from https://www.dcceew.gov.au/environment/marine/marine-bioregional-plans [Accessed 11 May 2026].

[DCCEEW] Department of Climate Change, Energy, the Environment and Water, 2022. National Recovery Plan for albatrosses and petrels. Commonwealth of Australia. Available from: https://www.dcceew.gov.au/sites/default/files/documents/national-recovery-plan-albatrosses-and-petrels-2022.pdf [Accessed 11 May 2026].

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

[DCCEEW] Department of Climate Change, Energy, the Environment and Water, 2023a. Species Threats and Profile Database. Department of Climate Change, Energy, the Environment and Water. Available from: https://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl [Accessed 11 May 2026].

[DCCEEW] Department of Climate Change, Energy, the Environment and Water, 2023b. Sea Country Indigenous Protected Areas Program – Grant Opportunity. Available from: https://www.dcceew.gov.au/environment/land/indigenous-protected-areas/sea-country-grant-opportunity [Accessed 08 May 2026].

[DCCEEW] Department of Climate Change, Energy, the Environment and Water, 2023c. Conservation Advice for *Varanus mitchelli* (Mitchell's water monitor). Canberra: Department of Climate Change, Energy, the Environment and Water. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/1569-conservation-advice-21122023.pdf [Accessed 29 May 2026].

[DCCEEW] Department of Climate Change, Energy, the Environment and Water, 2023d. Conservation Advice for *Numenius madagascariensis* (far eastern curlew). Canberra: Department of Climate Change, Energy, the Environment and Water. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/847-conservation-advice-18122023.pdf [Accessed 08 May 2026].

[DCCEEW] Department of Climate Change, Energy, the Environment and Water, 2023e. Conservation Advice for *Calidris ferruginea* (curlew sandpiper). Canberra: Department of Climate Change, Energy, the Environment and Water. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/856-conservation-advice-18122023.pdf [Accessed 08 May 2026].

[DCCEEW] Department of Climate Change, Energy, the Environment and Water, 2023f. Conservation Advice for *Charadrius leschenaultia* (greater sand plover). Canberra: Department of Climate Change, Energy, the Environment and Water. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/877-conservation-advice-18122023.pdf [Accessed 08 May 2026].

[DCCEEW] Department of Climate Change, Energy, the Environment and Water, 2023g. Australian Whale Sanctuary. Last updated 22 May 2023. Available from: https://www.dcceew.gov.au/environment/marine/marine-species/cetaceans/australian-whale-sanctuary [Accessed 27 Mar 2026].

[DCCEEW] Department of Climate Change, Energy, the Environment and Water, 2023h. Conservation Advice for *Phaethon rubricauda westralis* (Indian Ocean red-tailed tropicbird). Canberra: Department of Climate Change, Energy, the Environment and Water. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/91824-conservation-advice-21122023.pdf. In effect under the EPBC Act from 21-Dec-2023. [Accessed 11 May 2026].

[DCCEEW] Department of Climate Change, Energy, the Environment and Water, 2023i. Conservation Advice for *Varanus mertensi* (Mertens' water monitor). Canberra: Department of Climate Change, Energy, the Environment and Water. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/1568-conservation-advice-21122023.pdf. In effect under the EPBC Act from 21-Dec-2023.

[DCCEEW] Department of Climate Change, Energy, the Environment and Water, 2023j. National Light Pollution Guidelines for Wildlife Including Marine Turtles, Seabirds and Migratory Shorebirds. Available from: https://www.dcceew.gov.au/environment/biodiversity/publications/national-light-pollution-guidelines-wildlife [Accessed 08 May 2026].

[DCCEEW] Department of Climate Change, Energy, the Environment and Water, 2024a. National Recovery Plan for the Southern Right Whale *Eubalaena australis*. Department of Climate Change, Energy, the Environment and Water, Canberra. Available from: http://www.dcceew.gov.au/environment/biodiversity/threatened/recovery-plans/southern-right-whale [Accessed 11 May 2026].

[DCCEEW] Department of Climate Change, Energy, the Environment and Water, 2024b. Marine Key Ecological Features (dataset). Available from: https://fed.dcceew.gov.au/datasets/551d6e7fae514a0386f0043186599754_0/about [Accessed 08 May 2026].

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

[DCCEEW] Department of Climate Change, Energy, the Environment and Water, 2024c. Conservation Advice for *Limosa lapponica menzbieri* (Yakutian bar-tailed godwit). Canberra: Department of Climate Change, Energy, the Environment and Water. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/86432-conservation-advice-05012024.pdf [Accessed 08 May 2026].

[DCCEEW] Department of Climate Change, Energy, the Environment and Water, 2024d. Conservation Advice for *Calidris canutus* (red knot). Canberra: Department of Climate Change, Energy, the Environment and Water. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/855-conservation-advice-05012024.pdf [Accessed 08 May 2026].

[DCCEEW] Department of Climate Change, Energy, the Environment and Water, 2024e. Conservation Advice for *Calidris tenuirostris* (great knot). Canberra: Department of Climate Change, Energy, the Environment and Water. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/862-conservation-advice-05012024.pdf [Accessed 08 May 2026].

[DCCEEW] Department of Climate Change, Energy, the Environment and Water, 2024f. Conservation Advice for *Limosa limosa* (black-tailed godwit). Canberra: Department of Climate Change, Energy, the Environment and Water. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/845-conservation-advice-05012024.pdf [Accessed 08 May 2026].

[DCCEEW] Department of Climate Change, Energy, the Environment and Water, 2024g. Conservation Advice for *Tringa nebularia* (common greenshank). Canberra: Department of Climate Change, Energy, the Environment and Water. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/832-conservation-advice-05012024.pdf [Accessed 08 May 2026].

[DCCEEW] Department of Climate Change, Energy, the Environment and Water, 2024h. Conservation Advice for *Limnodromus semipalmatus* (Asian dowitcher). Canberra: Department of Climate Change, Energy, the Environment and Water. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/843-conservation-advice-05012024.pdf [Accessed 08 May 2026].

[DCCEEW] Department of Climate Change, Energy, the Environment and Water, 2024i. Conservation Advice for *Arenaria interpres* (ruddy turnstone). Canberra: Department of Climate Change, Energy, the Environment and Water. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/872-conservation-advice-05012024.pdf [Accessed 08 May 2026].

[DCCEEW] Department of Climate Change, Energy, the Environment and Water, 2024j. Conservation Advice for *Calidris acuminata* (sharp-tailed sandpiper). Canberra: Department of Climate Change, Energy, the Environment and Water. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/874-conservation-advice-05012024.pdf [Accessed 08 May 2026].

[DCCEEW] Department of Climate Change, Energy, the Environment and Water, 2024k. Conservation Advice for *Xenus cinereus* (terek sandpiper). Canberra: Department of Climate Change, Energy, the Environment and Water. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/59300-conservation-advice-05012024.pdf [Accessed 08 May 2026].

[DCCEEW] Department of Climate Change, Energy, the Environment and Water, 2024l. Conservation Advice for *Pluvialis squatarola* (grey plover). Canberra: Department of Climate Change, Energy, the Environment and Water. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/865-conservation-advice- 05012024.pdf [Accessed 08 May 2026].

[DCCEEW] Department of Climate Change, Energy, the Environment and Water, 2024m. Conservation Advice for *Aipysurus fuscus* (dusky sea snake). Canberra: Department of Climate Change, Energy, the Environment and Water. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/1119-conservation-advice-04092024.pdf [Accessed 08 May 2026].

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

[DCCEEW] Department of Climate Change, Energy, the Environment and Water, 2025a. Conservation Advice for *Pristis pristis* (largetooth sawfish). Canberra: Department of Climate Change, Energy, the Environment and Water. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/60756-conservation-advice-20082025.pdf. In effect under the EPBC Act from 20-Aug-2025. [Accessed 03 March 2026].

[DCCEEW] Department of Climate Change, Energy, the Environment and Water, 2025b. Biologically Important Areas of protected marine species. COPYRIGHT Commonwealth of Australia, Department of Climate Change, Energy, the Environment and Water. Info updated 11 December 2025 at 13:20:28 GMT+8. Available from: https://fed.dcceew.gov.au/datasets/e8e7a7c233a44cf099817b2f4dff29c7_0/about [Accessed 16 May 2026].

[DCCEEW] Department of Climate Change, Energy, the Environment and Water, 2025c. Conservation Advice for *Sternula albifrons* (little tern). Canberra: Department of Climate Change, Energy, the Environment and Water. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/82849-conservation-advice-05032025.pdf. In effect under the EPBC Act from 05-Mar-2025. [Accessed 11 May 2026].

[DCCEEW] Department of Climate Change, Energy, the Environment and Water, 2025d. Conservation Advice for *Orcaella heinsohni* (Australian snubfin dolphin). Canberra: Department of Climate Change, Energy, the Environment and Water. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/81322-conservation-advice-05032025.pdf. In effect under the EPBC Act from 05-Mar-2025. [Accessed 07 May 2026].

[DCCEEW] Department of Climate Change, Energy, the Environment and Water, 2025e. Conservation Advice for *Sousa sahulensis* (Australian humpback dolphin) . Canberra: Department of Climate Change, Energy, the Environment and Water. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/87942-conservation-advice-05032025.pdf. In effect under the EPBC Act from 05-Mar-2025. [Accessed 07 May 2026].

[DCCEEW] Department of Climate Change, Energy, the Environment and Water, 2025f. Murujuga Declaration 2025. https://www.dcceew.gov.au/parks-heritage/heritage/indigenous-heritage/murujuga-cultural-landscape-declaration-2025.

[DCCEEW] Department of Climate Change, Energy, the Environment and Water, 2026a. National Heritage Places – Dampier Archipelago (including Burrup Peninsula). Available from: https://www.dcceew.gov.au/parks-heritage/heritage/places/national/dampier-archipelago [Accessed 08 May 2026].

[DCCEEW] Department of Climate Change, Energy, the Environment and Water, 2026b. Indigenous Protected Areas. Available from: https://www.dcceew.gov.au/environment/land/indigenous-protected-areas [Accessed 31 Mar 2026].

[DCCEEW] Department of Climate Change, Energy, the Environment and Water, 2026c. Map of Indigenous Protected Areas March 2026. Map produced by: Environmental Data and Analysis Branch, Department of Climate Change, Energy, the Environment and Water 4/03/2026. Available from: https://www.dcceew.gov.au/sites/default/files/documents/ipa-national-map.pdf [Accessed 08 May 2026].

[DCCEEW] Department of Climate Change, Energy, the Environment and Water, 2026d. Australasian Underwater Cultural Heritage Database. Available from: https://www.environment.gov.au/shipwreck/public/wreck/search.do%3Bjsessionid%3DAE4BC2234F7A11B8AD60E4F3B69C1985 [Accessed 02 Apr 2026].

[DCCEEW] Department of Climate Change, Energy, the Environment and Water, 2026e. National Heritage List Spatial Database – public. Available from: https://fed.dcceew.gov.au/datasets/erin::national-heritage-list-spatial-database-nhl-public/about [Accessed May 2026],

[DCCEEW] Department of Climate Change, Energy, the Environment and Water, 2026f. Conservation Advice for *Phaethon lepturus fulvus* (golden bosun). Canberra: Department of Climate Change, Energy, the Environment and Water. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/26021-conservation-advice-28012026.pdf. In effect under the EPBC Act from 28-Jan-2026. [Accessed 11 May 2026].

[DCCEEW] Department of Climate Change, Energy, the Environment and Water, n.d.-a. Mermaid Reef – Rowley Shoals, Broome, WA, Australia Place Details. Australian Heritage Database. Available from:

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

https://www.dcceew.gov.au/parks-heritage/heritage/places/commonwealth-heritage-list [Accessed 11 May 2026].

[DCCEEW] Department of Climate Change, Energy, the Environment and Water, n.d.-b. Learmonth Air Weapons Range Facility, Learmonth, WA, Australia Place Details. Australian Heritage Database. Available from: https://www.dcceew.gov.au/parks-heritage/heritage/places/commonwealth-heritage-list [Accessed 12 May 2026].

[DCCEEW] Department of Climate Change, Energy, the Environment and Water, n.d.-c. Yampi Defence Area, Koolan Island, WA, Australia Place Details. Australian Heritage Database. Available from: https://www.dcceew.gov.au/parks-heritage/heritage/places/commonwealth-heritage-list [Accessed 12 May 2026].

[DCCEEW] Department of Climate Change, Energy, the Environment and Water, n.d.-d. Ashmore Reef National Nature Reserve, Timor Sea, EXT, Australia Place Details. Australian Heritage. Database. Available from: https://www.dcceew.gov.au/parks-heritage/heritage/places/commonwealth-heritage-list [Accessed 12 May 2026].

[DCCEEW] Department of Climate Change, Energy, the Environment and Water, n.d.-e. Scott Reef and Surrounds, Timor Sea, EXT, Australia Place Details. Australian Heritage Database. Available from: https://www.dcceew.gov.au/parks-heritage/heritage/places/commonwealth-heritage-list [Accessed 12 May 2026].

[DCCEEW] Department of Climate Change, Energy, the Environment and Water, n.d.-f. Ningaloo Marine Area, Commonwealth Waters, Ningaloo, WA, Australia Place Details. Australian Heritage Database. https://www.dcceew.gov.au/parks-heritage/heritage/places/commonwealth-heritage-list [Accessed 12 May 2026].

[DEC] Department of Environment and Conservation, 2007a. Rowley Shoals Marine Park Management 2007–2017 Management Plan No. 56. Department of Environment and Conservation, Perth, Western Australia.

[DEC] Department of Environment and Conservation, 2007b. Management Plan for the Montebello/Barrow Islands Marine Conservation Reserves 2007–2017. Management Plan No 55. Department of Environment and Conservation, Perth, Western Australia.

[DEC] Department of Environment and Conservation, 2007c. Shoalwater Islands Marine Park Management Plan 2007–2017, Management Plan No 58. Department of Environment and Conservation, Perth, Western Australia.

[DEC] Department of Environment and Conservation, 2008. Shark Bay World Heritage Property Strategic Plan 2008–2020. Department of Environment and Conservation.

[DEC] Department of Environment and Conservation, 2009a. Walpole and Nornalup Inlets Marine Park Management Plan 2009–2019, Management Plan No 62. Department of Environment and Conservation, Perth, Western Australia.

[DEC] Department of Environment and Conservation, 2009b. Ecological Character Description of the Lake Warden System Ramsar Site: A Report by the Department of Environment and Conservation. Prepared by G. Watkins, Department of Environment and Conservation, Perth, Western Australia. Available from: https://rsis.ramsar.org/RISapp/files/55262733/documents/AU485ECD.pdf [Accessed 11 May 2026].

[DEC] Department of Environment and Conservation, 2013a. Ngari Capes Marine Park Management Plan 2013–2023, Management Plan Number 74. Department of Environment and Conservation.

[DEC] Department of Environment and Conservation, 2013b. Murujuga National Park Management Plan 78 2013, Department of Environment and Conservation, Perth. Available from: https://library.dbca.wa.gov.au/FullTextFiles/924013.pdf [Accessed 08 May 2026].

[DEWHA] Department of Environment, Water, Heritage and the Arts, 2007a. A characterisation of the marine environment of the North-west Marine Region. A summary of an expert workshop convened in Perth, Western Australia, 5–6 September 2007. Prepared by the North-west Marine Bioregional Planning section, Marine and Biodiversity Division, Department of the Environment, Water, Heritage and the Arts. 47 pp.

[DEWHA] Department of Environment, Water, Heritage and the Arts, 2007b. Characterisation of the marine environment of the North Marine Region. Outcomes of an Expert Workshop, Darwin, Northern Territory, 2–

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

3 April 2007. Prepared by the North Marine Bioregional Planning Section, Marine Division, Department of the Environment, Water, Heritage and the Arts. 37 pp.

[DEWHA] Department of Environment, Water, Heritage and the Arts, 2008a. The North-west Marine Bioregional Plan, Bioregional Profile. A Description of the Ecosystems, Conservation values and Uses of the North-west Marine Region. Prepared by the Marine Bioregional Planning – North-west, Marine and Biodiversity Division. Department of the Environment, Water, Heritage and the Arts. 288 pp.

[DEWHA] Department of Environment, Water, Heritage and the Arts, 2008b. Threat Abatement Plan for predation by the European red fox. DEWHA, Canberra. Available from: http://www.environment.gov.au/biodiversity/threatened/publications/tap/predation-european-red-fox. In effect under the EPBC Act from 01-Oct-2008.

[DEWHA] Department of Environment, Water, Heritage and the Arts, 2009a. Threat Abatement Plan to reduce the impacts of exotic rodents on biodiversity on Australian offshore islands less than 100,000 hectares. 24 pp.

[DEWHA] Department of Environment, Water, Heritage and the Arts, 2009b. Approved Conservation Advice for *Pristis clavata* (dwarf sawfish). Canberra, ACT: Department of the Environment, Water, Heritage and the Arts. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/68447-conservation-advice.pdf [Accessed 21 May 2026].

[DEWHA] Department of Environment, Water, Heritage and the Arts, 2009c. Approved Conservation Advice for *Dermochelys coriacea* (leatherback turtle). Canberra, ACT: Department of the Environment, Water, Heritage and the Arts. Available from: https://www.environment.gov.au/biodiversity/threatened/species/pubs/1768-conservation-advice.pdf [Accessed 21 May 2026].

[DEWR] Department of the Environment and Water Resources, 2007. A characterisation of the marine environment of the South-west Marine Region: A summary of an expert workshop convened in Perth, Western Australia, September 2006. 40 pp.

[DNP] Director of National Parks, 2018a. North-west Marine Parks Network Management Plan 2018, Director of National Parks, Canberra.

[DNP] Director of National Parks, 2018b. South-west Marine Parks Network Management Plan 2018, Director of National Parks, Canberra.

[DNP] Director of National Parks, 2018c. North Marine Parks Network Management Plan 2018, Director of National Parks, Canberra.

[DNP] Director of National Parks, 2025a. Christmas Island Marine Park Management Plan 2025. Available from: https://australianmarineparks.gov.au/static/c0e75cd618cb695f1fc4b21b966245d7/amp-cimp-management-plan-2025.pdf [Accessed 11 May 2026].

[DNP] Director of National Parks, 2025b. Cocos (Keeling) Islands Marine Park Management Plan 2025. Available from: https://australianmarineparks.gov.au/static/c3cf256f8e04c46783c7786a8d58e764/amp-ckimp-management-plan-2025.pdf [Accessed 08 May 2026].

[DoE] Department of the Environment, 2014a. Recovery Plan for the Grey Nurse Shark (*Carcharias taurus*). Canberra, ACT: Department of the Environment. Available from: http://www.environment.gov.au/resource/recovery-plan-grey-nurse-shark-carcharias-taurus [Accessed 08 May 2026].

[DoE] Department of the Environment, 2014b. Approved Conservation Advice for *Glyphis garricki* (northern river shark). Canberra: Department of the Environment. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/82454-conservation-advice.pdf. In effect under the EPBC Act from 11-Apr-2014. [Accessed 11 May 2026].

[DoE] Department of the Environment, 2014c. Approved Conservation Advice for *Glyphis glyphis* (speartooth shark). Canberra: Department of the Environment. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/82453-conservation-advice.pdf. In effect under the EPBC Act from 11-Apr-2014.

[DoE] Department of the Environment, 2024. Threat Abatement Plan for predation by feral cats. Canberra, ACT: Commonwealth of Australia. 50 pp.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

[DoE] Department of the Environment, 2026a. *Caretta caretta* (loggerhead turtle) in Species Profile and Threats Database, Department of the Environment, Canberra. Available from: https://www.environment.gov.au/sprat Accessed Fri, 29 May 2026.

[DoE] Department of the Environment, 2026b. *Crocodylus porosus* (salt-water crocodile) in Species Profile and Threats Database, Department of the Environment, Canberra. Available from: https://www.environment.gov.au/sprat [Accessed 11 May 2026].

[DoE] Department of the Environment, 2026c. Hawksbill turtle (*Eretmochelys imbricata*) in Species Profile and Threats Database, Department of the Environment, Canberra. Available from: https://www.environment.gov.au/sprat [Accessed 6 Jul 2026].

[DoEE] Department of the Environment and Energy, 2017. EPBC Act Policy Statement 3.21 – Industry guidelines for avoiding, assessing and mitigating impacts on EPBC Act listed migratory shorebird species. Commonwealth of Australia. Available from: https://www.dcceew.gov.au/sites/default/files/documents/bio4190517-shorebirds-guidelines.pdf. [Accessed 11 May 2026].

[DoEE] Department of the Environment and Energy, 2018. Threat Abatement Plan for the impacts of marine debris on the vertebrate wildlife of Australia's coasts and oceans. Commonwealth of Australia. Available from: https://www.dcceew.gov.au/sites/default/files/documents/tap-marine-debris-2018.pdf [Accessed 11 May 2026].

[DPAW] Department of Parks and Wildlife, 2014a. Eighty Mile Beach Marine Park Management Plan 2014–2024. Management Plan No. 80. Department of Parks and Wildlife, Perth, Western Australia.

[DPAW] Department of Parks and Wildlife, 2014b. Becher Point Wetlands. Information Sheet on Ramsar Wetlands. Available from: https://www.environment.gov.au/water/topics/wetlands/database/pubs/54-ris.pdf [Accessed 08 May 2026].

[DPAW] Department of Parks and Wildlife, 2014c. Vasse-Wonnerup System. Information Sheet on Ramsar Wetlands. Available from: https://rsis.ramsar.org/RISapp/files/RISrep/AU484RIS_1407_en.pdf [Accessed 08 May 2026].

[DPAW] Department of Parks and Wildlife, 2016a. North Kimberley Marine Park Joint Management Plan 2016 Uunguu, Balanggarra, Miriuwung Gajerrong and Wilinggin management areas, Number Plan 89. Department of Parks and Wildlife, Perth.

[DPAW] Department of Parks and Wildlife, 2016b, Yawuru Nagulagun/Roebuck Bay Marine Park Joint Management Plan 2016. Department of Parks and Wildlife, Perth.

[DPAW] Department of Parks and Wildlife, 2016c. Marmion Marine Park. Visitor Guide.

[DPIRD] Department of Primary Industries and Regional Development, n.d. Fisheries Research Report No. not provided. Unpublished Draft Resource Assessment Report for the North Coast Demersal Scalefish Resource. Available from: https://www.fish.wa.gov.au/Documents/resource_assessment/resource_assessment_report_013.pdf Demersal Scalefish RAR_13_220620 [Accessed 07 May 2026].

[DPIRD] Department of Primary Industries and Regional Development, 2001a. Plan of Management for the Cottesloe Reef Fish Habitat Protection Area. Fisheries Management Paper No. 155, Department of Fisheries, Perth, Western Australia.

[DPIRD] Department of Primary Industries and Regional Development, 2001b. Plan of Management for the Lancelin Island Lagoon Fish Habitat Protection Area. Fisheries Management Paper No. 149, Australian Marine Conservation Society Friends of Lancelin Island, Department of Fisheries, Perth, Western Australia.

[DPIRD] Department of Primary Industries and Regional Development, 2004. Plan of management for the Point Quobba fish habitat protection area. Department of Fisheries Western Australia, Perth. Report No. 185. Available at: https://library.dpird.wa.gov.au/fr_fmp/195 [Accessed May 2026].

[DPIRD] Department of Primary Industries and Regional Development, 2007. Plan of Management for the Kalbarri Blue Holes Fish Habitat Protection Area. Fisheries Management Paper No. 188, Department of Fisheries, Perth, Western Australia.

[DPIRD] Department of Primary Industries and Regional Development, 2018. Draft Management Plan for the Pilbara Crab Managed Fishery. Fisheries Management Paper No. 290. Government of Western Australia.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

[DPIRD] Department of Primary Industries and Regional Development, 2025a. Demersal fishing reforms for the future of Western Australia. Available from: https://www.dpird.wa.gov.au/environment-and-sustainability/sustainable-fisheries/western-australias-demersal-scalefish-resources/?accordion=accordionba4337f3c163462392654942e022e648 [Accessed 31 Mar 2026].

[DPIRD] Department of Primary Industries and Regional Development, 2025b. Recreational Fishing Guide. https://www.dpird.wa.gov.au/siteassets/documents/fisheries/recreational/guides-and-infographics/recreational-fishing-guide.pdf [Accessed 08 May 2026].

[DPIRD] Department of Primary Industries and Regional Development, 2025c. Miaboolya Beach Fish Habitat Protection Area (PB009-25-03). Government of Western Australia. Available from: https://www.dpird.wa.gov.au/siteassets/documents/fisheries/recreational/marine-parks/fhpa_miaboolya-beach.pdf [Accessed 11 May 2026].

[DPIRD] Department of Primary Industries and Regional Development, 2025d. Point Quobba Fish Habitat Protection Area (PB009-25-04). Government of Western Australia. Available at: https://www.dpird.wa.gov.au/siteassets/documents/fisheries/recreational/marine-parks/fpha_point_quobba.pdf [Accessed 11 May 2026].

[DPIRD] Department of Primary Industries and Regional Development, 2025e. Kalbarri Blue Holes Fish Habitat Protection Area (PB009-25-01). Government of Western Australia. Available at: https://www.dpird.wa.gov.au/siteassets/documents/fisheries/recreational/marine-parks/fhpa-kalbarri-blue-holes.pdf [Accessed 11 May 2026].

[DPIRD] Department of Primary Industries and Regional Development, 2026a. Fish habitat protection areas. Available from: https://www.dpird.wa.gov.au/individuals/recreational-fishing/marine-protected-areas/fish-habitat-protection-areas [Accessed 31 Mar 2026].

[DPIRD] Department of Primary Industries and Regional Development, 2026b. Cottesloe Reef Fish Habitat Protection Area (PB009-25-02). Government of Western Australia. Available at: https://www.dpird.wa.gov.au/siteassets/documents/fisheries/recreational/marine-parks/fhpa_cottesloe-reef.pdf [Accessed 11 May 2026].

[DPIRD] Department of Primary Industries and Regional Development, 2026c. Recreational Fishing Rules. Available from: https://www.dpird.wa.gov.au/individuals/recreational-fishing/recreational-fishing-rules/ [Accessed 07 July 2026].

[DPLH] Department of Planning, Lands and Heritage, 2026. Aboriginal Cultural Heritage Reform 2022. Department of Planning, Lands and Heritage, Perth, Western Australia. Available from: https://www.wa.gov.au/organisation/department-of-planning-lands-and-heritage/aboriginal-cultural-heritage-reform [Accessed 12 May 2026].

[DPLH] Department of Planning, Lands and Heritage, 2024. *Aboriginal Heritage Act* in Western Australia. Government of Western Australia, Perth, Western Australia. Available from: https://www.wa.gov.au/organisation/department-of-planning-lands-and-heritage/aboriginal-heritage-act-western-australia [Accessed 12 May 2026].

[DSEWPaC] Department of Sustainability, Environment, Water, Population and Communities, 2011a. Approved Conservation Advice for *Aipysurus apraefrontalis* (short-nosed sea snake). Canberra, ACT: Department of Sustainability, Environment, Water, Population and Communities. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/1115-conservation-advice.pdf [Accessed 12 May 2026].

[DSEWPaC] Department of Sustainability, Environment, Water, Population and Communities, 2011b. Approved Conservation Advice for *Aipysurus foliosquama* (leaf-scaled sea snake). Canberra, ACT: Department of Sustainability, Environment, Water, Population and Communities. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/1118-conservation-advice.pdf [Accessed 11 May 2026].

[DSEWPaC] Department of Sustainability, Environment, Water Population and Communities, 2012a. Marine bioregional plan for the North-west Marine Region. Prepared under the *Environment Protection and Biodiversity Conservation Act 1999.* 269 pp.

[DSEWPaC] Department of Sustainability, Environment, Water Population and Communities, 2012b. Marine bioregional plan for the South-west Marine Region. Prepared under the *Environment Protection and Biodiversity Conservation Act 1999.* 216 pp.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

[DSEWPaC] Department of Sustainability, Environment, Water Population and Communities, 2012c. Marine bioregional plan for the North Marine Region. Prepared under the *Environment Protection and Biodiversity Conservation Act 1999.* 200 pp.

[DSEWPaC] Department of Sustainability, Environment, Water, Populations and Communities, 2012d. Species group report card – seabirds and migratory shorebirds. Supporting the marine bioregional plan for the North-west Marine Region.

[DSEWPaC] Department of Sustainability, Environment, Water, Population and Communities, 2013a. Recovery Plan for the Australian Sea Lion (*Neophoca cinerea*) 2013. Department of Sustainability, Environment, Water, Population and Communities. Available from: http://www.environment.gov.au/system/files/resources/1eb9233c-8474-40bb-8566-0ea02bbaa5b3/files/neophoca-cinerea-recovery-plan.pdf [Accessed 11 May 2026].

[DSEWPaC] Department of Sustainability, Environment, Water, Population and Communities, 2013b. Recovery Plan for the White Shark (*Carcharodon carcharias*). Department of Sustainability, Environment, Water, Population and Communities. Available from: http://www.environment.gov.au/biodiversity/threatened/recovery-plans/recovery-plan-white-shark-carcharodon-carcharias [Accessed 11 May 2026].

[DSEWPaC] Department of Sustainability, Environment, Water, Population and Communities, 2013c. Conservation Advice for Subtropical and Temperate Coastal Saltmarsh. Canberra: Department of Sustainability, Environment, Water, Population and Communities. Available from: http://www.environment.gov.au/biodiversity/threatened/communities/pubs/118- conservation-advice.pdf [Accessed 11 May 2026].

[DSEWPaC] Department of Sustainability, Environment, Water, Population and Communities, 2013d. Approved Conservation Advice for the Monsoon vine thickets on the coastal sand dunes of Dampier Peninsula. Canberra, ACT: Department of Sustainability, Environment, Water, Population and Communities. Available from: http://www.environment.gov.au/biodiversity/threatened/communities/pubs/105-conservation-advice.pdf [Accessed 11 May 2026].

[GDC] Gascoyne Development Commission, 2022. Annual Report 2021–2022, supported by Department of Primary Industries and Regional Development, Western Australia. Available from: https://www.gdc.wa.gov.au/Profiles/gdc/Assets/ClientData/GDC_Annual_Report_21-22.pdf [Accessed 08 May 2026].

[GDC] Gascoyne Development Commission, 2023. Annual Report 2022–2023, supported by Department of Primary Industries and Regional Development, Western Australia. Available from: https://www.gdc.wa.gov.au/Profiles/gdc/Assets/ClientData/GDC_Annual_Report_22-23_WEB.pdf [Accessed 08 May 2026].

[GDC] Gascoyne Development Commission, 2025. Annual Report 2024–2025. Supported by Department of Primary Industries and Regional Development, Western Australia. Available from: https://gdc.wa.gov.au/wp-content/uploads/2025/12/GDC_Annual_Report_Online_Version_2024_25-1.pdf [Accessed 08 May 2026].

Kimberley Development Commission, 2025. Annual Report 2024–2025. Government of Western Australia, Kununurra. Available from: https://www.kdc.wa.gov.au/wp-content/uploads/2025/09/KDC_Annual-Report-2024-25.pdf [Accessed 08 May 2026].

[KTLA] Karajarri Traditional Lands Association, 2014a. Karajarri Healthy Country Plan 2013–2023. Funded by the Department of Sustainability, Environment, Water, Population and Communities and the PEW Environment Trust and Nature Conservancy.

[KTLA] Karajarri Traditional Lands Association, 2014b. Karajarri Indigenous Protected Area. Available from: https://www.ktla.org.au/karajarri-indigenous-protected-area [Accessed 08 May 2026].

[KLC/BJNAC RNTBC] Kimberley Land Council / Bardi Jawi Niimidiman Aboriginal Corporation RNTBC 2013. Bardi Jawi Indigenous Protected Area Management Plan 2013–2023. Broome.

[MAC, DBCA, DoEE] Murujuga Aboriginal Corporation in cooperation with Western Australian Government (Department of Biodiversity, Conservation and Attractions) and Australian Government (Department of the Environment and Energy 2020, UNESCO World Heritage Tentative List Submission. Murujuga Cultural Landscape. Available from: https://www.dbca.wa.gov.au/media/958/download [Accessed 08 May 2026].

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

[NIAA] National Indigenous Australians Agency, n.d.-a. Karajarri IPA and Rangers. Australian Government. Available from: https://www.niaa.gov.au/indigenous-affairs/environment/karajarri-ipa-and-rangers [Accessed 08 May 2026].

[NIAA] National Indigenous Australians Agency, n.d.-b. Yawuru IPA and Rangers. Australian Government. Available from: https://www.niaa.gov.au/indigenous-affairs/environment/yawuru-ipa-and-rangers [Accessed 08 May 2026].

[NIAA] National Indigenous Australians Agency, n.d.-c. Bardi Jawi IPA and Rangers. Australian Government. Available from: https://www.niaa.gov.au/indigenous-affairs/environment/bardi-jawi-ipa-and-rangers [Accessed 08 May 2026].

[NIAA] National Indigenous Australians Agency, n.d.-d. Uunguu IPA and Rangers. Australian Government. Available from https://www.niaa.gov.au/indigenous-affairs/environment/uunguu-ipa-and-rangers [Accessed 08 May 2026].

[NIAA] National Indigenous Australians Agency, n.d.-e. Wilinggin IPA and Wunggurr Rangers. Australian Government. https://www.niaa.gov.au/indigenous-affairs/environment/wilinggin-ipa-and-wunggurr-rangers [Accessed 08 May 2026].

[PDC] Pilbara Development Commission, 2024. Annual Report 2023–2024. Government of Western Australia. Available from: https://www.pdc.wa.gov.au/Profiles/pdc/Assets/ClientData/PDC_Annual_Report_2023-2024_7MB.pdf [Accessed 11 May 2026].

[PDC] Pilbara Development Commission, 2025. Annual Report 2024–2025. Government of Western Australia. Available from: https://www.pdc.wa.gov.au/Profiles/pdc/Assets/ClientData/2025-09-09_PDC_Annual_Report_2024-2025.pdf [Accessed 11 May 2026].

[UWA] University of Western Australia, 2021. Scarborough Pipeline Cultural Heritage Assessment: Establishing Archaeological Potential and Significance. Technical report by UWA for Woodside Energy Limited.

[WAMSI] Western Australian Marine Science Institution, 2025. Knowledge review of Exmouth Gulf and prioritisation of future research. Prepared for the Department of Water and Environmental Regulation by the Western Australian Marine Science Institution. 246 pp. Available from: https://wamsi.org.au/app/uploads/2025/09/WAMSI_Exmouth_Gulf_Knowledge_Review_Report_FINAL_WEB_Spreads_July30_2025.pdf [Accessed 12 May 2026].

[WGAC] Wunambal Gaambera Aboriginal Corporation, 2010. Wunambal Gaambera Healthy Country Plan – Looking after Wunambal Gaambera Country 2010–2020.

[WGAC] Wunambal Gaambera Aboriginal Corporation, 2017. Uunguu Indigenous Protected Area: Wundaagu (Saltwater) Country, Plan of Management 2016–2020.

[Yawuru RNTBC] Yawuru Registered Native Title Body Corporate, 2014. Yawuru IPA – Plan of management 2016–2026. Broome, WA: Yawuru Registered Native Title Body Corporate.

Abascal, F.J., Quintans, M., Ramos-Cartelle, A. and Mejuto, J., 2011. Movements and environmental preferences of the shortfin mako, *Isurus oxyrinchus*, in the southeastern Pacific Ocean. Marine Biology 158: 1175–1184.

Abdul Wahab, M.A., Radford, B., Cappo, M., Colquhoun, J., Stewar, M., Depczynski, M., Miller., K and Heyward, A., 2018. Biodiversity and spatial patterns of benthic habitat and associated demersal fish communities at two tropical submerged reef ecosystems. Coral Reefs 37: 327–343. Available from: https://doi.org/10.1007/s00338-017-1655-9 [Accessed 12 May 2026].

Allen, G.R. and Swainston, R., 1988. The Marine Fishes of North-Western Australia. A Field Guide for Anglers and Divers. Published by the Western Australian Museum, Perth, WA 6000.

Allen, S.J., Cagnazzi, D.D., Hodgson, A.J., Loneragan, N.R. and Bejder, L., 2012. Tropical inshore dolphins of north-western Australia: Unknown populations in a rapidly changing region. Pacific Conservation Biology 18: 56–63. Available from: https://doi.org/10.1071/PC120056 [Accessed 12 May 2026].

Allen, S.J., Tyne, J.A., Kobry, H.T., Bejder, L., Pollock, K.H. and Loneragan, N.R., 2014. Patterns of Dolphin Bycatch in a North-Western Australian Trawl Fishery. PloS ONE 9(4): e93178. Available from: https://doi.org:10.1371/journal.pone.0093178 [Accessed May 2026].

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Alymore, S. and Anderson, S., 2003. Plan of management for the Miaboolya Beach fish habitat protection area. Fisheries Western Australia, Perth. Report No. 161. Available from: https://library.dpird.wa.gov.au/fr_fmp/160 [Accessed 12 May 2026].

Anderson, P.K. and Prince, R.I.T., 1985, Predation on dugongs: attacks by killer whales. Journal of Mammalogy 66(3): 554–556.

Andrews, T. and Buggey, S., 2008. Authenticity in Aboriginal cultural landscapes. APT Bulletin: Journal of Preservation Technology, 39(2–3): 63–72.

Andrzejaczek, S., Gleiss, A.C., Jordan, L.K.B., Pattiaratchi, C.B., Howey, L.A., Brooks, E.J. and Meekan, M.G., 2018. Temperature and the vertical movements of oceanic whitetip sharks, *Carcharhinus longimanus*. Scientific Reports 8, 8351. Available from: https://doi.org/10.1038/s41598-018-26485-3 [Accessed 12 May 2026].

Aston, J.K., Hellmrich, L., Church, D., Bessey, C., Mullins, I.M., Mortimer, N., Crossing, R.C., Scurfield, E., Babcock, R.C., Spencer, C., Gibbons, B.A., Aston, C. and Goetze, J.S., 2026. Effectiveness of a deep water fully protected marine reserve five years after establishment. Marine Environmental Research, 213, 107715. Available from: https://doi.org/10.1016/j.marenvres.2025.107715 [Accessed 12 May 2026].

Aulich, M.G., McCauley, R.D., Miller, B.S., Samaran, F., Giorli, G., Saunders, B.J. and Erbe, C., 2022. Seasonal distribution of the fin whale (*Balaenoptera physalus*) in Antarctic and Australian waters based on passive acoustics. Frontiers in Marine Science, 9, p.864153.

Austin, R.E, De Pascalis, F, Votier, S.C., Haakonsson, J., Arnould, J.P.Y., Ebanks-Petrie, G., Newton, J., Harvey, J. and Green, J.A., 2021. Interspecific and intraspecific foraging differentiation of neighbouring tropical seabirds. Movement Ecology 9:27.

Australian Government Defence, n.d. Unexploded Ordnance Site Information. Available from: https://uxo.defence.gov.au/unexploded-ordnance-site-information [Accessed 12 May 2026].

Australian Heritage Council, 2012. The Potential Outstanding Universal Value of the Dampier Archipelago Site and Threats to that Site. Report by the Australian Heritage Council to the Minister for Sustainability, Environment, Water, Population and Communities. Australian Government, Canberra.

Australian Institute of Aboriginal and Torres Strait Islander Studies, 2026. First Peoples of Australia. Available from: https://aiatsis.gov.au/explore/first-peoples-australia [Accessed 31 Mar 2026].

Australian Maritime Safety Authority, 2013. Australian Government Maritime Safety Authority Annual Report 2012/13. Available at: https://www.amsa.gov.au/sites/default/files/amsa191-annual-report-2012-13.pdf [Accessed 11 May 2026].

Australian Public Service Commission, 2025. Nyul Nyul Indigenous Protected Area. https://www.apsc.gov.au/initiatives-and-programs/workforce-information/research-analysis-and-publications/state-service/state-service-report-2024-25/serving-community/nyul-nyul-indigenous-protected-area [Accessed 31 Mar 2026].

Baird, A.H., Blakeway, D.R., Hurley, T.J. and Stoddart, J.A., 2011. Seasonality of coral reproduction in the Dampier Archipelago, northern Western Australia. Marine Biology, 158, 275–285.

Baker, C., Potter, A., Tran, M. and Heap, A.D., 2008. Sedimentology and Geomorphology of the North-west Marine Region of Australia. Geoscience Australia, Canberra. 24 pp.

Balance, L.T., Ainley, D.G. and Hunt, G.L., 2008. Seabird Foraging Ecology. In: Steele, J., Thorpe, S.A. and Turekian, K.K., eds. Encyclopedia of Ocean Science. 2nd ed. [place unknown]: Elsevier Ltd. p. 2636–2644.

Balanggarra Aboriginal Corporation and Kimberley Land Council, 2011. Balanggarra Healthy Country Plan. Available from: https://www.klc.org.au/s/balanggarra-healthy-country-plan-2012-2022.pdf [Accessed 12 May 2026].

Bamford, M., Watkins, D., Bancroft, W., Tischler, G. and Wahl, J., 2008. Migratory shorebirds of the East Asian-Australasian flyway: population estimates and internationally important sites. Wetlands International – Oceania, Canberra.

Bannister, J., Kemper, C.M. and Warneke, R.M., 1996, The action plan for Australian cetaceans. Australian Nature Conservation Agency, Canberra.

Bannister, J.L. and Hedley, S.L., 2001. Southern hemisphere group IV humpback whales: their status from recent aerial survey. Memoirs of the Queensland Museum 47(2): 587–98.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Barber, M. and Jackson, S., 2011. Water and Indigenous People in the Pilbara, Western Australia: A Preliminary Study.

Bateman, R.L., Morgan, D.L., Wueringer, B.E., McDavitt, M. and Lear, K.O., 2024. Collaborative methods identify a remote global diversity hotspot of threatened, large-bodied rhino rays. Aquatic Conservation: Marine and Freshwater Ecosystems: 34(1).

Bayliss, P. and Hutton, M., 2017. Integrating Indigenous knowledge and survey techniques to develop a baseline for dugong (*Dugong dugon*) management in the Kimberley: Final Report of project 1.2.5 of the Kimberley. Marine Research Program Node of the Western Australian Marine Science Institution, WAMSI, Perth, Western Australia, 98 pp. Available from: Final-Report-WAMSI-KMRP-Dugong-Developing-a-Baseline-for-Dugong-Management-Bayliss-Hutton-1.pdf [Accessed 11 May 2026].

Bednarik, R.G., 2007. The science of Dampier rock art – Part 1. Rock Art Research (24).

Bejder, L., Videsen, S., Hermannsen, L., Simon, M., Hanf, D. and Madsen, P.T., 2019. Low energy expenditure and resting behaviour of humpback whale mother-calf pairs highlights conservation importance of sheltered breeding areas. Scientific Reports 9: 771. Available from: https://doi.org/10.1038/s41598-018-36870-7 [Accessed 12 May 2026].

Benjamin, J., O'Leary, M., McDonald, J., Wisemen, C., McCarthy, J., Beckett, E., Morrison, P., Stankiewicz, F., Leach, J., Hacker, J., Baggaley, P., Jerbic, K., Fowler, M., Fairweather, J., Jefferies, P., Ulm, S. and Bailey, G., 2020. Aboriginal artefacts on the continental shelf reveal ancient drowned cultural landscapes in northwest Australia. PloS ONE 15(7): e0233912. Available at: https://doi.org/10.1371/journal.pone.0233912.

Benjamin, J., O'Leary, M., McCarthy, J., Reynen, W., Wiseman, C., Leach, J., Bobeldyk, S., Buchler, J., Kermeen, P., Langley, M., Black, A., Yoshida, H., Parnum, I., Stevens, A., Ulm, S., McDonald, J., Veth, P. and Bailey, G., 2023. Stone artefacts on the seabed at a submerged freshwater spring confirm a drowned cultural landscape in Murujuga, Western Australia. Quaternary Science Reviews 313: 108190. Available from: https://doi.org/10.1016/j.quascirev.2023.108190 [Accessed 11 May 2026].

Bertolero, A., Oro, D., Martínez Vilalta, A. and Àngel López, M., 2005. Selection of foraging habitats by Little Terns *Sterna albifrons* at the Ebro Delta. Revista Catalana d'Ornitologia 21:37–42.

Berry, P., 1986. Part VIII: Insects, Reptiles, Birds and Seagrasses, Fauna Surveys of the Rowley Shoals, Scott Reef and Seringapatam Reef, North-western Australia. Records of the Western Australian Museum, Supplement No. 25.

Bignell, C.J., Patterson, T.A., Donovan, A., Vanderklift, M.A., Rochester, W., Semmens, J.M. and Pilans, R.D., 2025. Satellite tracking reveals sex-specific differences in the geographical and vertical habitat use of whale sharks, *Rhincodon typus*, in the Eastern Indian Ocean. Marine Biology, 172, 105. Available from: https://doi.org/10.1007/s00227-025-04616-5 [Accessed 11 May 2026].

Birt, M.J., Wilson, S., Sahin, D., Ryan, N., Depczynski, M., Speed, C.W., Travers, M.J. and Gilmour, J., 2025. Taxonomic, trophic and functional change of fishes on oceanic coral reefs with contrasting coral disturbance histories. Coral Reefs. Advance online publication. https://doi.org/10.1007/s00338-025-02761-3.

Blake, I., Butler, I. and Dylewski, M., 2021. Chapter 6: North West Slope Trawl Fishery. In: Fishery status reports 2021, Australian Bureau of Agricultural and Resource Economics and Sciences, Canberra. CC BY 4.0.

Blake, S., Bromhead, D., Patterson, H. and Dylewski, M., 2022. Western Tuna and Billfish Fishery. In: Patterson, H., Bromhead, D., Galeano, D., Larcombe, J., Timmiss, T., Woodhams, J. and Curtotti, R., eds. Fishery Status Reports 2022. Australian Bureau of Agricultural and Resource Economics and Sciences, Canberra. Pp. 326–339.

Blakeway, D.R. and Radford, B., 2005. Scleractinian corals of the Dampier Port and inner Mermaid Sound: species list, community composition and distributional data. In: Stoddart, J.A. and Stoddart, S.E., eds. Corals of the Dampier Harbour: Their survival and reproduction during the dredging programs of 2004. MScience Pty Ltd, Perth, Western Australia, pp. 1–11.

Bouchet, P.J., Thiele, D., Marley, S.A., Waples, K., Weisenberger, F., Balangarra Rangers, Bardi Jawi Rangers, Dambimangari Rangers, Nyamba Buru Yawuru Rangers, Nyul Nyul Rangers, Uunguu Rangers and Raudino, H., 2021. Regional assessment of the conservation status of snubfin dolphins (*Orcaella heinsohni*) in the Kimberley Region, Western Australia. Frontiers in Marine Science 7:article 614852.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Braccini, M. and Blay, N., 2020. Temperate Demersal Gillnet and Demersal Longline Fisheries Resource Status Report 2020. In: Gaughan, D.J. and Santoro, K., eds. Status Reports of the Fisheries and Aquatic Resources of Western Australia 2019/20: The State of the Fisheries. Department of Primary Industries and Regional Development, Western Australia. pp. 214–220.

Braccini, M. and Rynvis, L., 2023. Temperate Demersal Gillnet and Demersal Longline Fisheries Resource Status Report. In: Newman, S.J., Santoro, K.G. and Gaughan, D.J., eds. Status Reports of the Fisheries and Aquatic Resources of Western Australia 2022/23: The State of the Fisheries. Department of Primary Industries and Regional Development, Western Australia. pp 238–244.

Braccini, M. and Rynvis, L., 2024. Temperate Demersal Gillnet and Demersal Longline Fisheries Resource Status Report 2024. In: Newman, S.J., Moore, J. and Gaughan, D.J., eds. State of the fisheries: Status reports of the fisheries and aquatic resources of Western Australia 2023/24. Department of Primary Industries and Regional Development, Western Australia, Perth. https://library.dpird.wa.gov.au/an_sofar/17.

Brewer, D., Lyne, V., Skewes, T. and Rothlisberg, P., 2007. Trophic Systems of the North West Marine Region, Report to the Department of the Environment and Water Resources, CSIRO Marine and Atmospheric Research, Cleveland. 167 pp.

Brown, A., Bejder, L., Cagnazzi, D., Parra, G.J. and Allen, S.J., 2012. The North West Cape, Western Australia: a potential hotspot for Indo-Pacific humpback dolphins *Sousa chinensis*? Pacific Conservation Biology 18: 240−246.

Brown, K. and Skewes, T., 2005. A preliminary assessment of the ecology of seagrasses at Ashmore Reef. In: Russell, B., Larson, H., Glasby, C.J., Willan, R.C. and Martin, J., eds. Understanding the Cultural and Natural Heritage Values and Management Challenges of the Ashmore Region. Proceedings of a Symposium organised by the Australian Marine Sciences Association and the Museum and Art Gallery of the Northern Territory, Darwin, 4–6 April 2001. Museum and Art Galleries of the Northern Territory & Australian Marine Sciences Association, Darwin, NT, pp. 143–152.

Browne, C.E., Erbe, C. and McCauley, R.D., 2025. Omura's whale (*Balaenoptera omurai*) song features and structure in northern Australian waters. JASA Express Letters, 5(7), 071201. Available from: https://doi.org/10.1121/10.0037187 [Accessed 11 May 2026].

Bruce, B.D., 2008. The biology and ecology of the white shark, *Carcharodon carcharias*. In: Camhi, M.D., Pikitch, E.K. and Babcock, E.A. eds. Sharks of the Open Ocean: Biology, Fisheries and Conservation. Blackwell Publishing Limited, Oxford, pp. 69–81.

Bruce, B.D., Stevens, J.D. and Malcolm, H., 2006. Movements and swimming behaviour of white sharks (*Carcharodon carcharias*) in Australian waters. Marine Biology 150: 161–172.

Bruce, C., Strain, L. and Cox, J., 2024. Statewide Specimen Shell Resource Status Report 2024. In: Newman, S.J., Moore, J. and Gaughan, D.J., eds. State of the fisheries: Status reports of the fisheries and aquatic resources of Western Australia 2023/24. Department of Primary Industries and Regional Development, Western Australia, Perth. Available from: https://library.dpird.wa.gov.au/an_sofar/17 [Accessed 11 May 2026].

Buenafe, K.C.V., Neubert, S., Scales, K.L., Dunn, D.C., Everett, J.D., Flower, J., Suthers, I.M., Granados-Dieseldorff, P., Dabala, A., Esturas, K.J.T., Mercer, J. and Richardson, A.J., 2025. Near-global spawning strategies of large pelagic fish. Nature Communications, 16, 8146. Available from: https://doi.org/10.1038/s41467-025-63106-w [Accessed 11 May 2026].

Bulman, C., 2006. Trophic webs and modelling of Australia's North West Shelf. North West Shelf Joint Environmental Management Study, Technical Report No. 9. CSIRO Marine and Atmospheric Research, Hobart. 49 pp.

Burbidge, A.A., Fuller, P., Lane, A.K. and Moore, S., 1987. Counts of Nesting Boobies and Lesser Frigate-birds in Western Australia. Emu 87:128–129.

Burbidge, A.A., Johnstone, R.E. and Fuller P.J., 1996. The status of seabirds in Western Australia. In: Ross, G.J.B., Weaver, K. and Greig, J.C., eds. The Status of Australia's Seabirds: Proceedings of the National Seabird Workshop, Canberra, 1–2 November 1993. Pp. 57–71. Canberra: Biodiversity Group, Environment Australia.

Bureau of Rural Sciences, 2007. Fishery Status Reports 2007. Status of Fish Stocks Managed by the Australian Government. Australian Government Department of Agriculture, Fisheries and Forestry, Bureau of Rural Sciences. 304 pp.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Burger, J., Gochfeld, M. and Bonan, A., 1996. Gulls, Terns, Skimmers (Laridae). In: del Hoyo, J., Elliott, A., Sargatal, J., Christie, D.A. and de Juana, E., eds. Handbook of the Birds of the World Alive Vol 3. Barcelona: Lynx Edicions.

Butler, I., Patterson, H., Bromhead, D., Galeano, D., Timmiss, T., Woodhams, J. and Curtotti, R., 2024. Fishery status reports 2024, Australian Bureau of Agricultural and Resource Economics and Sciences, Canberra. https://doi.org/10.25814/bfnc-9160. CC BY 4.0. [Accessed 12 May 2026].

Butler, I., Patterson, H., Cottrell, R.S., Bromhead, D., Galeano, D., Timmiss, T., Woodhams, J. and Curtotti, R. (eds), 2025. Fishery status reports 2025, Australian Bureau of Agricultural and Resource Economics and Sciences, Canberra. https://doi.org/10.25814/ewe9-4p78. CC BY 4.0. [Accessed 12 May 2026].

Campana, S. and Joyce, W., 2004. Temperature and depth associations of porbeagle shark (*Lamna nasus*) in the northwest Atlantic. Fisheries Oceanography 13(1): 52–64.

Campana, S.E., Joyce, W. and Fowler, M., 2010. Subtropical pupping ground for a cold-water shark. Canadian Journal of Fisheries and Aquatic Sciences 67: 769–773.

Campana, S.E., Marks, L. and Joyce, W., 2005. The biology and fishery of shortfin mako sharks (*Isurus oxyrinchus*) in Atlantic Canadian waters. Fisheries Research 73: 341–352.

Cannell, B., Allen, P.J.D., Wiley, E.M., Radford, B., Surman, C.A. and Ridley, A., 2022. The diet of brown boobies at a globally significant breeding ground is influenced by sex, breeding, sub-colony and year. Marine Ecology Progress Series. 10.3354/meps13895.

Cannell, B. and Surman, A., 2021. Ashmore Reef: seabirds and shorebirds, pages 122–148. In: Keesing, J.K., Webber, B.L. and Hardiman, L.K., eds. Ashmore Reef Marine Park Environmental Assessment. Report to Parks Australia. CSIRO, Crawley Australia.

Cannell, B., Hamilton, S. and Driessen, J., 2019. Wedge-tailed shearwater foraging behaviour in the Exmouth Region. BirdLife Australia and University of Western Australian study. Available from: https://www.birdlife.org.au/documents/wedge-tailed%20shearwater%20foraging%20behaviour.pdf [Accessed 12 May 2026].

Carruthers, T.J.B., Dennison, W.C., Kendrick, G., Waycott, M., Walker, D.I. and Cambridge, M., 2007. Seagrasses of south west Australia: a conceptual synthesis of the world's most diverse and extensive seagrass meadows. Journal of Experimental Marine Biology & Ecology 350: 21–45.

Catry, T., Ramos, J.A., Le Corre, M. and Phillips, R.A., 2009. Movements, at-sea distribution and behaviour of a tropical pelagic seabird: the wedge-tailed shearwater in the western Indian Ocean. Mar Ecol Prog Ser 391:231–242. https://doi.org/10.3354/meps07717.

Ceccarelli, D., McCrea, I., Collis, M. and Nicoll, R., 2011. Australia's Last Great Whale Haven – Cetacean distribution and conservation needs in the north-west marine region. International Fund for Animal Welfare, November 2011. 72 pp.

Cerchio, S., Yamada, T.K. and Brownell Jr, R.L., 2019. Global Distribution of Omura's Whales (*Balaenoptera omurai*) and Assessment of Range-Wide Threats. Frontiers in Marine Science, 6(67). DOI:10.3389/fmars.2019.00067.

Chandrapavan, A., Wilkin, S., How, J. and Brown, S., 2024. Shark Bay Blue Swimmer Crab Resource Status Report 2024. In: Newman, S.J., Moore, J. and Gaughan, D.J., eds. State of the fisheries: Status reports of the fisheries and aquatic resources of Western Australia 2023/24. Department of Primary Industries and Regional Development, Western Australia, Perth. https://library.dpird.wa.gov.au/an_sofar/17.

Charlton, C., Germishuizen, M., O'Shannessy, B., McCauley, R., Vermeulen, E., Seyboth, E., Brownell, R.L. Jr and Burnell, S., 2026. Climate-driven reproductive decline in southern right whales. Scientific Reports, 16, 5352. https://doi.org/10.1038/s41598-026-36897-1.

Chevron Australia, 2019. Jansz-Io Soundscape Monitoring Marine fauna acoustic detections 1 Jan to 31 Dec 2019. Chevron Energy Technology Pty Ltd, Perth, Western Australia.

Chiaradia, A., Dann, P., Jessop, R. and Collins, P., 2002. The diet of crested tern (*Sterna bergii*) chicks on Phillip Island, Victoria, Australia. Emu, 102(4), pp.367–371.

Chidlow, J., Gaughan, D. and McAuley, R., 2006. Identification of Western Australian Grey Nurse Shark Aggregation Sites: Final Report to the Australian Government, Department of the Environment and Heritage.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

In: Fisheries Research and Development Corporation, eds. Fisheries Research Report, Perth, Department of Fisheries, Perth.

Christiansen, F., Uhart, M.M., Bejder, L., Clapham, P., Ivashchenko, Y., Tormosov, D., Lewin, N. and Sironi, M., 2022. Fetal Growth, Birth Size and Energetic Cost of Gestation in Southern Right Whales. The Journal of Physiology 600, 9, 2245–2266.

Christiansen, F., Vivier, F., Charlton, C., Ward, R., Amerson, A., Burnell, S. and Bejder, L., 2018. Maternal Body Size and Condition Determine Calf Growth Rates in Southern Right Whales. Marine Ecology Progress Series 592, 267–281.Fisheries Research Report, Perth, Department of Fisheries, Perth.

Clarke, R.H. and Herrod, A., 2016. The status of seabirds and shorebirds at Ashmore Reef, Cartier Island & Browse Island. Final impact assessment for the Montara Oil Spill. Prepared on behalf of PTTEP Australasia and the Department of the Environment. Monash University, Melbourne, Australia.

Clarke, R.H., 2010. The Status of Seabirds and Shorebirds at Ashmore Reef and Cartier and Browse Islands: Monitoring program for the Montara Well release – Pre-impact Assessment and First Post-impact Field Survey. Prepared on behalf of PTTEP Australasia and the Department of the Environment, Water, Heritage and the Arts, Australia (now the Department of Sustainability, Environment, Water, Population and Communities).

Clarke, R.H., Carter, M., Swann, G. and Thomson, J., 2011. The status of breeding seabirds and herons at Ashmore Reef, off the Kimberley coast, Australia. Journal of the Royal Society of Western Australia, 94: 365–376.

Clarkson, C., Jacobs, Z., Marwick, B., Fullagar, R., Wallis, L., Smith, M., Roberts, R., Hayes, E., Lowe, K., Carah, X., Florin, S., McNeil, J., Cox, D., Arnold, L., Hua, Q., Huntley, J., Brand, H., Manne, T., Fairbairn, A., Shulmeister, J., Lyle, L., Salinas, M., Page, M., Connell, K., Park, G., Norman, K., Murphy, T. and Pardoe, C., 2017. Human occupation of northern Australia by 65,000 years ago. Nature (547) 306–310. https://doi.org/10.1038/nature22968.

Cleguer, C. and Marsh, H., 2023. An inventory of dugong aerial surveys in Australia. Report to the National Environmental Science Program. Centre for Tropical Water and Aquatic Ecosystem Research, Report 23/15, James Cook University. pp. 48. Available from: https://www.nespmarinecoastal.edu.au/wp-content/uploads/2023/09/Project-1.20-Final-report-dugongs.pdf [Accessed 12 May 2026].

Cliff, G. and Wilson, G., 1994. Natal Sharks Board's guide to sharks and other marine animals. Natal Sharks Board, 33 pp.

Commonwealth of Australia, 2002a. Ningaloo Marine Park (Commonwealth Waters) Management Plan. Environment Australia, Canberra.

Commonwealth of Australia, 2002b. Ashmore Reef National Nature Reserve and Cartier Island Marine Reserve (Commonwealth Waters) Management Plans. Environment Australia, Canberra.

Commonwealth of Australia, 2006a. A guide to the Integrated Marine and Coastal Regionalisation of Australia version 4.0. Department of Environment and Heritage, Canberra, Australia. 16 pp.

Commonwealth of Australia, 2006b. Inclusion of a place in the National Heritage List, Dirk Hartog Landing and Cape Inscription Area, Western Australia. Gazette Special. Published Thursday, 6 April 2006.

Commonwealth of Australia, 2007. Inclusion of a place in the National Heritage List, Dampier Archipelago (including Burrup Peninsula), Western Australia. Gazette Special. Published Tuesday, 3 July 2007.

Commonwealth of Australia, 2010. Inclusion of a place in the National Heritage List, The Ningaloo Coast. Gazette Special. Published Wednesday 6 Jan 2010. Available from: https://www.dcceew.gov.au/sites/default/files/env/pages/96f9d558-fd97-4022-9e63-82c0e18349a1/files/10588104.pdf [Accessed 12 May 2026].

Commonwealth of Australia, 2011a. Inclusion of a place in the National Heritage List, The West Kimberley. Gazette Special. Published 31 Aug 2011. Available from: https://www.environment.gov.au/heritage/laws/publicdocuments/pubs/106063_gazette_place_inclusion_20110831.pdf [Accessed 12 May 2026].

Commonwealth of Australia, 2011b. Inclusion of a place in the Commonwealth Heritage List, HMAS Sydney II and HSK Kormoran Shipwreck Sites. Gazette Special. Published 14 March 2011.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Commonwealth of Australia, 2015a. Conservation Management Plan for the Blue Whale: A Recovery Plan under the *Environment Protection and Biodiversity Conservation Act 1999* 2015-2025. Canberra, ACT: Commonwealth of Australia. Available from: http://www.environment.gov.au/biodiversity/threatened/publications/recovery/blue-whale- conservation-management-plan [Accessed 12 May 2026].

Commonwealth of Australia, 2015b. Sawfish and River Sharks Multispecies Recovery Plan. Canberra, ACT: Commonwealth of Australia. Available from: http://www.environment.gov.au/biodiversity/threatened/publications/recovery/sawfish-river-sharks-multispecies-recovery-plan [Accessed 12 May 2026].

Commonwealth of Australia, 2015c. Wildlife Conservation Plan for Migratory Shorebirds. Canberra, ACT: Commonwealth of Australia. Available from: https://www.environment.gov.au/system/files/resources/9995c620-45c9-4574-af8e-a7cfb9571deb/files/widlife-conservation-plan-migratory-shorebirds.pdf [Accessed 12 May 2026].

Commonwealth of Australia, 2017. Recovery Plan for Marine Turtles in Australia. Australian Government, Canberra. Available from: http://www.environment.gov.au/marine/publications/recovery-plan-marine-turtles-australia-2017 [Accessed 12 May 2026].

Commonwealth of Australia, 2018. Threat Abatement Plan for the incidental catch (or bycatch) of seabirds during oceanic longline fishing operations (2018). Canberra, ACT: Department of the Environment and Energy. Available from: http://www.antarctica.gov.au/about-antarctica/environment/plants-and-animals/threat-abatement-plan-seabirds. In effect under the EPBC Act from 10-Nov-2018.

Commonwealth of Australia, 2020a. Wildlife Conservation Plan for Seabirds. Canberra, ACT: Commonwealth of Australia. Available from: https://www.dcceew.gov.au/environment/biodiversity/publications/wildlife-conservation-plan-seabirds-2022 [Accessed 12 May 2026].

Commonwealth of Australia, 2020b. National Recovery Plan for the Australian Fairy Tern (*Sternula nereis nereis*). Department of Agriculture, Water and the Environment, Canberra. Available from: http://www.dcceew.gov.au/environment/biodiversity/threatened/publications/recovery/fairy-tern-2022 [Accessed 12 May 2026].

Commonwealth of Australia, 2021. Indian Ocean Territories Marine Parks. Parks Australia. Available from: https://parksaustralia.gov.au/marine/parks/indian-ocean-territories/ [Accessed 12 May 2026].

Condie, S.A., Andrewartha, J., Mansbridge, J. and Waring, J.R., 2006. Modelling circulation and connectivity on Australia's North West Shelf, Technical Report No. 6, North West Shelf Joint Environmental Management Study, CSIRO Marine and Atmospheric Research, Hobart, Tasmania.

Convention on Biological Diversity, 2015. Ecologically or Biologically Significant Marine Areas. Spawning area of Southern Bluefin Tuna. Marine EBSA. CHM-EBSA-SCBD-204023-2. Available at: https://chm.cbd.int/en/database/record?documentID=204023 [Accessed 11 May 2026].

Corrigan, S., Lowther, A.D., Beheregaray, L.B., Bruce, B.D., Cliff, G., Duffy, C.A., Foulis, A., Francis, M.P., Goldsworthy, S.D., Hyd, J.R., Jabado, R.W., Kacev, D., Marshall, L., Mucientes, G.R., Naylor, G.J.P., Pepperell, J.G., Queiroz, N., Whit, W.T., Wintner, S.P. and Rogers, P.J., 2018. Population Connectivity of the Highly Migratory Shortfin Mako (*Isurus oxyrinchus Rafinesque* 1810) and Implications for Management in the Southern Hemisphere. Conservation and Restoration Ecology 6.

Crawford, R., Cooper, J., Dyer, B., Upfold, L. Venter, A.D., Whittington, P., Williams, A.J. and Wolfaardt, A., 2002. Longevity, inter-colony movements and breeding of Crested Terns in South Africa. Emu. 102. 10.1071/MU01009.

Currey-Randall, L.M., Galaiduk, R., Stowar, M., Vaughan, B.I. and Miller K.J., 2021. Mesophotic fish communities of the ancient coastline in Western Australia. PloS ONE 16(4): e0250427. https://doi.org/10.1371/journal.pone.0250427.

Curtin University, 2025. Murujuga Rock Art Monitoring Program: Interim Environmental Quality Criteria. Submitted to the Murujuga Aboriginal Corporation and the Department of Water and Environmental Regulation, Government of Western Australia. DWER COPP21065-REP-G-107, revision 1.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

D'Anastasi, B., Simpfendorfer, C.A. and van Herwerden, L., 2013. In: The IUCN Red List of Threatened Species. Version 2013.2. *Anoxypristis cuspidata* (narrow sawfish). Available from: http://www.iucnredlist.org/details/39389/0 [Accessed 11 May 2026].

D'Antonio, B., Ferreira, L.C., Meekan, M., Thomson, P.G., Lieber, L., Virtue, P., Power, C., Pattiaratchi, C.B., Brierley, A.S., Sequeira, A.M.M. and Thums, M., 2024. Links between the three-dimensional movements of whale sharks (*Rhincodon typus*) and the bio-physical environment off a coral reef. Movement Ecology, 12(10). https://doi.org/10.1186/s40462-024-00452-2.

D'Antonio, B., Ferreira, L., Fisher, R., Thums, M., Pattiaratchi, C.B., Sequeira, A.M.M., Faubel, S., Norman, B. and Meekan, M., 2025. Natural and artificial structures influence the movement and habitat connectivity of whale sharks (*Rhincodon typus*) across seascapes. Diversity and Distributions, 31(1), e13950. https://doi.org/10.1111/ddi.13950.

D'Cruz, A., Salgado Kent, C., Waples, K., Brown, A.M., Marley, S.A., Thiele, D. and Raudino, H.C., 2022. Ranging Patterns and Site Fidelity of Snubfin Dolphins in Yawuru Nagulagun/Roebuck Bay, Western Australia. Frontiers in Marine Science, 8. https://doi.org/10.3389/fmars.2021.758435.

Dambimangari Aboriginal Corporation, 2012. Dambimangari Healthy Country Plan 2012–2022.

Dawson, C.E., 1985. Indo-Pacific pipefishes (Red Sea to the Americas). Gulf Coast Research Laboratory, Ocean Springs, Mississippi, USA.

De Lestang, S. and Walsh, A., 2024. West Coast Rock Lobster Resource Status Report 2024. In: Newman, S.J., Moore, J. and Gaughan, D.J., eds. State of the fisheries: Status reports of the fisheries and aquatic resources of Western Australia 2023/24. Department of Primary Industries and Regional Development, Western Australia, Perth. https://library.dpird.wa.gov.au/an_sofar/17.

Debens, H.A., McCorry, D., Sidenko, E., Erbe, C., Collet, O., Pevzner, R. and Gurevich, B., 2024. Whale detection and microseismic monitoring via distributed acoustic sensing using submarine telecommunications cables – a case study from the NWS, Western Australia. Australian Energy Producers Journal 64 (S1), S481-486. https://doi.org/10.1071/EP23268.

Del Hoyo, J., Elliott, A. Christie, D.A. and Sargatal, J., 1996. Handbook of the Birds of the World: Hoatzin to Auks. Barcelona: Lynx Edicions.

Department of Defence, n.d. Base locations, Australian Government. Available from: https://www.defence.gov.au/about/base-locations [Accessed 08 May 2026].

Department of Environment and Heritage, 2004. Assessment of the Onslow and Nickol Bay Prawn Managed Fisheries, November 2004. 24 pp.

Depczynski, M. and Bellwood, D.R., 2003. The role of cryptobenthic reef fishes in coral reef trophodynamics. Mar Ecol Prog Ser 256:183–191.

Desfosses, C., Smith, K.A., Strain, L., Murphy, D., Hogan-West, K., Yeoh, D., Burchert, S., Wiberg, L., Oliver, R., Crisafulli, B, and Mitsopoulos, G., 2024. Ecological Risk Assessment for the Western Australian Cephalopod Resource. Fisheries Research Report No. 342. Department of Primary Industries and Regional Development, Western Australia. 88 pp.

Done, T.J., Williams, D.McB., Speare, P.J., Davidson, J., DeVantier, L.M., Newman, S.J. and Hutchins, J.B., 1994. Surveys of coral and fish communities at Scott Reef and Rowley Shoals. Australian Institute of Marine Science, Townsville.

Double, M., Gales, N., Jenner, K. and Jenner, M., 2010. Satellite tracking of south-bound female humpback whales in the Kimberley region of Western Australia. Australian Marine Mammal Centre, Hobart.

Double, M., Jenner, K., Jenner, M., Ball, I., Childerhouse, S., Loverick, S. and Gales, N., 2012. Satellite tracking of northbound humpback whales (*Megaptera novaeangliae*) off Western Australia. Australian Marine Mammal Centre, Hobart.

Double, M.C., Andrews-Goff, V., Jenner, K.C.S., Jenner, M.N., Laverick, S.M., Branch, T.A. and Gales, N.J., 2014. Migratory movements of pygmy blue whales (*Balaenoptera musculus brevicauda*) between Australia and Indonesia as revealed by satellite telemetry. PloS One, 9(4), p.e93578.

Driessen, J., Kidd, L.R., Weller, D.R., Purnell, C., Maguire, G., Jaensch, R. and LeClair, S.M., 2026. Australian National Directory of Important Migratory Shorebird Habitat. BirdLife Australia; Department of Climate Change, Energy, the Environment and Water.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Dunlop, J.N., 1997. Foraging ranges marine habitat and diet of bridled terns breeding in Western Australia. Corella. 21 (3): 77-82.

Dunlop, J.N., 2018. Fairy Tern (*Sternula nereis*) conservation in south-western Australia. Second Edition. Conservation Council (WA): Perth.

Dunlop, J.N., Surman, C.A. and Wooller, R.D., 2001. The marine distribution of seabirds from Christmas Island, Indian Ocean, Emu – Austral Ornithology, 101:1, 19–24.

Dunlop, J. and McNeill, S. 2017. Local movements, foraging patterns, and heavy metals exposure in Caspian Terns *Hydroprogne caspia* breeding on Penguin Island, Western Australia. Marine Ornithology 45:115–120.

Dunlop, J.N. and Greenwell, C., 2022. A long-tern view: distribution of small terns (*Sternula*) in Western Australia and implications for their conservation. Pacific Conservation Biology doi:10.1071/PC22016.

Edwards, C.M., Syme, J. and Parra, G.J., 2025. Association patterns of Indo-Pacific Bottlenose Dolphins (*Tursiops aduncus*) in waters off the North West Cape, Western Australia. Marine Mammal Science, e70017. https://doi.org/10.1111/mms.70017.

Environmental Resources Management, 2009. Browse LNG Development: Social Study on Indonesian Fishers (Phase 2) 2008. Report produced for Woodside Energy Limited.

Evans, S.N., Konzewitsch, N. and Bellchambers, L.M., 2022. Houtman Abrolhos Islands Fish Habitat Protection Area: A Summary of Marine Resource Use and Ecological Attributes. Fisheries Research Report No. 321. Department of Primary Industries and Regional Development, Western Australia. 174pp.

Evans, S.N., Konzewitsch, N., Hovey, R.K., Kendrick, G.A. and Bellchambers, L.M., 2025. Selecting the best habitat mapping technique: a comparative assessment for fisheries management in Exmouth Gulf. Frontier Marine Science, 12, 1570277. https://doi.org/10.3389/fmars.2025.1570277.

Fairclough, D. and Walters, S., 2018. West Coast Demersal Scalefish Resource Status Report 2018. In: Status Reports of the Fisheries and Aquatic Resources of Western Australia 2017/18: The State of the Fisheries. Gaughan, D.J. and Santoro, K., eds. Department of Primary Industries and Regional Development, Western Australia. pp. 56–62.

Falkner, I., Whiteway, T., Przeslawski, R. and Heap, A.D., 2009. Review of ten key ecological features in the North-west Marine Region. Record 2009/13, Geoscience Australia, Canberra.

Farr, H., 2025. 72% and rising: exploring the archaeological potential of the submerged continental shelf. In: Part 5. Bringing Submerged Site Archaeology to the Surface: Theoretical and Methodological Challenges of Integrating Terrestrial and Underwater Records, pp 207-221. Available from: https://eprints.soton.ac.uk/500643/1/UMMAA_Part_5_session_4_003_.pdf [Accessed May 2026].

Ferreira, L.C., Thums, M., Fossette, S., Wilson, P., Shimada, T., Tucker, A.D., Pendoley, K., Waayers, D., Guinea, M.L., Loewenthal, G., King, J., Speirs, M., Rob, D. and Whiting, S.D., 2021. Multiple satellite tracking datasets inform green turtle conservation at a regional scale. Diversity and Distributions 27(2): 249–266. https://doi.org/10.1111/ddi.13197.

Ferreira, L.C., Davenport, A., Jenner, M., Jenner, C. and Thums, M., 2024. Technical note: cetacean sightings and observations made during the 2023 pygmy blue whale field work off Western Australia. A document prepared for Woodside Energy Ltd. Australian Institute of Marine Science, Perth (8 pp.).

Field, I.C., Charters, R., Buckworth, R.C., Meekan, M.G. and Bradshaw, C.J.A., 2008. Distribution and abundance of *Glyphis* and sawfishes in northern Australia and their potential interactions with commercial fisheries. Report to Australian Government, Department of the Environment, Water, Heritage and the Arts. Canberra. 39 pp.

Fisher, E., Fairclough, D. and Watt, M., 2024. West Coast Demersal Scalefish Resource Status Report 2024. In: Newman, S.J., Moore, J. and Gaughan, D.J., eds. State of the fisheries: Status reports of the fisheries and aquatic resources of Western Australia 2023/24. Department of Primary Industries and Regional Development, Western Australia, Perth. https://library.dpird.wa.gov.au/an_sofar/17.

Fletcher, W.J. and Santoro, K. (eds), 2009. State of the fisheries report 2008/09. Western Australian Department of Fisheries, Perth.

Fletcher, W.J. and Santoro, K. (eds), 2015. Status Reports of the Fisheries and Aquatic Resources of Western Australia 2014/15: The State of the Fisheries. Department of Fisheries, Western Australia.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Fossette, S., Ferreira, L.C., Whiting, S.D., King, J., Pendoley, K., Shimada, T., Speirs, M., Tucker, .A.D, Wilson, P. and Thums, M., 2021a. Movements and distribution of hawksbill turtles in the Eastern Indian Ocean. Global Ecology and Conservation. 29. https://doi.org/10.1016/j.gecco.2021.e01713.

Fossette, S., Loewenthal, G., Peel, L.R., Vitenbergs, A., Hamel, M.A., Douglas, C., Tucker, A.D., Mayer, F. and Whiting, S.D., 2021b. Using Aerial Photogrammetry to Assess Stock-Wide Marine Turtle Nesting Distribution, Abundance and Cumulative Exposure to Industrial Activity. Remote Sensing. 13(6): 1116. https://doi.org/10.3390/rs13061116.

Francis, M., Natanson, L. and Campana, S., 2002. The Biology and Ecology of the Porbeagle Shark, *Lamna nasus*. In: Camhi, M., Pikitch, E. and Babcock, E., eds. Sharks of the Open Ocean: Biology, Fisheries and Conservation: 105–113.

Fromont, J., Abdul Wahab, M.A., Gomez, O., Ekins, M., Grol, M. and Hooper, J.N.A., 2016. Patterns of sponge biodiversity in the Pilbara, north western Australia. Diversity, 8(4), Article 21. https://doi.org/10.3390/d8040021.

Fromont, J., 2003. Porifera (sponges) in the Dampier Archipelago: Taxonomic affinities and biogeography. In: Wells, F.E., Walker, D.I. and Jones, D.S., eds. Proceedings of the Eleventh International Marine Biological Workshop: The marine flora and fauna of Dampier, Western Australia (pp. 405–417). Western Australian Museum.

Fromont, J., 2004. Porifera (sponges) of the Dampier Archipelago, Western Australia: Habitats and distributions. Records of the Western Australian Museum, Supplement No. 66, 69–100.

Gaughan, D.J. and Santoro, K. (eds), 2018. Status Reports of the Fisheries and Aquatic Resources of Western Australia 2016/17: The State of the Fisheries. Department of Primary Industries and Regional Development, Western Australia.

Gaughan, D.J. and Santoro, K. (eds), 2020. Status Reports of the Fisheries and Aquatic Resources of Western Australia 2018/19: The State of the Fisheries. Department of Primary Industries and Regional Development, Western Australia.

Gelsleichter, J., Musick, J.A. and Nichols, S., 1999. Food habits of the smooth dogfish, *Mustelus canis*, dusky shark, *Carcharhinus obscurus*, Atlantic sharpnose shark, *Rhizoprionodon terraenovae*, and the sand tiger, *Carcharias taurus*, from the northwest Atlantic Ocean. Environmental Biology of Fishes 54: 205–217.

Geoscience Australia, 2026. Australian Marine Spatial Information System Advanced Map Viewer. Department of Climate Change, Energy, the Environment and Water. Australian Government. Available from: https://amsis-geoscience-au.hub.arcgis.com/ [Accessed on 18 Mar 2026].

Gerrans, M., Langlois, T.J., Spencer, C., Gibbons, B. and Griffin, K.J., 2025. Investigating fish-habitat associations on mesophotic reefs using stereo-BRUVS. Austral Ecology, 50(7), e70096. https://doi.org/10.1111/aec.70096.

Gilmour, J., Sahin, D., Ryan, N. and Birt, M., 2023. Long Term Monitoring of Coral and Fish Communities at Scott Reef and Rowley Shoals: 2021. Report prepared for Woodside Energy Limited. Australian Institute of Marine Science, Perth (50 pp).

Gilmour, J.P., Cook, K.L., Ryan, N.M., Puotinen, M.L., Green, R.H., Shedrawi, G., Hobbs, J.P.A., Thomson, D.P., Babcock, R.C., Buckee, J. and Foster, T., 2019. The state of Western Australia's coral reefs. Coral Reefs, 38: 651–667.

Gilmour, J.P., Smith, L.D., Heyward, A.J., Baird, A.H. and Pratchett, M.S., 2013. Recovery of an isolated coral reef system following severe disturbance. Science 340(6128): 69–71.

Gilmour, J.P., Speed, C.W. and Babcock, R., 2017. Coral reproduction in Western Australia. Report of Theme 7 – Project 7.2 prepared for the Dredging Science Node, Western Australian Marine Science Institution, Perth, Western Australia, 85 pp.

Gilmour, J.P., Travers, M.J., Underwood, J.N., McKinney, D.W., Gates, E.N., Birrell, C.L. and Fitzgerald, K.L., 2008. The Status of Shallow-Water Coral and Fish Communities at Scott Reef: 2008. Report to the Browse Joint Venture Partners. AIMS, Perth, Western Australia. 66 pp.

Gilmour, J.P., Travers, M.J., Underwood, J.N., McKinney, D.W., Gates, E.N., Fitzgerald, K.L. and Birrell, C.L., 2009. Long-Term Monitoring of Shallow-Water Coral and Fish Communities at Scott Reef. AIMS Document SRRP-RP-RT-024. Project 1 Technical Report to Woodside Energy Ltd as agent for the Browse Joint Venture Partners. Australian Institute of Marine Science, Perth, Western Australia. 64 pp.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Gischler, E., 2025. Sediment distribution and facies of modern tropical reefs and carbonate platforms revisited: A global perspective. Sedimentary Geology, 486, 106929. https://doi.org/10.1016/j.sedgeo.2025.106929.

Goldsworthy, S.D., Shaughnessy, P.D., MacKay, A.I., Bailleul, F., Holman, D., Lowther, A.D., Page, B., Waples, K., Raudino, H., Bryars, S. and Anderson, T., 2021. Assessment of the status and trends in abundance of a coastal pinniped, the Australian sea lion, *Neophoca cinerea*. Endangered Species Research 44: 421–437.

Government of Western Australia, 2023. Murujuga Rock Art Monitoring Program: Monitoring Studies Report 2023. Available at: https://www.wa.gov.au/system/files/2023-12/murujuga-rock-art-monitoring-program-monitoring-studies-report-2023.pdf [Accessed 11 May 2026].

Government of Western Australia, 2025. Exmouth Gulf Taskforce. Final Report to the Minister for the Environment. Available from: https://www.wa.gov.au/system/files/2025-09/exmouth-gulf-final-report.pdf [Accessed 11 May 2026].

Green, R.H., Jones, N.L., Rayson, M.D., Lowe, R.J., Bluteau, C.E. and Ivey, G.N., 2019. Nutrient fluxes into an isolated coral reef atoll by tidally driven internal bores. Limnology and Oceanography, 64(2), 461–473. https://www.jstor.org/stable/26629523.

Greenwell, C., 2021. Life history, ecology, and population dynamics of the Australian Fairy Tern and implications for their conservation. Research thesis, Murdoch University, Perth, Western Australia.

Griffith, J.K., 2004. Scleractinian corals collected during 1998 from the Dampier Archipelago, Western Australia. Records of the Western Australian Museum, Supplement 66, 101–120.

Guinea, M.L., 2006. Sea Turtles, Sea Snakes and Dugongs of Scott Reef, Seringapatam Reef and Browse Island with Notes on West Lacepede Island. Report to URS, Charles Darwin University.

Guinea, M.L., 2007a. Marine snakes: species profile for the north-western planning area, report for the Australian Government Department of the Environment, Water, Heritage and the Arts, Charles Darwin University, Northern Territory.

Guinea, M.L., 2007b. Final report survey March 16 to April 2 2007: sea snakes of Ashmore Reef, Hibernia Reef and Cartier Island with comments on Scott Reef, Charles Darwin University, Darwin.

Guinea, M.L., 2009. Long Term Marine Turtle Monitoring at Scott Reef. Report prepared for Woodside Pty Ltd.

Guinea, M.L. and Whiting, S.D., 2005. Insights into the distribution and abundance of sea snakes at Ashmore Reef. The Beagle (Supplement 1): 199–206.

Guinea, M., 2011. Long term monitoring of the marine turtles of Scott Reef satellite tracking of green turtles from Scott Reef #1 (p. 35). Appendix F27. Report prepared by Sinclair Knight Merz. Browse LNG Development.

Hadiyanto, H., Prince, J. and Hovey, R.K., 2025. Modelling present and future distribution of intertidal macroalgae to evaluate the efficacy of Western Australia's marine protected areas. Biodiversity and Conservation, 34, 1335–1363. https://doi.org/10.1007/s10531-025-03020-1

Hallegraeff, G.M., 1995. Marine phytoplankton communities in the Australian region: current status and the future threats. Our sea, our future: major findings of the State of the Marine Environment Report for Australia. Great Barrier Reef Marine Park Authority, Canberra, Australia.

Hallenburger, M., Reuning, L., Takayanagi, H., Iryu, Y., Keul, N., Ishiwa, T. and Yokoyama, Y., 2022. The pteropod species *Heliconoides inflatus* as an archive of late Pleistocene to Holocene environmental conditions on the North West Shelf Australia. Progress in Earth and Planetary Science 9:49. https://doi.org/10.1186/s40645-022-00507-1.

Hanf, D., Hunt, T. and Parra, G.J., 2016. Humpback dolphins of Western Australia: a review of current knowledge and recommendations for future management. Advances in Marine Biology 73: 193–218. https://doi.org.10.1016/bs.amb.2015.07.004.

Hanf, D.M., 2015. Species Distribution Modelling of Western Pilbara Inshore Dolphins. Masters Research thesis. Murdoch University, Perth, Western Australia.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Hanson, C.E., Pattiaratchi, C.B. and Waite, A.M., 2005. Seasonal production regimes off south- western Australia: influence of the Capes and Leeuwin Currents on phytoplankton dynamics. Marine and Freshwater Research 56(7): 1011–1026.

Hanson, C.E., Waite, A.M., Thompson, P.A., and Pattiaratchi, C.B., 2007. Phytoplankton community structure and nitrogen nutrition in Leeuwin Current and coastal waters off the Gascoyne region of Western Australia. Deep Sea Research Part II: Topical Studies in Oceanography 54(8–10): 902–924.

Harris, P., Heap, A., Passlow, V., Sbaffi, L., Fellows, M., Porter-Smith, R., Buchanan, C. and Daniell, J., 2005. Geomorphic Features of the Continental Margin of Australia. Geoscience Australia, Record 2003/30, 142 pp.

Harris, P.T., Heap, A., Marshall, J., Hemer, M., Daniell, J., Hancock, A., Buchanan, C., Brewer, D. and Heales, D., 2007. Submerged coral reefs and benthic habitats of the southern Gulf of Carpentaria: post survey report GA survey 276, RV Southern Surveyor, Record 2007/02, Geoscience Australia, Canberra.

Harris, D., Johnston, D., Maus, C., Brooks, B. and Cox, J., 2024. North Coast Crab Resource Status Report 2024. In: Newman, S.J., Moore, J. and Gaughan, D.J., eds. State of the fisheries: Status reports of the fisheries and aquatic resources of Western Australia 2023/24. Department of Primary Industries and Regional Development, Western Australia, Perth. https://library.dpird.wa.gov.au/an_sofar/17.

Hart, A., Murphy, D. and Wright, L., 2021. Pearl Oyster Managed Fishery Resource Status Report. In: Status Reports of the Fisheries and Aquatic Resources of Western Australia 2020/21: The State of the Fisheries eds. Newman, S.J., Wise, B.S., Santoro, K.G. and Gaughan, D.J. Department of Primary Industries and Regional Development, Western Australia. pp. 167–170.

Hart, A., Murphy, D. and Steele, A., 2023a. Sea Cucumber Resource Status Report. In: Newman, S.J., Wise, B.S., Santoro, K.G. and Gaughan, D.J., eds. Status Reports of the Fisheries and Aquatic Resources of Western Australia 2021/2022: The State of the Fisheries Department of Primary Industries and Regional Development, Western Australia. pp. 180–191.

Hart, A., Murphy, D. and Blay, N., 2023b. West Coast Octopus Resource Status Report. In: Newman, S.J., Wise, B.S., Santoro, K.G. and Gaughan, D.J., eds. Status Reports of the Fisheries and Aquatic Resources of Western Australia 2021/2022: The State of the Fisheries Department of Primary Industries and Regional Development, Western Australia. pp. 58–62.

Hassell, C.J., 2003. A bird survey with the Australian Quarantine Inspection Service of some Kimberley islands and Ashmore Reef. Unpubl. Report to Australian Quarantine Service.

Haughey, R., Hunt, T.N., Hanf, D., Passadore, C., Baring, R. and Parra, G.J., 2021. Distribution and Habitat Preferences of Indo-Pacific Bottlenose Dolphins (*Tursiops aduncus*) Inhabiting Coastal Waters With Mixed Levels of Protection. Frontiers in Marine Science 8:617518. doi: 10.3389/fmars.2021.617518.

Haughey, R., Hunt, T.N., Hanf, D., Passadore, C., Baring, R. and Parra, G.J., 2025. Behavioural processes under lying the habitat selection of Indo-Pacific Bottlenose dolphins (*Tursiops aduncus*) in the Ningaloo Marine Park and Exmouth Gulf, at the North West Cape, Western Australia. Aquatic Conservation Marine and Freshwater Ecosystems, 35(40), e70114. https://doi.org/10.1002/aqc.70114.

He, K., Zhu, Z.X., Jin, T., Feng, J.Y., Zhou, X., Wei, L. and Liu, B., 2025. Migration Ecology and Protection of Stopover sites of the Whimbrels along China's Coastal. Ecology and Evolution, 15, e71890. https://doi.org/10.1002/ece3.71890.

Heck Jr., K.L., Hays, G. and Orth, R.J., 2003. Critical evaluation of the nursery role hypothesis for seagrass meadows. Marine Ecology Progress Series 253: 123–136.

Hedley, S.L., Bannister, J.L. and Dunlop, R.A., 2011. Abundance estimates of Breeding Stock 'D' humpback whales from aerial and land-based surveys off Shark Bay, Western Australia, 2008. Journal of Cetacean Research Management (special issue 3): 209–21.

Heyward, A.J., Halford, A.R., Smith, L.D. and Williams, D.M., 1997. Coral reefs of north west Australia: baseline monitoring of an oceanic reef ecosystem. In: Proceedings on 8th International Coral Reef Symposium 1: 289–294.

Heyward, A.J., Revill, A.T. and Sherwood, C.R., 2000. Review of Research and Data Relevant to Marine Environmental Management of Australia's North West Shelf, Produced for the Western Australian Department of Environmental Protection. (Unpublished report).123 pp.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Heyward, A.J., Negri, A.P, *et al*., 2000. Studies on coral spawning, fertilisation, and larval ecology in north western Australia. Australian Institute of Marine Science, Dampier.

Heyward, A.J. and Radford, B., 2019. Northwest Australia. In: Loya, Y., Puglise, K. and Bridge, T., eds. Mesophotic Coral Ecosystems. Corals Reefs of the World, Volume 12, p 337–349. https://link.springer.com/book/10.1007/978-3-319-92735-0.

Hickey, S.M., Stone, A., Radford, B. and Lovelock, C.E., 2025. Multidecadal mapping of arid intertidal ecosystems reveals a dynamic mosaic of habitats north-western Australia. Estuarine, Coastal and Shelf Science, 323, 109401. https://doi.org/10.1016/j.ecss.2025.109401.

Higgins, P.J. and Davies, S.J.J.F. (eds), 1996. Handbook of Australian, New Zealand and Antarctic Birds. Volume 3: Snipe to Pigeons. Oxford University Press, Melbourne.

Holley, D.K., Lawler, I.R. and Gales, N.J., 2006. Summer survey of dugong distribution and abundance in Shark Bay reveals additional key habitat area. Wildlife Research 33: 243–250. https://doi.org/10.1071/WR05031.

Holloway, P., 2001. A regional model of the semidiurnal internal tide on the Australian North West Shelf. Journal of Geophysical Research 106: 19625–19638.

Holloway, P. and Nye, H.C., 1985. Leeuwin Current and wind distributions on the southern part of the Australian North West Shelf between January 1982 and July 1983. Australian Journal of Marine and Freshwater Research 36: 123–137.

Hoschke, A.M., Whisson, G.J. and Haulsee, D., 2023. Population distribution, aggregation sites and seasonal occurrence of Australia's western population of the grey nurse shark *Carcharias taurus*. Endangered Species Research 50:107–123.

Hounslow, J.L., Fossette, S., van Rooijen, A., Tucker, A.D., Whiting, S.D. and Gleiss, A.C., 2025. Incorporating fine-scale behaviors into habitat suitability modelling: A case study for sea turtles. Ecological Applications, 35(6), e70095. Available at: https://doi.org/10.1002/eap.70095.

Howey-Jordan, L.A., Brooks, E.J., Abercrombie, D.L., Jordan, L.K., Brooks, A., Williams, S., Gospodarczyk, E. and Chapman, D.D., 2013. Complex movements, philopatry and expanded depth range of a severely threatened pelagic shark, the oceanic whitetip (*Carcharhinus longimanus*) in the western North Atlantic. PloS One 8:e56588. https://doi:10.1371/journal.pone.0056588.

Hu, Y.W., Wang, C.Z. and Wang, X.H., 2025. Geographically dependent coastal marine heatwaves: Insights from coastal seas around a semi-enclosed bay. Advances in Climate Change Research, 16, 1191–1205. https://doi.org/10.1016/j.accre.2025.09.012.

Hunt, T.N., Bejder, L., Allen, S.J., Rankin, R.W., Hanf, D. and Parra, G.J., 2017. Demographic characteristics of Australian humpback dolphins reveal important habitat toward the southwestern limit of their range. Endangered Species Research 32: 71–88. https://doi.org/10.3354/esr00784.

Hutchings, M.J., Parra, G.J., Totterdell, J.A., Wellard, R., Donnelly, D.M., Sandoval-Castillo, J. and Möller, L., 2025. Species Distribution Modeling of Killer Whales (*Orcinus orca*) in Australian Waters. Ecology and Evolution, 15(7), e71359. https://onlinelibrary.wiley.com/doi/10.1002/ece3.71359.

Isaac, J., Mouda, R., Barrett, D., Gould, J., Smyth, D. and Vernes, T., 2024. Sea Country Indigenous Protected Areas: Indigenous leadership in the protection of Australia's marine environments. Marine Policy, Volume 170, December 2024, 106358. Available at: https://doi.org/10.1016/j.marpol.2024.106358.

Irvine, L.G., Thums, M., Hanson, C.E., McMahon, C.R. and Hindell, M.A., 2017. Evidence for a widely expanded humpback whale calving range along the Western Australian coast. Marine Mammal Science 34(2): 294–310. https://doi.org/10.1111/mms.12456.

Irvine, L.G. and Salgado Kent, C., 2019. The distribution and relative abundance of marine mega-fauna, with a focus on humpback whales. Exmouth Gulf, Western Australia. Attachment 2J Humpback Whale Aerial Survey Report, Subsea7.

Jackson, G., Fisher, E. and Rynvis, L., 2024. Gascoyne Demersal Scalefish Resource Status Report 2024'. In: Newman, S.J., Moore, J. and Gaughan, D.J., 2024. State of the fisheries: Status reports of the fisheries and aquatic resources of Western Australia 2023/24. Department of Primary Industries and Regional Development, Western Australia, Perth. https://library.dpird.wa.gov.au/an_sofar/17.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Jackson, G. and Nolan, D., 2024. Gascoyne Inner Shark Bay Scalefish Resource Status Report 2024. In: Newman, S.J., Moore, J. and Gaughan, D.J., 2024. State of the fisheries: Status reports of the fisheries and aquatic resources of Western Australia 2023/24. Department of Primary Industries and Regional Development, Western Australia, Perth. https://library.dpird.wa.gov.au/an_sofar/17.

James, N.P., Bone, Y., Kyser, T.K., Dix, G.R. and Collins, L.B., 2004. The importance of changing oceanography in controlling late Quaternary carbonate sedimentation on a high-energy, tropical, oceanic ramp: north-western Australia. Sedimentology 51: 1179–1205.

Jenner, K., Jenner, M. and McCabe, K., 2001. Geographical and temporal movements of humpback whales in Western Australian waters. APPEA Journal 41: 692–707.

Jo McDonald Cultural Heritage Management Pty Ltd, 2011. Study of the Outstanding Universal Values of the Dampier Archipelago site, Western Australia. Report to the Australian Heritage Council, Canberra.

Jo McDonald Cultural Heritage Management Pty Ltd, 2009. Heritage inventory methodology report: Dampier Archipelago. Report to the Department of Indigenous Affairs, Perth.

Johnston, D., Yeoh, D. and Blazeski, S., 2021. North Coast Crab Resource Status Report 2021. In: Wise, B.S., Gaughan, D.J., Santoro, K.G. and Newman, S.J., eds. Status Reports of the Fisheries and Aquatic Resources of Western Australia 2020/21: The State of the Fisheries. Department of Primary Industries and Regional Development, Western Australia. Pp. 174–182.

Johnston, D., Myers, E., Maus, C. and Blazeski, S., 2023. North Coast Crab Resource Status Report. In: Newman, S.J., Wise, B.S., Santoro, K.G. and Gaughan, D.J., eds. Status Reports of the Fisheries and Aquatic Resources of Western Australia 2021/2022: The State of the Fisheries. Department of Primary Industries and Regional Development, Western Australia. Pp. 181–191.

Johnstone, R.E., Burbidge, A. and Darnell, J., 2013. Birds of the Pilbara region, including seas and offshore islands, Western Australia: distribution, status and historical changes. Records of the Western Australian Museum, Supplement. 78. 343. 10.18195/issn.0313-122x.78(2).2013. 343–441.

Johnstone, R.E. and Storr, G.M., 1998. Handbook of Western Australian Birds. Vol. 1 – Non-Passerines, Emu to Dollarbird. Western Australian Museum: Perth.

Jolliffe, C., Russell, G., McPherson, C. and Eldson, B., 2024. Evidence of humpback whale calving in southwest Western Australia. Discover Animals 1:14. Brief Communication. https://link.springer.com/article/10.1007/s44338-024-00012-3.

Jones, D.S., 2004. The Burrup Peninsula and Dampier Archipelago, Western Australia: an introduction to the history of its discovery and study, marine habitats and their flora and fauna. Records of the Western Australian Museum, Supplement 66, pp. 27–49. https://doi.org/10.18195/issn.0313-122x.66.2004.027-049.

Jones, R., Wakeford, M., Currey-Randall, L., Miller, K. and Hemerson, T., 2021. Drill cuttings and drilling fluids (muds) transport, fate and effects near a coral reef mesophotic zone. Marine Pollution Bulletin 172:112717.

Joyce, W., Campana, S., Natanson, L., Kohler, N., Pratt Jr, H. and Jensen, C., 2002. Analysis of stomach contents of the porbeagle shark (*Lamna nasus*) in the northwest Atlantic. ICES Journal of Marine Science 53: 1263–1269.

Kangas, M., Wilkin, S., Breheny, N., Cavalli, P., Grounds, G. and Brown, S., 2021. Saucer Scallop Resource Status Report 2021. In: Wise, B.S., Gaughan, D.J., Santoro, K.G. and Newman, S.J., eds. Status Reports of the Fisheries and Aquatic Resources of Western Australia 2020/21: The State of the Fisheries. Department of Primary Industries and Regional Development, Western Australia. pp. 96–103.

Kangas, M., Wilkin, S., Koefoed, I. and Grounds, G., 2023a. Exmouth Gulf Prawn Resource Status Report. In: Newman, S.J., Wise, B.S., Santoro, K.G. and Gaughan, D.J., eds. Status Reports of the Fisheries and Aquatic Resources of Western Australia 2021/2022: The State of the Fisheries. Department of Primary Industries and Regional Development, Western Australia. pp. 117–124.

Kangas, M., Wilkin, S., Cavalli, P. and Grounds, G., 2023b. Shark Bay Prawn Resource Status Report. In: Newman, S.J., Wise, B.S., Santoro, K.G. and Gaughan, D.J., eds. Status Reports of the Fisheries and Aquatic Resources of Western Australia 2021/2022: The State of the Fisheries. Department of Primary Industries and Regional Development, Western Australia. pp. 117–124.

Keesing, J.K., Bessey, C., Mortimer, N., Hosack, G.R., Haywood, M.D.E., Orr, M., Hellmrich, L., Hardiman, L.K., Kalkowski-Pope, S., Miller, M., Slawinski, D. and Edgar, G.J., 2025. Status of coral, giant clam and sea

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

cucumber communities including CITES listed species on a remote Australian coral reef atoll and the potential impact of illegal fishing. Marine Environmental Research, 204, 106915.

Keller, K., Clayton, C., Blake, S. and Cao, A., 2025a. Western Deepwater Trawl Fishery. In: Butler, I., Patterson, H., Cottrell, R.S., Bromhead, D., Galeano, D., Timmiss, T., Woodhams, J. and Curtotti, R., eds. Fishery status reports 2025, Australian Bureau of Agricultural and Resource Economics and Sciences, Canberra, DOI: https://doi.org/10.25814/ewe9-4p7. CC BY 4.0.

Keller, K., Clayton, C. and Dylewski, M., 2025b. North West Slope Trawl Fishery. In: Butler, I., Patterson, H., Cottrell, R.S., Bromhead, D., Galeano, D., Timmiss, T., Woodhams, J. and Curtotti, R., eds. Fishery status reports 2025, Australian Bureau of Agricultural and Resource Economics and Sciences, Canberra, DOI: https://doi.org/10.25814/ewe9-4p7. CC BY 4.0.

Kim Oanh, N.T., Permadi, D.A., Hopke, P.K., Smith, K.R., Phan Dong, N. and Nguyet Dang, A., 2018. Annual emissions of air toxics emitted from crop residue open burning in Southeast Asia over the period of 2010-2015. Atmospheric Environment 187: 163–173.

Kimberley Land Council, n.d. Ranger/IPA Map. Available from: https://www.klc.org.au/ranger-ipa-map [Accessed 11 May 2026].

Kingsley, M.R., Lavers, J.L., Steeves, T.E. and Burridge, C.P., 2019. Genetic distinctiveness of masked booby (*Sula dactylatra*) on Bedout Island, Western Australia. Emu – Austral Ornithology, 120(2), 150–155. https://doi.org/10.1080/01584197.2019.1663125.

Kirkwood, R., Pemberton, D. and Copson, G., 1992. The conservation and management of seals in Tasmania. Hobart: Department of Parks, Wildlife and Heritage. 48 pp.

Kirwan, G.M., Carboneras, C. and Jutglar, F., 2020. Little Shearwater (*Puffinus assimilis*), version 1.0. In: Billerman, S.M., Keeney, B.K., Rodewald, P.G. and Schulenberg, T.S., eds. Birds of the World. Cornell Lab of Ornithology, Ithaca, NY, USA. https://doi.org/10.2173/bow.litshe8.01.

Kobryn, H.T., Beckley, L.E. and Wouters, K., 2022. Bathymetry Derivatives and Habitat Data from Hyperspectral Imagery Establish a High-Resolution Baseline for Managing the Ningaloo Reef, Western Australia. Remote Sensing 14, 1827. https://doi.org/10.3390/rs14081827.

Koefoed, I., Wilkin, S., Shanks, M., How, J. and Leaversuch, R., 2024a. North Coast Prawn Resource Status Report 2024. In: Newman, S.J., Moore, J. and Gaughan, D.J., eds. State of the fisheries: Status reports of the fisheries and aquatic resources of Western Australia 2023/24. Department of Primary Industries and Regional Development, Western Australia, Perth. https://library.dpird.wa.gov.au/an_sofar/17.

Koefoed, I., Wilkin, S., Brown, S. and How, J., 2024b. Exmouth Gulf Prawn Resource Status Report 2024. In: Newman, S.J., Moore, J. and Gaughan, D.J., eds. State of the fisheries: Status reports of the fisheries and aquatic resources of Western Australia 2023/24. Department of Primary Industries and Regional Development, Western Australia, Perth. https://library.dpird.wa.gov.au/an_sofar/17.

Koefoed, I., Wilkin, S., Brown, S. and How, J., 2024c. Shark Bay Prawn Resource Status Report 2024. In: Newman, S.J., Moore, J. and Gaughan, D.J., eds. State of the fisheries: Status reports of the fisheries and aquatic resources of Western Australia 2023/24. Department of Primary Industries and Regional Development, Western Australia, Perth. https://library.dpird.wa.gov.au/an_sofar/17.

Krause, S. and Stow, A., 2025. A grey nurse shark from the Northern Territory of Australia shares a mitochondrial haplotype only recorded from the western Australian population. Marine and Freshwater Research, 76(4). https://doi.org/10.1071/MF24162.

Kyne, P.M., Heupel, M.R., White, W.T. and Simpfendorfer, C.A., 2021. The Action Plan for Australian Sharks and Rays. National Environmental Science Program, Marine Biodiversity Hub, Hobart.

Last, P., Lyne, V., Yearsley, G., Gledhill, D., Gommon, M., Rees, T. and White, W., 2005. Validation of national demersal fish datasets for the regionalisation of the Australian continental slope and outer shelf (>40 m depth). Australian Government Department of the Environment and Heritage and CSIRO Marine Research, Australia.

Last, P.R. and Stevens, J.D., 2009. Sharks and rays of Australia, 2nd edition, CSIRO Publishing, Melbourne.

Lester, E., Cuttler, M., Langlois, T.J. and Madin, E.M.P., 2025. Deciphering the footprints of predator–prey interactions on coral reefs: seasonal dynamics and environmental drivers of reef halos. Coral Reefs 44, 1467–1477. https://doi.org/10.1007/s00338-025-02701-1.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Lewis, P., Blay, N. and Watt, M., 2020. Statewide Large Pelagic Finfish Resource Status Report 2020. In: Gaughan, D.J. and Santoro, K., eds. Status Reports of the Fisheries and Aquatic Resources of Western Australia 2019/20: The State of the Fisheries. Department of Primary Industries and Regional Development, Western Australia. pp. 241–247.

Lewis, P. and Rynvis, L., 2024. 'Statewide Large Pelagic Finfish Resource Status Report 2024. In: Newman, S.J., Moore, J. and Gaughan, D.J., eds. State of the fisheries: Status reports of the fisheries and aquatic resources of Western Australia 2023/24. Department of Primary Industries and Regional Development, Western Australia, Perth. https://library.dpird.wa.gov.au/an_sofar/17.

Limpus, C.J., 1992. Estimation of tag loss in marine turtle research. Wildlife Research 19: 457–469. https://doi.org/10.1071/WR9920457.

Limpus, C., 2006. Marine turtle conservation and Gorgon gas development, Barrow Island, Western Australia. Report to Environmental Protection Authority and Department of Conservation and Land Management, Western Australia.

Limpus, C.J., Parmenter, C.J., Baker, V. and Fleay, A., 1983. The Flatback Turtle, *Chelonia depressa*, in Queensland: Post-Nesting Migration and Feeling Ground Distribution. Wildlife Research 10: 557–561. https://doi.org/10.1071/WR9830557.

Limpus, C.J., 2009a. A biological review of Australian marine turtles. 6. Leatherback turtle, *Dermochelys coriacea* (Vandelli), Queensland Government Environmental Protection Agency, Brisbane.

Limpus, C.J., 2009b. A biological review of Australian marine turtles. 3. Hawksbill turtle, *Eretmochelys imbricata* (Linnaeus), Queensland Government Environmental Protection Agency, Brisbane.

Limpus, C.J., 2009c. A biological review of Australian marine turtles. 1. *Caretta caretta* (Linneaus) Environmental Protection Agency, Brisbane, QLD.

Liu, Q.Y., Feng, M., Wang, D. and Wijffels, S., 2015. Interannual variability of the Indonesian Throughflow transport: a revisit based on 30-year expendable bathythermograph data. Journal of Geophysical Research: Oceans 120: 8270–8282.

Locarnini, R.A., Mishonov, A.V., Baranova, O.K., Boyer, T.P., Zweng, M.M., Garcia, H.E., Reagan, J.R., Seidov, D., Weathers, K.W., Paver, C.R. and Smolyar, I.V., 2018. Temperature. World Ocean Atlas 2018, Volume 1. A. Mishonov Technical Ed.; NOAA Atlas NESDIS 81.

López, N.A., McAuley, R.B. and Meeuwig, J.J., 2022. Identification of the southernmost aggregation of scalloped hammerhead sharks (*Sphyrna lewini*) in Australia. Austral Ecology, 47: 717–722. https://doi.org/10.1111/aec.13149.

Lourie, S.A., Foster, S.J., Cooper, E.W.T. and Vincent, A.C.J., 2004. A guide to the identification of seahorses. Project Seahorse and TRAFFIC North America, University of British Columbia and World Wildlife Fund. Available from: https://cites.unia.es/cites/file.php/1/files/guide-seahorses.pdf [Accessed May 2026].

Lourie, S.A., Vincent, A.C.J. and Hall, H.J., 1999. Seahorses: an identification guide to the world's species and their conservation. Project Seahorse, London, UK.

Lukoschek, V., Beger, M., Ceccarelli, D., Richards, Z. and Pratchett, M., 2013. Enigmatic declines of Australia's sea snakes from a biodiversity hotspot. Biological Conservation 166: 191e202.

Lulofs, H.M.A. and Sumner, N.R., 2002. Historical diving profiles for pearl oyster divers in Western Australia. Fisheries Research Report, 138.

Mackie, M., Gaughan, D.J. and Buckworth, R.C., 2003. Stock assessment of narrow-barred Spanish mackerel (*Scomberomorus commerson*) in Western Australia. FRDC Project No. 1999/151.

Mackie, M., Nardi, A., Lewis, P. and Newman, S., 2007. Small pelagic fishes of the North-west Marine Region. Department of Fisheries, Perth.

Madhusudhana, S., Erbe, C., Sidenko, E. and McCauley, R.D., 2026. Beaked whale (Ziphiidae) foraging along Australia's North West Shelf. Journal of the Acoustical Society of America, 159(2), 1163–1172. https://doi.org/10.1121/10.0042398.

Malgana Aboriginal Corporation, 2021. Seagrass (wirriya jalyanu): giving life to sea country of Shark Bay (Gathaagudu), Marine Biodiversity Hub.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Marchant, S. and Higgins, P.S.,1990. *Fregata andrewsi* Christmas Frigatebird. In: Handbook of Australian, New Zealand and Antarctic Birds, Volume 1, Ratites to Ducks. Oxford University Press, Melbourne.

Marsh, H., Loates, P.J. and Schramm, L., 2025. A global assessment of dugong status and conservation needs. CMS Technical Series Publication No. 51. Convention on the Conservation of Migratory Species of Wild Animals. https://doi.org/10.25903/0ncx-v838.

Marsh, H., O'Shea, T.J. and Reynolds, J.R., 2011. The ecology and conservation of sirenia; dugongs and manatees. Cambridge University Press, London.

Marsh, H., Penrose, H., Eros, C. and Hugues, J., 2002. Dugong Status Report and Action Plans for Countries and Territories. Early Warning Assessment Reports. United Nations Environment Programme, Nairobi.

Marsh, H., Prince, R.I.T., Saafeld, W.K. and Shepherd, R., 1994. The distribution and abundance of the dugong in Shark Bay, Western Australia. Wildlife Research 21: 149–161. https://doi.org/10.1071/WR9940149.

Marshall, A., Bennett, M., Kodja, G., Hinojosa-Alvarez, S., Galvan-Magana, F., Harding, M., Stevens, G. and Kashiwaga, T., 2011. *Manta birostris* (Chevron Manta Ray, Giant Manta Ray, Oceanic Manta Ray, Pacific Manta Ray, Pelagic Manta Ray). The IUCN Red List of Threatened Species. Available from: http://www.iucnredlist.org/details/198921/0 [Accessed 11 May 2026].

Marshall, A.D., Compagno, L.J. and Bennett, M.B., 2009. Redescription of the genus *Manta* with resurrection of *Manta alfredi* (Krefft, 1868) (Chondrichthyes; Myliobatoidei; Mobulidae). Zootaxa 2301: 1–28.

Martin, R.A., 2007. A review of behavioural ecology of whale sharks. Fisheries Research 84: 10–16.

Mayala Inninalang Aboriginal Corporation RNTBC, 2024. Mayala Country Plan 2024–2034. https://mayala.org.au/wp-content/uploads/2025/01/Mayala-Country-IPA-Plan-2024.pdf.

McAuley, R., 2004. Western Australian Grey Nurse Shark Pop Up Archival Tag Project. Final Report to Department of Environment and Heritage. Department of Fisheries, Western Australia. 49 pp.

McCauley, R.D. 2011a. Fugro Scarborough Sea Noise Logger Program: January 2010 to January 2011. Report R2011-50. Fugro Survey on behalf of ExxonMobil. 68 pp.

McCauley, R., 2011b. Woodside Kimberley Sea noise logger program, Sept 2006 to June 2009: Whales, Fish and Man-made Noise. Report produced for Woodside Energy Ltd.

McCauley, R. and Duncan, A., 2011. Sea noise logger deployment, Wheatstone and Onslow, April 2009 to November 2010 (Technical Report No. R2011-23). Centre for Marine Science and Technology, Curtin University of Technology, Perth.

McCauley, R. and Jenner, C., 2010. Migratory patterns and estimated population size of pygmy blue whales (*Balaenoptera musculus brevicauda*) traversing the Western Australian coast based on passive acoustics. Paper SC/62/SH26 presented to the IWC Scientific Committee, June 2010, Agadir, Morocco (unpublished). 9 pp.

McCauley, R., Jenner, C., Bannister, J., Cato, D. and Duncan, A., 2000. Blue whale calling in the Rottnest trench, Western Australia, and low frequency sea noise. Acoustics Australia/Australian Acoustical Society: 245–250.

McCauley, R., Salgado Kent, C., Gavrilov, A., Recalde-Salas, A., Burton, C. and Marley, S., 2004. Passive acoustic monitoring of baleen whales in Geographe Bay, Western Australia. Acoustics Australia Proceedings of Acoustics 2004 November Gold Coast.

McCauley, R.D., Gavrilov, A.N., Jolliffe, C.D., Ward, R. and Gill, P.C., 2018. Pygmy blue and Antarctic blue whale presence, distribution and population parameters in southern Australia based on passive acoustics. Deep-Sea Research Part II: Topical Studies in Oceanography 157–158: 154–168.

McClatchie, S., Middleton, J.F. and Ward, T.M., 2006. Water mass analysis and alongshore variation in upwelling intensity in the eastern Great Australian Bight. Journal of Geophysical Research, Oceans 111(C8). https://doi.org/10.1029/2004JC002699.

McCosker, J., 1975. Feeding behavior of Indo-Australian hydrophiidae. The biology of sea snakes 1: 217–232.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

McDonald, E.M. and Phillips, T., 2021. Report of an Ethnographic Consultation Regarding Woodside's Scarborough Gas Project & Submerged Landscape, Pilbara, Western Australia – Phase I. Report by Ethnosciences to Murujuga Aboriginal Corporation.

McDonald, J. and Veth, P., 2006. Distribution of rock art on the Dampier Archipelago and associated islands including Burrup Peninsula, Western Australia. Gap analysis and predictive model. Unpublished report to the Department of Environment and Heritage, Canberra.

McDuie, F. and Congdon, B.C., 2016. Trans-equatorial migration and non-breeding habitat of tropical shearwaters: implications for modelling pelagic Important Bird Areas. Marine Ecology Progress Series, 550, 219–234.

McLeay, L.J., Page, B., Goldsworthy, S.D., Ward, T.M., Paton, D.C., Waterman, M. and Murray, M.D., 2009. Demographic and morphological responses to prey depletion in a crested tern (*Sterna bergii*) population: can fish mortality events highlight performance indicators for fisheries management? ICES Journal of Marine science, 66(2), pp.237–247.

McLeay, L., Page, B., Goldsworthy, S., Paton, D., Teixeira, C., Burch, P. and Ward, T., 2010. Foraging behaviour and habitat use of a short-ranging seabird, the crested tern. Marine Ecology Progress Series. 411. 271–283. 10.3354/meps08606.

McMahon, K., Statton, J. and Lavery, P., 2017. Seagrasses of the north-west of Western Australia: biogeography and considerations for dredging-related research. WAMSI Dredging Science Node Project 5.1.2.

McNiven, I., 2004. Saltwater People: spiritscapes, maritime rituals and the archaeology of Australian Indigenous seascapes. World Archaeology, 35(3): 329–349.

Menezes, V.V., Phillips, H.E., Schiller, A., Domingues, C.M. and Bindoff, N.L., 2013. Salinity dominance on the Indian Ocean Eastern Gyral current. Geophysical Research Letters 40: 5716–5721.

MetOcean Engineers, 2005. Preliminary metocean conditions for the Browse Development (Prospective Production Facilities/Areas, Pipeline Routes/Shore Crossings and Flow- Lines/Seabed Manifolds), Scott Reef Vicinity to Shore. Report produced for Woodside Energy Limited.

Miller, K., Depczynski, M., Cappo, M., Wakeford, M., Speed, C,, Stowar, M., Colquhoun, J., Tinkler, P., Cheal, A., Fisher, R., Johansson, C., Noble, M. and Radford, B., 2015. Ningaloo and Outer Shark Bay Environmental Baseline Survey 2014. Report prepared for Woodside Energy Ltd by the Australian Institute of Marine Science, Townsville. 2015 (117 pp).

Milton, D.A., 2005. Birds of Ashmore Reef National Nature Reserve: an assessment of its importance for seabirds and waders. The Beagle, Records of the Museums and Art Galleries of the Northern Territory Supplement 1 133–141.

Minton, C., Wahl, J., Jessop, R., Hassell, C., Collins, P. and Gibbs, H., 2006. Migration routes of waders which spend the non-breeding season in Australia. Stilt. 50. 135–157.

Minton, S., Heatwole, H. and Dunson, W., 1975. Sea snakes from reefs of the Sahul Shelf. University of Maryland Press, 1: 141–144.

Miyazaki, S. and Stagg, H., 2013. Exmouth Plateau. Geoscience Australia: National Geological Provinces Online Database. Available at: http://www.ga.gov.au/provexplorer/provinceDetails.do?eno=30351.

Möller, L.M., Attard, C.R.M., Bilgmann, K., Andrews-Goff, V., Jonsen, I., Paton, D. and Double, M.C., 2020. Movements and behaviour of blue whales satellite tagged in an Australian upwelling system. Nature Scientific Reports 10:21165. https://www.nature.com/articles/s41598-020-78143-2.

Mollet, H., Cliff, G., Pratt Jr, H. and Stevens, J., 2000. Reproductive biology of the female shortfin mako, *Isurus oxyrinchus* Rafinesque, 1810, with comments on the embryonic development of lamnoids. Fishery Bulletin – National Oceanic and Atmospheric Administration 98(2): 299–318.

Molony, B., Lai, E. and Jones, R., 2015. Mackerel Managed Fishery Report: Statistics Only. In: Fletcher, W.J. and Santoro, K., eds. Status Reports of the Fisheries and Aquatic Resources of Western Australia 2014/15: The State of the Fisheries. Department of Fisheries, Western Australia, pp. 207–210.

Morrice, M.G., Gill, P.C., Hughes, J. and Levings, A.H., 2004. Summary of aerial surveys for the Santos Ltd EPP32 seismic survey, 2–13 December 2003. Report WEG-SO 02/2004 to Santos Ltd. Whale Ecology Group, Deakin University, Warrnambool.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Mott, R., Herrod, A. and Clarke, R.H., 2017. Post-breeding dispersal of frigatebirds increases their exposure to mercury, Marine Pollution Bulletin, Volume 119, Issue 1, pp. 204–210.

Mott, R., Herrod, A. and Clarke, R.H., 2021. Transboundary priorities for protection of frigatebird non-breeding habitat in a heavily impacted region, Global Ecology and Conservation, Volume 27.

MScience, 2014. Dampier Port Authority Marine Environment: Distribution of Benthic Primary Producer Habitats within Port Waters. Report prepared for Dampier Port Authority.

MScience, 2019. Scarborough Trunkline Marine Environmental Studies: Pre-dredging Coral Habitat Assessment. Unpublished report MSA275_2R01 to Advisian, Perth Western Australia, pp. 53.

Mustika, P.L.K, Ratha, I.M.J., Setyawan, E., Prinanda, M.O., Rusydi, R., Purnomo, F.S. and Fuazi, I., 2024. The first record of the southbound movement of satellite-tagged pygmy blue whales (*B. m. brevicauda*) from Savu Sea (Indonesia) to the subantarctic waters. Marine Mammal Science 2024:e13167. https://onlinelibrary.wiley.com/doi/epdf/10.1111/mms.13167.

Mustoe, S. and Edmunds, M., 2008. Coastal and Marine natural values of the Kimberley. Produced for WWF-Australia by: AES Applied Ecology Solutions Pty Ltd.

Neale, M. and Kelly, L., 2020. Songlines: the power and promise. Thames & Hudson Australia.

Newman, S.J., Moore, J. and Gaughan, D.J., 2024a. State of the fisheries: Status reports of the fisheries and aquatic resources of Western Australia 2023/24. Department of Primary Industries and Regional Development, Western Australia, Perth. https://library.dpird.wa.gov.au/an_sofar/17.

Newman, S., Harry, A., Bruce, C., Steele, A. and Cox, J., 2024b. Statewide Marine Aquarium Fish and Hermit Crab Resources Status Report 2024. In: Newman, S.J., Moore, J. and Gaughan, D.J., eds. State of the fisheries: Status reports of the fisheries and aquatic resources of Western Australia 2023/24. Department of Primary Industries and Regional Development, Western Australia, Perth. https://library.dpird.wa.gov.au/an_sofar/17.

Nicholson, L.W., 2002. Breeding strategies and community structure in an assemblage of tropical seabirds on the Lowendal Islands, Western Australia [PhD thesis]. Perth, Australia: Murdoch University. 327 pp.

Norman, B.M., Whitty, J.M., Beatty, S.J., Reynolds, S.D. and Morgan, D.L., 2017. Do they stay or do they go? Acoustic monitoring of whale sharks at Ningaloo Marine Park, Western Australia. Journal of Fish Biology 91(6): 1713–1720.

Northern Territory Government, 2011. Cobourg Marine Park Plan of Management. Prepared by the Cobourg Peninsula Sanctuary and Marine Park Board and Parks and Wildlife Service of the Northern Territory, Department of Natural Resources, Environment, The Arts and Sport. https://depws.nt.gov.au/_data/assets/pdf_file/0006/249045/Cobourg-Marine-Park.pdf.

Norriss, J. and Moses, A., 2024a. South Coast Small Pelagic Scalefish Resource Status Report 2024. In: Newman, S.J., Moore, J. and Gaughan, D.J., eds. State of the fisheries: Status reports of the fisheries and aquatic resources of Western Australia 2023/24. Department of Primary Industries and Regional Development, Western Australia, Perth. https://library.dpird.wa.gov.au/an_sofar/17.

Norriss, J. and Moses, A., 2024b. West Coast Small Pelagic Scalefish Resource Status Report 2024. In: Newman, S.J., Moore, J. and Gaughan, D.J., eds. State of the fisheries: Status reports of the fisheries and aquatic resources of Western Australia 2023/24. Department of Primary Industries and Regional Development, Western Australia, Perth. https://library.dpird.wa.gov.au/an_sofar/17.

Nyangumarta Warrarn Aboriginal Corporation and Yamatji Marlpa Aboriginal Corporation, 2015. Nyangumarta Warrarn Indigenous Protected Area, Plan of Management, 2015 to 2020. Prepared by Dr Nicholas Smith, South Hedland, WA.

O'Leary, M.J., Paumard, V. and Ward, I., 2020. Exploring Sea Country through High-Resolution 3D Seismic Imaging of Australia's NW Shelf: Resolving Early Coastal Landscapes and Preservation of Underwater Cultural Heritage. Quaternary Science Reviews (239), 106353.

Ottewell, K., Coughran, D., Gall, M., Irvine, L. and Bryne, M., 2016. A Recent Stranding of Omura's Whale (*Balaenoptera omurai*) in Western Australia. Aquatic Mammals, 42(2): 193–197. DOI 10.1578/AM.42.2.2016.193.

Parra, G.J., 2006. Resource partitioning in sympatric delphinids: Space use and habitat preferences of Australian snubfin and Indo-Pacific humpback dolphins. Journal of Animal Ecology 75: 862–874.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Parra, G.J. and Cagnazzi, D., 2016. Conservation Status of the Australian Humpback Dolphin (*Sousa sahulensis*) Using the IUCN Red List Criteria. Advances in Marine Biology. 73:157–192.

Parra, G.J., Corkeron, P.J. and Marsh, H., 2002. The Indo-Pacific humpback dolphin, *Sousa chinensis* (Osbeck, 1765) in Australian waters: a summary of current knowledge and recommendations for their conservation. Unpublished Report to the Scientific Committee of the International Whaling Commission, SC/54/SM27.

Parra, G.J., Corkeron, P.J. and Marsh, H., 2006. Population sizes, site fidelity and residence patterns of Australian snubfin and Indo-Pacific humpback dolphins: implications for conservation. Biological Conservation 129: 167–180.

Paterson, A., Shellam, T., Veth, P., Mulvaney, K., Anderson, R., Dortch, J. and McDonald, J., 2019. The Mermaid? Re-envisaging the 1818 exploration of Enderby Island, Murujuga, Western Australia. The Journal of Island and Coastal Archaeology, 1–21. Paton, D. C. and Rogers, D. J. 200. Ecology of breeding fairy terns Sterna nereis in the Coorong. Final report for the Wildlife Conservation Fund.

Paton, D.C. and Rogers, D.J., 2009. Ecology of breeding Fairy Terns *Sternula nereis* in the Coorong. Final report for the Wildlife Conservation Fund. Adelaide University, Adelaide.

Patterson, H. and Dylewski, M., 2024. Skipjack Tuna Fishery. In: Butler, I., Patterson, H., Bromhead, D., Galeano, D., Timmiss, T., Woodhams, J., and Curtotti, R., 2024, eds. Fishery status reports 2024, Australian Bureau of Agricultural and Resource Economics and Sciences, Canberra, DOI: https://doi.org/10.25814/bfnc-9160. CC BY 4.0.

Patterson, H., Noriega, R., Georgeson, L., Larcombe, J. and Curtotti, R., 2017. Fishery status reports 2017, Australian Bureau of Agricultural and Resource Economics and Sciences, Canberra. CC BY 4.0.

Patterson, S.H., Larcombe, J., Woodhams, J. and Curtotti, R., 2020. Fishery status reports 2020, Australian Bureau of Agricultural and Resource Economics and Sciences, Canberra. CC BY 4.0. https://doi.org/10.25814/5f447487e6749.

Patterson, H., Wise, B. and Dylewski, M., 2025a. Southern Bluefin Tuna Fishery. In: Butler, I., Patterson, H., Cottrell, R.S., Bromhead, D., Galeano, D., Timmiss, T., Woodhams, J. and Curtotti, R., eds. Fishery status reports 2025, Australian Bureau of Agricultural and Resource Economics and Sciences, Canberra, DOI: https://doi.org/10.25814/ewe9-4p7. CC BY 4.0.

Patterson, H., Bromhead, D., Cottrell, R.S. and Dylewski, M., 2025b. Western Tuna and Billfish Fishery. In: Butler, I., Patterson, H., Cottrell, R.S., Bromhead, D., Galeano, D., Timmiss, T., Woodhams, J. and Curtotti, R., eds. Fishery status reports 2025, Australian Bureau of Agricultural and Resource Economics and Sciences, Canberra, DOI: https://doi.org/10.25814/ewe9-4p7. CC BY 4.0.

Pearce, A., Buchan, S., Chiffings, T., D'Adamo, N., Fandry, C., Fearns, P., Mills, D., Phillips, R. and Simpson, C., 2003. A review of the oceanography of the Dampier Archipelago, Western Australia. In: Wells, F., Walker, D. and Jones, D., eds. The Marine Flora and Fauna of Dampier, Western Australia. Western Australian Museum, Perth, pp. 13–50.

Peck, D. and Congdon, B., 2005. Colony-specific foraging behaviour and co-ordinated divergence of chick development in the wedge-tailed shearwater *Puffinus pacificus.* Mar Ecol Prog Ser Vol. 299: 289–296.

Peel, L.R., Whiting, S.D., Pendoley, K., Whittock, P.A., Ferreira, L.C., Thums, M., Whiting, A.U., Tucker, A.D., Rossendell, J., McFarlane, G. and Fossette, S., 2024. I still call Australia home: Satellite telemetry informs the protection of flatback turtles in Western Australian waters. Ecosphere, 15(5), p.e4847.

Pendoley, K.L., 2005. Sea turtles and the environmental management of industrial activities in North West Western Australia. PhD thesis, Murdoch University.

Pendoley, K., Vitenbergs, A., Whittock, P. and Bell, C., 2016. Twenty years of turtle tracks: marine turtle nesting activity at remote locations in the Pilbara region, Western Australia. Australian Journal of Zoology 64. https://doi.org.10.1071/ZO16021.

Pilbara Ports Authority, 2025. Annual Report 2025. https://www.parliament.wa.gov.au/publications/tabledpapers.nsf/displaypaper/4210525aeda969ee0208ae4248258d090005f9f2/$file/tp+525+(2025).pdf [Accessed 31 Mar 2026].

Pillans, R.D., Stevens, J.D., Peverell, S. and Edgar, S., 2008. Spatial distribution and habitat utilisation of the speartooth shark *Glyphis glyphis* in relation to fishing in Northern Australia. Department of the Environment, Water, Heritage and the Arts, Canberra. 47 pp.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Pillans, R.D., Stevens, J.D., Kyne, P.M. and Salini, J., 2009. Observations on the distribution, biology, short-term movements and habitat requirements of river sharks *Glyphis* spp. In northern Australia. Endangered Species Research 10: 321–332.

Pitman, R.L., Totterdell, J.A., Fearnbach, H., Ballance, L.T., Durban, J.W. and Kemps, H., 2015. Whale killers: Prevalence and ecological implications of killer whale predation on humpback whale calves off Western Australia. Marine Mammal Science 31(2): 629–657. https://doi.org/10.1111/mms.12182.

Preen, A., 2004. Distribution, abundance and conservation status of dugongs and dolphins in the southern and western Arabian Gulf. Biological Conservation 118(2): 205–218.

Preen, A., Marsh, H., Lawler, I., Prince, R. and Shepherd, R., 1997. Distribution and abundance of dugongs, turtles, dolphins and other megafauna in Shark Bay, Ningaloo Reef and Exmouth Gulf, Western Australia. Wildlife Research 24: 185–208.

Prieto, R., Janiger, D., Silva, M.A., Waring, G.T., and Gonçalves, J.M., 2012. The forgotten whale: a bibliometric analysis and literature review of the North Atlantic sei whale *Balaenoptera borealis.* Mammal Review 42: 235–272. https://doi.org.10.1111/j.1365-2907.2011.00195.x.

Przeslawski, R., Daniell, J., Nichol, S., Anderson, T. and Barrie, J.V., 2011. Seabed Habitats and Hazards of the Joseph Bonaparte Gulf and Timor Sea, Northern Australia. Record 2011/040. Geoscience Australia, Canberra.

Przeslawski, R., Alvarez, B., Battershill, C. and Smith, T., 2014. Sponge biodiversity and ecology of the Van Diemen Rise and eastern Joseph Bonaparte Gulf, northern Australia. Hydrobiologia 730: 1–16.

Ramsar Convention Bureau, 2000. Strategic Framework and Guidelines for the Future Development of the List of Wetlands of International Importance. Ramsar Convention Bureau, Gland, Switzerland.

Raudino, H., Hunt, T.N. and Waples, K.A., 2018. Records of Australian humpback dolphins (*Sousa sahulensis*) from an offshore island groups in Western Australia. Marine Biodiversity Records 11:14–20.

Raudino, H.C., Bouchet, P.J., Douglas, C., Douglas, R. and Waples, K., 2023. Aerial abundance estimates for two sympatric dolphin species at a regional scale using distance sampling and density surface modelling. Frontiers in Ecology and Evolution, 10, p.1086686.

Reardon, M.B., Gerber, L. and Cavanagh, R.D., 2006. *Isurus paucus*. The IUCN Red List of Threatened Species 2006.

Reinhold, L. and Whiting, A., 2014. High-density Loggerhead Sea Turtle Nesting on Dirk Hartog Island, Western Australia. Marine Turtle Newsletter 141: 7–10.

Richards, Z.T., Haines, L., Ross, C., Preston, S., Matthews, T., Terriaca, A., Black, E., Lewis, Y., Mannolini, J., Dean, P., Middleton, V. and Saunders, B., 2024. Deoxygenation following coral spawning and low-level thermal stress trigger mass coral mortality at Coral Bay, Ningaloo Reef. Coral Reefs 43:443–453. https://doi.org/10.1007/s00338-024-02476-x.

Richards, Z.T., Buckee, J., Hoschke, A. and Whisson, G., 2025. Sessile benthic marine invertebrate biodiversity at Ningaloo Reef, Muiron Islands, and Exmouth Gulf, Western Australia: A review and gap analysis. Diversity, 17(9), 597. https://www.mdpi.com/1424-2818/17/9/597.

Risch, D., Norris, T., Curnock, M. and Friedlaender, A., 2019. Common and Antarctic Minke Whales: Conservation status and future research directions. Frontiers in Marine Science vol. 6. https://doi.org/10.3389/fmars.2019.00247.

Rob, D., Barnes, P., Whiting, S., Fossette, S., Tucker, T. and Mongan, T., 2019. Turtle activity and nesting on the Muiron Islands and Ningaloo Coast: Final Report 2018, Ningaloo Turtle Program. Report prepared for Woodside Energy Limited. Department of Biodiversity, Conservation and Attractions, Exmouth. 51 pp.

Rochester, W.A., Moeseneder, C.H., Miller, M.J., Milton, D.A., Fry, G.C., Griffiths, S.P., Pillans, R.D., Rothlisberg, P.C., Bustamante, R.H. and Butler, A.J., 2007. The North Marine Region marine bioregional plan: Information and analysis for the regional profile. Final report to the Department of the Environment and Water Resources. CSIRO Marine and Atmospheric Research.

Rock, J.C., Leonard, M.L. and Boyne, A.W., 2007. Foraging habitat and chick diets of roseate tern, *Sterna dougallii*, breeding on Country Island, Nova Scotia. Avian Conservation and Ecology 2:1–10.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Rogers, A., Fuller, R.A. and Amano, T., 2023. Australia's migratory shorebirds: trends and prospects. Report to the National Environmental Science Program. University of Queensland, Brisbane. https://www.nespmarinecoastal.edu.au/wp-content/uploads/2023/10/Project-1.21_Final-report.pdf.

Rogers, D.I., Piersma, T., Minton, C.D.T., Boyle, A.N., Hassell, C.J., Rogers, K.G., Silcocks, A. and Gutiérrez, A.S., 2025. Coastal Shorebirds Delay Maturity More Than Inland Ones. Ecology and Evolution15, no. 7: e71679. https://doi.org/10.1002/ece3.71679.

Rosser, N.L. and Gilmour, J.P., 2008. New insights into patterns of coral spawning on Western Australian reefs. Coral Reefs 27: 345–349.

Rosser, N., Benthuysen, J., Castro-Sanguino, C. and Grimaldi, C., 2025. Biannual coral spawning provides a mechanism for ecosystem resilience in Western Australia. Preprint. https://doi.org/10.21203/rs.3.rs-6216160/v1.

RPS Environment and Planning Pty Ltd, 2010. Ecology of Marine Turtles of the Dampier Peninsula and the Lacepede Island Group 2009–2010. Report produced for Woodside Energy Limited.

RPS, 2012. Sediment quality surveys March–April 2011. Greater Western Flank Marine Environmental Baseline Studies. RPS Environment and Planning Pty Ltd, Perth.

RPS, 2016. Metocean Criteria Guidelines for Mobile Offshore Drilling Unit Mooring on Australia's North West Shelf.

Russell, G., Cagnazzi, D., Colefax, A., Sprogis, K.R. and Christiansen, F., 2024. Cost of migration and migratory timing in Western Australian humpback whales. Marine Mammal Science, 40(2), p.e13074.

Ryan, K.L., Lai, E.K.M., Smallwood, C.B., Lyle, J.M., Stark, K.E. and Tracey, S.R., 2025. Recreational boat fishing participation varies across bioregional fisheries in Western Australia, with persistent patterns within fisheries and fisher typologies over time. ICES Journal of Marine Science, 82(8), fsaf131. https://doi.org/10.1093/icesjms/fsaf131.

Said, N.E., Cleguer, C., Lavery, P., Hodgson, A.J., Gorham, C., Tyne, J.A., Frouws, A., Strydom, S., Lo, J., Raudino, H.C., Waples, K. and McMahon, K., 2025. Sparse seagrass meadows are critical dugong habitat: a novel rapid assessment of habitat-wildlife associations using paired drone and in-water surveys. Ecological Indicators, 171, 113135. https://doi.org/10.1016/j.ecolind.2025.113135.

Salgado Kent, C., Jenner, C., Jenner, M., Bouchet, P. and Rexstad, E., 2012. Southern hemisphere breeding stock D humpback whale population estimates from North West Cape, Western Australia. Journal of Cetacean Research and Management 12(1): 29–38.

Santos, C.D., Campos, L.F.A.S. and Efe, M.A., 2018. Foraging habitat choice of white-tailed tropicbirds revealed by fine-scale global positioning system tracking and remote sensing. PeerJ 7. DOI 10.5441/001/1.649s6f21.

Saunders, D.A. and De Rebeira, P., 1985. The Birdlife of Rottnest Island. The Authors. Perth. A.H. and A.W. Reed Ltd, Sydney.

Saunders, R., Royer, F. and Clarke, M., 2011. Winter migration and diving behaviour of Porbeagle shark, *Lamna nasus*, in the Northeast Atlantic. ICES Journal of Marine Science 68(1): 166–174.

Schreiber, E.A., Feare, C.J., Harrington, B.A., Murray Jr., B.G., Robertson Jr., W.B. Robertson, M.J. and Woolfenden, G.E., 2020. Sooty Tern (*Onychoprion fuscatus*), version 1.0. In Birds of the World (S.M. Billerman, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. https://doi.org/10.2173/bow.sooter1.01.

Schroeder, T., Lyne, V., Dekker, A.G. and Rathbone, C., 2009. Regional MODIS Satellite Data Study: Scott Reef. CSIRO report produced for Woodside Energy Ltd. CSIRO.

Serventy, D.L., Serventy, V. and Warham, J., 1971. The Handbook of Australian Seabirds. A.H. and A.W. Reed Ltd, Sydney.

Shephard, J.M., Dunlop, J.N. and Bouten, W., 2018. Foraging movements of common noddies in the East Indian Ocean are dependent on breeding stage: implications for marine reserve design. Pacific Conservation Biology 25, 164–173.

Sheppard, J., Preen, A.R., Marsh, H., Lawler, I.R., Whiting, S. and Jones, R.E., 2006. Movement heterogeneity of dugongs, *Dugong dugon* (Muller) over large spatial scales. Journal of Experimental Marine Biology and Ecology 334: 64–83.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Simpson, C.J., 1985a. Mass spawning of scleractinian corals in the Dampier Archipelago and the implications for management of coral reefs in Western Australia. Bulletin 244, Department of Conservation and Environment, Perth.

Simpson, C.J., 1985b. Environmental factors affecting coral growth in the Dampier Archipelago, Western Australia. Environmental Note No. 168, Department of Conservation and Environment, Perth.

Simpson, C.J., 1988. Ecology of scleractinian corals in the Dampier Archipelago, Western Australia. EPA Technical Series No. 23. Environmental Protection Authority, Perth.

Simpson, C.J., Cary, J.L. and Masini, R.J., 1993. Destruction of corals and other reef animals by coral spawn slicks on Ningaloo Reef, Western Australia. Coral Reefs 12: 185–191. https://doi.org/10.1007/BF00334478.

Sinclair Knight Merz, 2007. North West Shelf Venture Cumulative Environmental Impact Study – cumulative environmental assessment report. Sinclair Knight Merz, Perth.

Skewes, T., Gordon, S., McLeod, I., Taranto, T., Dennis, D., Jacobs, D., Pitcher, C., Haywood, M., Smith, G., Poiner, I., Milton, D., Griffin, D. and Hunter, C., 1999. Survey and Stock Size Estimates of the Shallow Reef (0–15 m) and Shoal Area (15–50 m Deep) Marine Resources and Habitat Mapping Within the Timor Sea, in: Habitat Mapping and Coral Dieback. Department of the Environment and Heritage, Canberra, Australia.

Sleeman, J.C., Meekan, M.G., Wilson, S.G., Jenner, K.C.S., Jenner, M.N., Boggs, G. and Bradshaw, C.J.A., 2007. Biophysical correlates of relative abundances of marine megafauna at Ningaloo Reef, Western Australia. Marine and Freshwater Research 58: 608–623.

Smale, M.J., 2005. The diet of the ragged-tooth shark *Carcharias Taurus* Rafinesque 1810 in the Eastern Cape, South Africa. African Journal of Marine Science 27: 331–335. https://doi:10.2989/18142320509504091.

Smith, J.N., Double, M., Kelly, N., Charlton, C. and Bannister, J., 2022a. Relative Abundance of the 'Western' Population of Southern Right Whales from an Aerial Survey Off Southern Australia: Final Report on 2021 Survey. Report to the National Environmental Science Program. Murdoch University (Lead organisation).

Smith, B., Black, J., Mulvaney, K. and Hoerlé, S., 2022b. Monitoring Rock Art Decay: Archival Image Analysis of petroglyphs on Murujuga, Western Australia. Conservation and Management of Archaeological Sites.

Smith, K.A., Crisafulli, B., Mitsopoulos, G.E., Trinnie, F.I., Grosse, T. Thompson, T. and Newman, S.J., 2025. Ecological Risk Assessment for the North Coast Demersal Scalefish Resource (Fisheries Research Report No. 353). Department of Primary Industries and Regional Development, Western Australia.

Smyth, D., 2007. Sea Countries of the North-West: Literature review on Indigenous connection to and uses of the North-west Marine Region. Sea countries of the North-west: Literature review on Indigenous connection to and uses of the North-west Marine Region (dcceew.gov.au).

Somaweera, R. and Sanders, K., 2015. Guide to the Sea Snakes of the Kimberley Coast of Western Australia. Department of Parks and Wildlife, Western Australia. 10.13140/RG.2.1.2701.2960.

Sommerfeld, J., Stokes, T. and Baker, G.B., 2015. Breeding success, mate-fidelity and nest-site fidelity in Red-tailed Tropicbirds (*Phaethon rubricauda*) on Christmas Island, Indian Ocean. Emu – Austral Ornithology, 115(3), 214–222. https://doi.org/10.1071/MU14016.

Sporer, E., Kangas, M., Shanks, M. and Blay, N., 2015. North Coast Prawn Managed Fisheries Status Report. In: Fletcher, W.J. and Santoro, K., eds. Status Reports of the Fisheries and Aquatic Resources of Western Australia 2014/15: The State of the Fisheries. Department of Fisheries, Western Australia, pp. 173–188.

Stevens, J.D., Pillans, R.D. and Salini, J.P., 2005. Conservation assessment of *Glyphis glyphis* (speartooth shark), *Glyphis garicki* (northern river shark), *Pristis microdon* (freshwater sawfish) and *Pristis zijsron* (green sawfish). Report to Department of Environment and Heritage. Canberra. Australia. 84 pp.

Stevens, J., McAuley, R., Simpfendorfer, C. and Pillans, R., 2008. Spatial distribution and habitat utilisation of sawfish (*Pristis* spp.) in relation to fishing in northern Australia. CSIRO Marine and Atmospheric Research, Hobart.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Stevens, J.D., Bradford, R.W. and West, G.J., 2010. Satellite tagging of blue sharks (*Prionace glauca*) and other pelagic sharks off eastern Australia: depth behaviour, temperature experience and movements. Marine Biology 157: 575–591.

Stokes, T. and Hinchey, M., 1990. Which small noddies breed at Ashmore Reef in the Indian Ocean? Emu 90: 269–271.

Strahan, R., 1983. The Australian Museum Complete Book of Australian Mammals. London, United Kingdom: Angus and Robertson.

Strain, L., Brown, J. and Blay, N., 2023. South Coast Greenlip/Brownlip Abalone Resource Status Report 2023. In: Newman, S.J., Santoro, K.G. and Gaughan, D.J., eds. Status Reports of the Fisheries and Aquatic Resources of Western Australia 2022/23: The State of the Fisheries. Department of Primary Industries and Regional Development, Western Australia pp 218–224.

Strain, L., Murphy, D. and Steele, A., 2024a. Sea Cucumber Resource Status Report 2024. In: Newman, S.J., Moore, J. and Gaughan, D.J., eds. State of the fisheries: Status reports of the fisheries and aquatic resources of Western Australia 2023/24. Department of Primary Industries and Regional Development, Western Australia, Perth. https://library.dpird.wa.gov.au/an_sofar/17.

Strain, L., Fabris, F. and Nolan, D., 2024b. South Coast Greenlip/Brownlip Abalone Resource Status Report 2024. In: Newman, S.J., Moore, J. and Gaughan, D.J., eds. State of the fisheries: Status reports of the fisheries and aquatic resources of Western Australia 2023/24. Department of Primary Industries and Regional Development, Western Australia, Perth. https://library.dpird.wa.gov.au/an_sofar/17.

Strain, L., Brown, J. and Nolan, D., 2024c. West Coast Roe's Abalone Resource Status Report 2024. In: Newman, S.J., Moore, J. and Gaughan, D.J., eds. State of the fisheries: Status reports of the fisheries and aquatic resources of Western Australia 2023/24. Department of Primary Industries and Regional Development, Western Australia, Perth. https://library.dpird.wa.gov.au/an_sofar/17.

Strain, L., Murphy, D., Hogan-West, K. and Walters, S., 2024d. West Coast Octopus Resource Status Report. In: Newman, S.J., Moore, J. and Gaughan, D.J., eds. State of the fisheries: Status reports of the fisheries and aquatic resources of Western Australia 2023/24. Department of Primary Industries and Regional Development, Western Australia, Perth. https://library.dpird.wa.gov.au/an_sofar/17.

Strydom, S., Murray, K., Moustaka, M., Hyndes, G. and Wilson, S., 2026. Getting edgy: implications of fragmented seagrass meadows for fish assemblages. Landscape Ecology 41, 31. https://doi.org/10.1007/s10980-025-02261-3.

Surman, C.A., and Wooller, R.D., 1995. The Breeding Biology of the Lesser Noddy on Pelsaert Island, Western Australia, Emu – Austral Ornithology, 95:1, 47–53, DOI: 10.1071/MU9950047.

Surman, C.A. and Wooller, R.D., 2003. Comparative feeding ecology of five sympatric terns at a subtropical island in the eastern Indian Ocean. Journal of Zoology 259:219–230.

Surman, C.A. and Nicholson, L.W., 2009. A survey of the breeding seabirds and migratory shorebirds of the Houtman Abrolhos, Western Australia. Corella, 33(4):89–98.

Surman, C.A. and Nicholson, L.W., 2011. Ichthys Gas Field Development Project: literature review of seabirds in the vicinity of Ichthys Field infrastructure in the Browse Basin, Western Australia. Report prepared by Halfmoon Biosciences, Perth, for INPEX Browse, Ltd., Perth, Western Australia.

Surman, C.A. and Nicholson, L.W., 2015. Exmouth Sub-basin Marine Avifauna Monitoring Program: Final Report. Unpublished report prepared for Apache Energy Ltd. By Halfmoon Biosciences. 188 pp.

Surman, C.A., Burbidge, A.A. and Fitzhardinge, J., 2016. Long-term population trends in the vulnerable Lesser Noddy at the Houtman Abrolhos, Western Australia. Corella 40: 69–75.

Surman, C., Nicholson, L. and Ayling, S., 2017. Foraging behaviour of the Lesser Noddy *Anous tenuirostris* from the eastern Indian Ocean: Insights from micro-geologging. Marine Ornithology. 45. 123–128.

Surman, C.A., Nicholson, L.W. and Philipps, R.A., 2018. Distribution and patterns of migration of a tropical seabird community in the Eastern Indian Ocean. Journal of Ornithology 158: 867–877.

Surman, C.A., 2019. Houtman Abrolhos – A Natural History. Halfmoon Biosciences. 192 pp.

Surman, C., Surman, S. and Nicholson, L., 2025. The beachcomber effect. Prevalence of marine debris collected in nests of seabirds at the Houtman Abrolhos, Western Australia. SSRN. http://dx.doi.org/10.2139/ssrn.5145027.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Sutton, A.L., Jenner, K.C.S. and Jenner, M-N.M., 2019. Habitat associations of cetaceans and seabirds in the tropical eastern Indian Ocean. Deep Sea Research Part II: Topical Studies in Oceanography 166: 171–186.

Swann, G., 2002. Ornithological report for Lacepede Islands and Adele Island – October 2002 Kimberley Birdwatching, Broome (Unpublished, 15 pages).

Swann, G., 2005a. Occasional count no. 7, Ashmore Reef, 21 to 30 January 2002. Stilt 47: 26–33.

Swann, G., 2005b. Occasional count no. 8, Ashmore Reef, 23 January to 4 February 2003. Stilt 47: 34–39.

Swann, G., 2005c. Ornithological Report, Ashmore Reef 23 January to 5 February 2005. Kimberley Birdwatching, Broome. Swann G & T Willing 1997 Annotated list of the birds of the Lacepede Islands 15–19 December 1997. Unpublished report.

Taylor, M.D., Strydom, S., Fraser, M.W., Sequeira, A.M.M. and Kendrick, G.A., 2025. Breaking down seagrass fragmentation in a marine heatwave impacted World Heritage Area. Remote Sensing in Ecology and Conservation, 11, e70032. https://doi.org/10.1002/rse2.70032.

Thiele, D. and Gill, P.C., 1999. Cetacean observations during a winter voyage into Antarctic sea ice south of Australia. Antarctic Science 11(1): 48–53.

Thomson, P.G., Pillans, R., Jaine, F.R., Harcourt, R.G., Taylor, M.D., Pattiaratchi, C.B. and McLean, D.L., 2021. Acoustic telemetry around western Australia's oil and gas infrastructure helps detect the presence of an elusive and endangered migratory giant. Frontiers in Marine Science, 8, p.631449.

Thorburn, D.C. and Morgan, D.L., 2004. The northern river shark *Glyphis sp. C.* (Carcharhinidae) discovered in Western Australia. Zootaxa 685: 1–8.

Thorburn, D.C., 2006. Biology, ecology and trophic interactions of elasmobranchs and other fishes in riverine waters of northern Australia. PhD Thesis, Murdoch University, Perth, Western Australia.

Thorburn, D.C., Peverell, S.C., Stevens, J.D., Last, P.R. and Rowland, A.J., 2003. Status of freshwater and estuarine elasmobranchs in Northern Australia. Final Report to the Natural Heritage Trust, pp. 1–75.

Threatened Species Scientific Committee, 2009. Commonwealth Listing Advice on *Galeorhinus galeus*. Department of the Environment, Water, Heritage and the Arts. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/68453-listing-advice.pdf.

Threatened Species Scientific Committee, 2013a. Commonwealth Listing Advice on *Centrophorus zeehaani* (southern dogfish). Department of Sustainability, Environment, Water, Population and Communities. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/82679-listing-advice.pdf.

Threatened Species Scientific Committee, 2013b. Conservation Advice *Rostratula australis* Australian painted snipe. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/77037-conservation-advice.pdf.

Threatened Species Scientific Committee, 2015a. Conservation Advice *Balaenoptera borealis* sei whale. Canberra: Department of the Environment. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/34-conservation-advice-01102015.pdf.

Threatened Species Scientific Committee, 2015b. Conservation Advice *Megaptera novaeangliae* humpback whale. Canberra: Department of the Environment. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/38-conservation-advice- 10102015.pdf.

Threatened Species Scientific Committee, 2015c. Conservation Advice *Balaenoptera physalus* fin whale. Canberra: Department of the Environment. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/37-conservation-advice-01102015.pdf.

Threatened Species Scientific Committee, 2015d. Conservation Advice *Rhincodon typus* whale shark. Canberra: Department of the Environment. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/66680-conservation-advice-01102015.pdf.

Threatened Species Scientific Committee, 2015e. Conservation Advice *Anous tenuirostris melanops* Australian lesser noddy. Canberra: Department of the Environment. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/26000-conservation-advice-01102015.pdf.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Threatened Species Scientific Committee, 2015f. Conservation Advice *Pterodroma mollis* soft-plumaged petrel. Canberra: Department of the Environment. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/1036-conservation-advice-01102015.pdf.

Threatened Species Scientific Committee, 2020. Conservation Advice *Neophoca cinerea* Australian sea lion. Canberra: Department of Agriculture, Water and the Environment. Available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/22-conservation-advice-23122020.pdf.

Threatened Species Scientific Committee, 2024. Listing Advice *Sphyrna lewini* scalloped hammerhead. Canberra: Department of the Environment and Energy. Available from: https://www.environment.gov.au/biodiversity/threatened/species/pubs/85267-listing-advice-27022024.pdf.

Thums, M., Jenner, C., Waples, K., Salgado Kent, C. and Meekan, M., 2018. Humpback whale use of the Kimberley; understanding and monitoring spatial distribution. Report of Project 1.2.1 prepared for the Kimberley Marine Research Program, Western Australian Marine Science Institution, Perth, Western Australia, 78pp.

Thums, M., Ferreira, L.C., Jenner, C., Jenner, M., Harris, D., Davenport, A., Andrews-Goff, V., Double, M., Möller, L., Attard, C.R. and Bilgmann, K., 2022. Pygmy blue whale movement, distribution and important areas in the Eastern Indian Ocean. Global Ecology and Conservation, 35, p.e02054.

Thums, M., Ferreira, L.C., Davenport, A., Jenner, M., Möller, L.M., Russell, G., McCauley, R.D. and Jenner, C .,2025. Tracking pygmy blue whale diving behaviour and validation of foraging areas defined from horizontal movement data. Global Ecology and Conservation, 57, e03362. https://doi.org/10.1016/j.gecco.2024.e03362.

Tourism Western Australia, 2024. Overview of Visitation to WA – YE Mar 24. Tourism Research Australia, International and National Visitor Surveys. Available from: https://www.tourism.wa.gov.au/Publications%20Library/Markets%20and%20research/2024/IVS%20NVS/Overview%20of%20Visitation%20to%20WA%20-%20YE%20Mar%2024.pdf [Accessed 11 May 2026].

Tourism Western Australia, 2025. State Tourism Satellite Account 2023–24: Topline Results for WA. Prepared by Tourism WA. Available from: https://assets-us-01.kc-usercontent.com/53c284ed-8b6d-0077-d7d1-762b0c10baee/bc4652b7-2b61-484b-b16b-31e006362231/State%20Tourism%20State%20Satellite%20Account%202023-24.pdf [Accessed 31 Mar 2026].

Tourism Western Australia, 2026. Australia's North West. Research and Insights. Available from: https://www.tourism.wa.gov.au/en/research-and-insights/regional-research/australias-north-west [Accessed 31 Mar 2026].

Townsend, C.H., 1935. The distribution of certain whales as shown by logbook records of American whaleships. Zoologica 19: 3–50.

Trinnie, F.I., Evans-Powell, R.T., Denham, A., Hesp, S.A., Wakefield, C.B., Skepper, C., Crisafulli, B.M. and Newman, S.J., 2025. North Coast Demersal Scalefish Resource – Kimberley: 2025 Assessment. Resource Assessment Report No. 4, Department of Primary Industries and Regional Development, Western Australia.

Tremblin, C.M., Pinter, S.S., Holzmann, M., Parker, J.H., Walker, J.K. and Haig, D.W., 2025. *Neorotalia leeuwinensis*: a new species of calcarinid foraminifera living at the southern extreme of their biogeographical range, southwest Australia. Journal of Foraminiferal Research, 55(2), pp.103–130.

Truffley, E. and Wiberg, L., 2024a. South Coast Crustacean Resource Status Report 2024. In: Newman, S.J., Moore, J. and Gaughan, D.J., eds. State of the fisheries: Status reports of the fisheries and aquatic resources of Western Australia 2023/24. Department of Primary Industries and Regional Development, Western Australia, Perth. https://library.dpird.wa.gov.au/an_sofar/17.

Tuffley, E. and Wiberg, L., 2024b. West Coast Deep Sea Crustacean Resource Status Report 2024. In: Newman, S.J., Moore, J. and Gaughan, D.J., eds. State of the fisheries: Status reports of the fisheries and aquatic resources of Western Australia 2023/24. Department of Primary Industries and Regional Development, Western Australia, Perth. https://library.dpird.wa.gov.au/an_sofar/17.

Tucker, A.D., Pendoley, K.L., Murray, K., Loewenthal, G., Barber, C., Denda, J., Lincoln, G., Mathews, D., Oades, D., Whiting, S.D., Miriuwung Gajerrong Rangers, Balanggarra Rangers, Wunambal Gaambera Rangers, Dambimangari Rangers, Mayala Rangers, Bardi Jawi Rangers, Nyul Nyul Rangers, Yawuru Rangers, Karajarri Rangers, Nyangumart Rangers, 2021. Regional Ranking of Marine Turtle Nesting in

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Remote Western Australia by Integrating Traditional Ecological Knowledge and Remote Sensing. Remote Sensing13, 4696. https://doi.org/10.3390/rs13224696.

Udyawer, V., Read, M., Hamann, M., Heupel, M.R. and Simpfendorfer, C.A., 2016. Importance of shallow tidal habitats as refugia from trawl fishing for sea snakes. Journal of Herpetology 50: 527–533. https://doi.org.10.1670/15-026.

Udyawer, V., Somaweera, R., Nitschke, C., d'Anastasi, B., Sanders, K., Webber, B.L., Hourston, M, and Heupel, M.R., 2020. Prioritising search effort to locate previously unknown populations of endangered marine reptiles. Global Ecology and Conservation 22. https://doi.org/10.1016/j.gecco.2020.e01013.

Udyawer, V., Winchester, K., English, D., Streten, C. and Stacey, N., 2025. Professional fishers' knowledge informs distribution and interaction dynamics of sawfish and river sharks in coastal fishing grounds of Northern Territory, Australia. Maritime Studies, 24, 35. https://doi.org/10.1007/s40152-025-00429-w.

UNESCO, 1991. Shark Bay, Western Australia Description. UNESCO, World heritage Convention. https://whc.unesco.org/en/list/578 [Accessed 30 Mar 2026].

UNESCO 2003. *Convention for the Safeguarding of the Intangible Cultural Heritage*. United Nations Educational, Scientific and Cultural Organization. Available from: Text of the Convention for the Safeguarding of the Intangible Cultural Heritage [Accessed 7 Aug 2026].UNESCO, 2011. Ningaloo Coast Description. UNESCO, World heritage Convention. https://whc.unesco.org/en/list/1369 [Accessed 30 Mar 2026].

UNESCO, 2024. World Heritage. Available at: https://www.unesco.org/en/world-heritage?hub=68246 [Accessed 12 May 2026].

UNESCO, 2025. Murujuga Cultural Landscape Description. UNESCO, World heritage Convention. https://whc.unesco.org/en/list/1709 [Accessed 5 Mar 2026].

URS, 2004. Review of Department of Environment and Heritage Guidelines on the Application of the EPBC Act to Interactions between Offshore Seismic Operations and Large Cetaceans. Confidential report prepared for the Department of the Environment and Heritage by URS Australia Pty Ltd, Perth, Western Australia, Report No. R1039.

URS Australia Pty Ltd, 2006. Report on Environmental Surveys Undertaken at Scott Reef in February 2006. Report produced for Woodside Energy Limited.

URS, 2007. Scott Reef Environmental Survey 4: Remotely Operated Vehicle Inspection of Deep Habitats in Scott Reef Lagoons. Woodside Energy Limited.

Vadrevu, K.P., Lasko, K., Giglio, L. and Justice, C., 2014. Analysis of Southeast Asia pollution episode during June 2013 using satellite remote sensing datasets. Environmental Pollution 195: 245–256.

Vanderklift, M., Bearham, D., Haywood, M., Lozano Montes, H., McCallum, R., McLaughlin, J., McMahon, K., Mortimer, N, and Lavery, P., 2017. Natural dynamics: understanding natural dynamics of seagrasses of the north-west of Western Australia. WAMSI Dredging Science Node, Theme 5, Project 5.3.

Veth, P., McDonald, J., Ward, I., O'Leary, M., Beckett, E., Benjamin, J., Ulm, S., Hacker, J., Ross, P. and Bailey, G., 2019. A Strategy for Assessing Continuity in Terrestrial and Maritime Landscapes from Murujuga (Dampier Archipelago), North West Shelf, Australia. The Journal of Island and Coastal Archaeology 15(4): 477–503. Doi: 10.1080/15564894.2019.1572677.

Vincent, A.C.J., 1996. The international trade in seahorses. TRAFFIC International, Cambridge, UK. Available from: http://www.traffic.org/publication/96_International_Trade_Seahorse.pdf [Accessed 08 May 2026].

Voris, H.K., 1972. The role of sea snakes (Hydrophiidae) in the trophic structure of coastal ocean communities. Journal of the Marine Biological Association of India 14(2): 429–442.

Voris, H.K. and Voris, H.H., 1983. Feeding strategies in marine snakes: an analysis of evolutionary, morphological, behavioral and ecological relationships. American Zoology 23: 411–425. https://doi.org.10.1093/icb/23.2.411.

Wakefield, C., Trinnie, F., Skepoer, C., Boddington, D. and Grosse, T., 2024. North Coast Demersal Resource Status Report. In: Newman, S.J., Moore, J. and Gaughan, D.J., eds. State of the fisheries: Status reports of the fisheries and aquatic resources of Western Australia 2023/24. Department of Primary Industries and Regional Development, Western Australia, Perth. https://library.dpird.wa.gov.au/an_sofar/17.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Walker, D. and Prince, R., 1987. Distribution and biogeography of seagrass species on the northwest coast of Australia. Aquatic Botany 29, 19–32.

Ward, I., Larcombe, P., Ross, P. and Fandry, C., 2022. Applying geoarchaeological principles to marine archaeology: A reappraisal of the 'first marine' and 'in situ' lithic scatters in the Dampier Archipelago, NW Australia. Geoarchaeology (37), 783–810. https://doi.org/10.1002/gea.21917.

Warren, V.E., Delarue, J.J-Y, Robinson, C., Kowarski, K.A., McPherson, C.R., Wilson, C.C., Maxner, E.E., Lawrence, C.B., Gaudet, B.J. and Muellenmeister, A., 2023. Marine Mammal Acoustic Monitoring Report: Characterisation of Pygmy Blue Whales and Other Acoustic Contributors. Document 02826, Version 2.0 FINAL, 81+pp. Technical report by JASCO Applied Sciences for Woodside Energy Limited.

Watson, M., Stamation, K. and Charlton, C., 2021. Calving Rates, Long-Range Movements and Site Fidelity of Southern Right Whales (*Eubalaena australis*) in South-Eastern Australia. Journal of Cetacean Research Management 22(1) pp. 17–28.

WBM Oceanics and Claridge, G., 1997. Guidelines for managing visitation to seabird breeding islands, Great Barrier Reef Marine Park Authority, Townsville.

Weimerskirch, H., Le Corre, M. and Bost, C.A., 2008. Foraging strategy of masked boobies from the largest colony in the world: relationship to environmental conditions and fisheries. Marine Ecology Progress Series 362: 291–302. https://doi.org/10.3354/meps07424.

Weimerskirch, H., de Grissac, S., Ravache, A., Prudor, A., Corbeau, A., Congdon, B., McDuie, F., Bourgeois, K., Dromzée, S., Butscher, J., Menkes, C., Allain, V., Vidal, E., Jaeger, A, and Borsa, P., 2020. At-sea movements of wedge-tailed shearwaters during and outside the breeding season from four colonies in New Caledonia. Marine Ecology Progress Series. 633. 225–238. 10.3354/meps13171.

Weller, D.R. and Lee, C.V., 2017. Migratory shorebird conservation action plan. BirdLife Australia, unpublished report, September 2017.

Western Australian Museum, 2009. Marine Biodiversity Survey of Mermaid Reef (Rowley Shoals), Scott and Seringapatam Reef, Marine Survey Team, Aquatic Zoology, Western Australian Museum. Records of the Western Australian Museum 77.

Western Australian Museum, 2026. Shipwreck Databases. Government of Western Australia. Available from: https://museum.wa.gov.au/maritime-archaeology-db/wrecks [Accessed 02 Apr 2026].

White, W. 2008. Shark Families Heterodontidae to Pristiophoridae. pp. 32-100 in Gomon. M.F., Bray, D.J. & Kuiter, R.H (eds). Fishes of Australia's Southern Coast. Sydney : Reed New Holland 928 pp.

Whiting, A.U., Thomson, A., Chaloupka, M. and Limpus, C.J., 2008. Seasonality, abundance and breeding biology of one of the largest populations of nesting flatback turtles: Cape Domett. Western Australia. Australian Journal of Zoology 56: 297–303.

Whiting, S., Tucker, T., Pendoley, K., Mitchell, N., Bentley, B., Berry, O. and FitzSimmons, N., 2018. Marine Turtles in the Kimberley: Key Biological Indices Required to Understand and Manage Nesting Turtles along the Kimberley Coast. Western Australia Marine Science Institution: Perth, Australia.

Whiting, A.U., Rossendell, J., Gee, J., Clarke, S., Tucker, A.D., Fossette, S., Guinea, M.L and Whiting, S.D., 2025. Population dynamics of flatback turtles nesting on Delambre Island, ascertained using a multi-faceted approach. Endangered Species Research, 58, 287–302. Available online at: https://doi.org/10.3354/esr01449.

Whittock, P.A., Pendoley, K.L. and Hamann, M., 2016. Using habitat suitability models in an industrial setting: the case for internesting flatback turtles. Ecosphere7(11):e01551. 10.1002/ecs2.1551.

Whitty, J.M., Phillips, N.M., Morgan, D.L., Chaplin, J.A., Thorburn, D.C. and Peverell, S.C., 2008. Habitat associations of Freshwater Sawfish (*Pristis microdon*) and Northern River Sharks (*Glyphis garricki*): including genetic analysis of freshwater sawfish across northern Australia. Report to Australian Government, Department of the Environment, Water, Heritage and the Arts. Murdoch University Centre for Fish and Fisheries Research. Perth, Western Australia. 75 pp.

Wilinggin Aboriginal Corporation, 2022. Keeping Ngarinyin People and Willinggin Country Healthy 2023–2032. https://www.wilinggin.com.au/hcp.

Wijeratne, S., Pattiaratchi, C. and Proctor, R., 2018. Estimates of surface and subsurface boundary current transport around Australia. Journal of Geophysical Research: Oceans 123: 3444–3466.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Williams, A., Ulm, S., Sapienza, T., Lewis, S. and Turney, C., 2018. Sea-level change and demography during the last glacial termination and early Holocene across the Australian continent. Quaternary Science Reviews (182), 144–154. Doi: https://doi.org/10.1016/j.quascirev.2017.11.030.

Williams, A., Althaus, F., Dunstan, P.K., Poore, G.C.B., Bax, N.J., Kloser, R.J. and McEnnulty, F.R., 2010. Scales of habitat heterogeneity and megabenthos biodiversity on an extensive Australian continental margin (100–1,100 m depths). Marine Ecology 31: 222–236.

Williams, L.A., Gaston, T.F., Raoult, V., Klaassen, M. and Griffin, A.S., 2026. Stable isotopes show that across non-breeding sites migratory shorebirds rely on different primary producers. Estuarine, Coastal and Shelf Science, 297, 109736. https://doi.org/10.1016/j.ecss.2026.109736.

Williams-Hoffman, M., Johansen, M.P., Larcombe, P., Child, D.P., Hotchkis, M.A.C., Serrano, O., Lavery, P.S., Thiruvoth, S. and Masqué, P., 2025. Montebello Islands marine sediment retains nuclear weapons-derived radionuclide contamination 70 years after detonations. Marine Pollution Bulletin, 219, 118280. https://doi.org/10.1016/j.marpolbul.2025.118280.

Williamson, P..C., Sumner, N.R. and Malseed, B.E., 2006, A 12-month survey of recreational fishing in the Pilbara region of Western Australia during 1999–2000, Fisheries Research Report No. 153, Department of Fisheries, Western Australia. 61 pp.

Wilkin, S., How, J., Oliver, R. and Brown, S., 2023a. Saucer Scallop Resource Status Report 2023. In: Newman, S.J., Wise, B.S., Santoro, K.G. and Gaughan, D.J., eds. Status Reports of the Fisheries and Aquatic Resources of Western Australia 2022/2023: The State of the Fisheries. Department of Primary Industries and Regional Development, Western Australia. pp.107–114.

Wilkin, S., How, J., Shanks, M. and Leaversuch, R., 2023b. North Coast Prawn Resource Status 2023. In: Newman, S.J., Wise, B.S., Santoro, K.G. and Gaughan, D.J., eds. Status Reports of the Fisheries and Aquatic Resources of Western Australia 2022/2023: The State of the Fisheries. Department of Primary Industries and Regional Development, Western Australia. P 161–167.

Wilkin, S., Changrapavan, A., How, J., Baudains, G. and Brown, S., 2024. Saucer Scallop Resource Status Report. In: Newman, S.J., Moore, J. and Gaughan, D.J., 2024. State of the fisheries: Status reports of the fisheries and aquatic resources of Western Australia 2023/24. Department of Primary Industries and Regional Development, Western Australia, Perth. https://library.dpird.wa.gov.au/an_sofar/17.

Wilson, B.R., 2013. The biogeography of the Australian North West Shelf: Environmental Change and Life's Response. Western Australian Museum, Perth, Australia. 415 pp.

Wilson, S.., Carleton, J. and Meekan, M., 2003, Spatial and temporal patterns in the distribution and abundance of microzooplankton on the southern North West Shelf, Western Australia. Estuarine, Coastal and Shelf Science 56: 897–908.

Wilson, S.K., Depczynski, M. and Fisher, R., 2010. Habitat associations of juvenile fish at Ningaloo Reef, Western Australia: the importance of coral and algae. PloS ONE 5(12): e15185. https://doi.org/10.1371/journal.pone.0015185.

Wilson, P., Pattiaratchi, C., Whiting, S., Ferreira, L.C., Fossette, S., Pendoley, K. and Thums, M., 2023. Predicting core areas of flatback turtle hatchlings and potential exposure to threats. Endangered Species Research, 52, 129–147. https://doi.org/10.3354/esr01269.

Woodside, 2006. Pluto LNG Development: Draft Public Environment Report/Public Environment Review (EPBC Act Referral No. 2006/2968), Perth: Woodside Energy Limited.

Woodside, 2015. North Rankin Complex – Basic Design Data Specification Sheet – Metocean. Controlled reference number A1100ST9393191. Woodside Energy Limited, Perth, Western Australia.

Woodside, 2019, Proposed Browse to NWS Project Draft EIS/ERD. EPA Assessment No. 2191, EPBC 2018/8319. December 2019. 1986 pp.

Woodside, 2020. Scarborough Offshore Project Proposal, Revision 5 Submission, February 2020. Woodside Energy Ltd. 806 pp.

Woodside, 2022. Vincent – basic design data specification sheet – metocean (No. V0000ST9650826). Woodside Energy Limited, Perth, Western Australia.

Woodside Energy Ltd., 2023. Scarborough, Dredging and Spoil Disposal Management Plan. SA0006AH0000002.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Worley, 2024. Seabird and Shorebird Existing Knowledge Review 2024. North West Marine Region. Unpublished report prepared for Woodside Energy Ltd. By Worley with Subject Matter Expert input from Dr Annie Knipe and Dr Lisa Nicholson.

WorleyParsons, 2009. Comparison of the Dampier Port Fringing Reef Benthic Community with Nearby Reef Areas. Prepared for Dampier Port Authority. WorleyParsons Services Pty Ltd, Perth, Western Australia.

Wynen, L., Larson, H., Thorburn, D., Peverell, S., Morgan, D., Field, I. and Gibb, K., 2009. Mitochondrial deoxyribonucleic acid supports the identification of two endangered river sharks (*Glyphis glyphis* and *Glyphis garricki*) across northern Australia. Marine and Freshwater Research 60: 554–562.

Xue, J., Zhang, W., Zhang, Y., Luo, J.J., Zhu, H., Sun, C., Yamagata, T., 2025. Interdecadal modulation of Ningaloo Nino/Nina strength in the Southeast Indian Ocean by the Atlantic multidecadal oscillation. Nature Communications, 16(1966). https://doi.org/10.1038/s41467-025-57160-7.

Yeoh, D., Quinn, A., Brooks, B., Moses, A., Nolan, D. and Cox, J., 2024. West Coast Nearshore and Estuarine Finfish Resource Status Report 2024. In: Newman, S.J., Moore, J. and Gaughan, D.J., 2024. State of the fisheries: Status reports of the fisheries and aquatic resources of Western Australia 2023/24. Department of Primary Industries and Regional Development, Western Australia, Perth. https://library.dpird.wa.gov.au/an_sofar/17.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

15. LIST OF TERMS AND ACRONYMS

Table 15-1: List of terms and acronyms

Term	Definition
°C	Degrees Celsius
3D	three-dimensional
AFMA	Australian Fisheries Management Authority
AFZ	Australian Fishing Zone
AIMS	Australian Institute of Marine Science
AMP	Australian Marine Park
BC Act	*Biodiversity Conservation Act 2016* (WA)
BIA	biologically important area
BOM	Bureau of Meteorology
Burra Charter	Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance
CALM	Department of Conservation and Land Management
cm	centimetres
CSIRO	Commonwealth Scientific and Industrial Research Organisation
Commonwealth	Commonwealth
DAWE	Department of Agriculture, Water and the Environment
DBCA	Department of Biodiversity, Conservation and Attractions
DCCEEW	Department of Climate Change, Energy, the Environment and Wate
DEC	Department of Environment and Conservation
DEWHA	Department of Environment, Heritage, Water and the Arts
DEWR	Department of the Environment and Water Resources
DNP	Director of National Parks
DoE	Department of the Environment
DoEE	Department of Environment and Energy
DPAW	Department of the Parks and Wildlife
DPIRD	Department of Primary Industries and Regional Development
DPLH	Department of Planning, Lands and Heritage
DSEWPaC	Department of Sustainability, Environment, Water, Population and Communities
DWER	Department of Water and Environmental Regulation
EAAF	East Asian–Australasian Flyway
EEZ	Exclusive Economic Zone
EMBA	environment that may be affected
EP	Environment Plan
EPBC	environment protection and biodiversity conservation
F-CD	flatback turtle, Cape Domett stock
F-Pil	flatback turtle, Pilbara stock
F-swKim	flatback turtle, south-west Kimberley stock
FHPA	fish habitat protection area

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Term	Definition
G-AR	green turtle, Ashmore Reef stock
G-NWS	green turtle, NWS stock
G-ScBr	green turtle, Scott Reef-Browse Island stock
GDC	Gascoyne Development Commission
H-WA	hawksbill turtle, Western Australia genetic stock
ha	hectares
HMAS	His Majesty's Australian Ship
HSK	Handelstörkreuzer
ICOMOS	International Council on Monuments and Sites
ILUA	Indigenous Land Use Agreement
IPA	Indigenous Protected Area
IUCN	International Union for Conservation of Nature
IWC	International Whaling Commission
KBA	key biodiversity area
KEF	key ecological feature
kHz	kilohertz
km	kilometres
km/h	kilometres per hour
km²	cubic kilometres
KTLA	Karajarri Traditional Lands Association
L	litres
LH-WA	loggerhead turtle, Western Australia stock
LNG	liquified natural gas
m	metres
m²	square metres
m/s	metres per second
MAC	Murujuga Aboriginal Corporation
MCL	Murujuga Cultural Landscape
mm	millimetres
MNES	matters of national environmental significance
MODIS	moderate resolution imaging spectroradiometer
MoU	Memorandum of Understanding
MRAMP	Murujuga Rock Art Monitoring Program
MRAS	Murujuga Rock Art Strategy
NIAA	National Indigenous Australians Agency
nm	nautical miles
NMR	North Marine Region
NWMR	North-west Marine Region
NT	Northern Territory
NWS	North West Shelf

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Term	Definition
OPGGS (E) Regulations	Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023
PDC	Pilbara Development Commission
PMST	EPBC Act Protected Matters Search Tool
RNTBC	Registered Native Title Body Corporate
SA	South Australia
SPRAT	species profile and threats database
SWMR	South-west Marine Region
t	tonnes
TEC	threatened ecological community
UNESCO	United Nations Educational, Scientific and Cultural Organization
UWA	University of Western Australia
WA	Western Australia
WAMSI	Western Australian Marine Science Institution
WGAC	Wunambal Gaambera Aboriginal Corporation
Woodside	Woodside Energy Ltd. or Woodside Energy Group

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

APPENDIX A PROTECTED MATTERS SEARCH REPORTS FOR THE NWMR, SWMR AND NMR

The PMST tool conducts searches on a grid-based function. Accordingly, the PMST results can indicate features or species that do not actually intersect or have a presence in the area. To validate search results, comprehensive literature and scientific expertise is used. As such, only species considered relevant to the scope of this document have been described.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

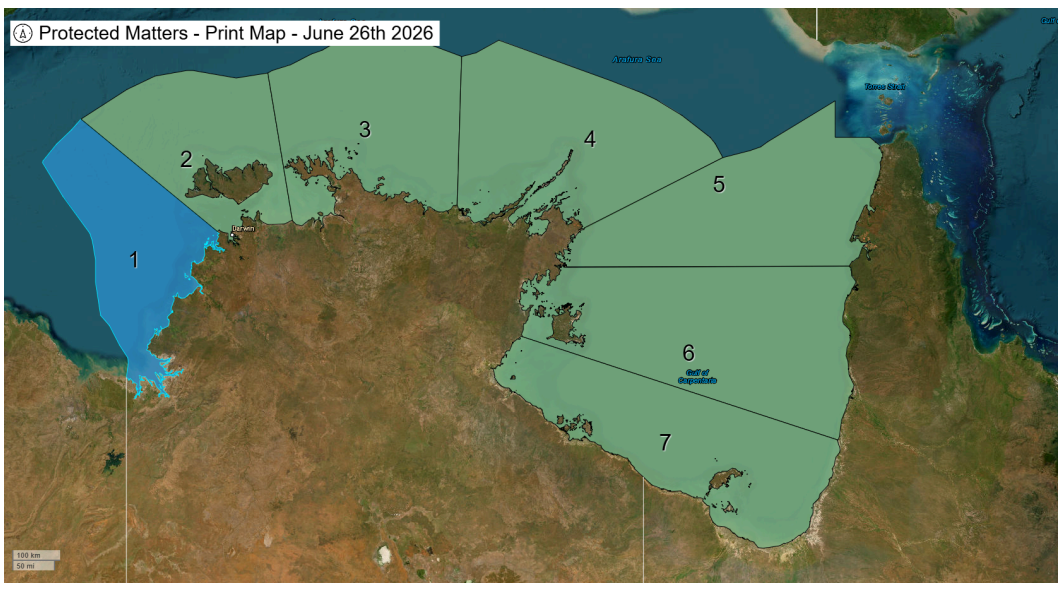


Figure 1: North Marine Region - Part 1

Report created: 26-Jun-2026

Summary
Details
Matters of NES
Other Matters Protected by the EPBC Act
Extra Information
Caveat
Acknowledgements

Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	3
Listed Threatened Ecological Communities:	None
Listed Threatened Species:	62
Listed Migratory Species:	64

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at https://www.dcceew.gov.au/parks-heritage/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	5
Commonwealth Heritage Places:	1
Listed Marine Species:	104
Whales and Other Cetaceans:	16
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	5
Habitat Critical to the Survival of Marine Turtles:	2

Extra Information

This part of the report provides information that may also be relevant to the area you have

State and Territory Reserves:	1
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	51
Key Ecological Features (Marine):	4
Biologically Important Areas:	7
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

Commonwealth Marine Area [Resource Information]

Approval is required for a proposed activity that is located within the Commonwealth Marine Area which has, will have, or is likely to have a significant impact on the environment. Approval may be required for a proposed action taken outside a Commonwealth Marine Area but which has, may have or is likely to have a significant impact on the environment in the Commonwealth Marine Area.

Feature Name
Commonwealth Marine Areas (EPBC Act)
Commonwealth Marine Areas (EPBC Act)
Commonwealth Marine Areas (EPBC Act)

Listed Threatened Species [Resource Information]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.
Number is the current name ID.

Scientific Name	Threatened Category	Presence Text
BIRD		
Arenaria interpres		
Ruddy Turnstone [872]	Vulnerable	Species or species habitat likely to occur within area
Calidris acuminata		
Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area
Calidris canutus		
Red Knot, Knot [855]	Vulnerable	Species or species habitat likely to occur within area
Calidris ferruginea		
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area
Calidris tenuirostris		
Great Knot [862]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Species or species habitat likely to occur within area
Chloebia gouldiae listed as Erythrura gouldiae Gouldian Finch [90091]	Endangered	Species or species habitat likely to occur within area
Erythrotriorchis radiatus Red Goshawk [942]	Endangered	Species or species habitat likely to occur within area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area
Falcunculus frontatus whitei Crested Shrike-tit (northern), Northern Shrike-tit [26013]	Vulnerable	Species or species habitat likely to occur within area
Geophaps smithii smithii Partridge Pigeon (eastern) [64441]	Vulnerable	Species or species habitat likely to occur within area
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat likely to occur within area
Limosa lapponica baueri Nunivak Bar-tailed Godwit, Western Alaskan Bar-tailed Godwit [86380]	Endangered	Species or species habitat may occur within area
Limosa limosa Black-tailed Godwit [845]	Endangered	Species or species habitat likely to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
[Pezoporus occidentalis](#)		
Night Parrot [59350]	Critically Endangered	Species or species habitat may occur within area
[Phaethon rubricauda westralis](#)		
Red-tailed Tropicbird (Indian Ocean), Indian Ocean Red-tailed Tropicbird [91824]	Endangered	Species or species habitat likely to occur within area
[Pluvialis squatarola](#)		
Grey Plover [865]	Vulnerable	Species or species habitat likely to occur within area
[Rostratula australis](#)		
Australian Painted Snipe [77037]	Endangered	Species or species habitat may occur within area
[Sternula albifrons](#)		
Little Tern [82849]	Vulnerable	Breeding likely to occur within area
[Tringa nebularia](#)		
Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area
[Tyto novaehollandiae kimberli](#)		
Masked Owl (northern) [26048]	Vulnerable	Species or species habitat likely to occur within area
FROG		
[Uperoleia daviesae](#)		
Howard River Toadlet, Davies's Toadlet [85375]	Vulnerable	Species or species habitat may occur within area
MAMMAL		
[Antechinus bellus](#)		
Fawn Antechinus [344]	Vulnerable	Species or species habitat likely to occur within area
[Balaenoptera borealis](#)		
Sei Whale [34]	Vulnerable	Species or species habitat likely to occur within area
[Balaenoptera musculus](#)		
Blue Whale [36]	Endangered	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Balaenoptera physalus Fin Whale [37]	Vulnerable	Species or species habitat likely to occur within area
Conilurus penicillatus Brush-tailed Rabbit-rat, Brush-tailed Tree-rat, Pakooma [132]	Vulnerable	Species or species habitat may occur within area
Dasyurus hallucatus Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu] [331]	Endangered	Species or species habitat likely to occur within area
Macroderma gigas Ghost Bat [174]	Vulnerable	Species or species habitat likely to occur within area
Mesembriomys gouldii gouldii Black-footed Tree-rat (Kimberley and mainland Northern Territory), Djintamoonga, Manbul [87618]	Endangered	Species or species habitat likely to occur within area
Orcaella heinsohni Australian Snubfin Dolphin [81322]	Vulnerable	Species or species habitat likely to occur within area
Petrogale concinna canescens Nabarlek (Top End) [87606]	Endangered	Species or species habitat likely to occur within area
Petrogale concinna concinna Nabarlek (Victoria River District) [87605]	Critically Endangered	Species or species habitat likely to occur within area
Phascogale pirata Northern Brush-tailed Phascogale [82954]	Vulnerable	Species or species habitat likely to occur within area
Saccolaimus saccolaimus nudicluniatus Bare-rumped Sheath-tailed Bat, Bare-rumped Sheathtail Bat [66889]	Vulnerable	Species or species habitat likely to occur within area
Sousa sahulensis Australian Humpback Dolphin [87942]	Vulnerable	Breeding likely to occur within area

Scientific Name	Threatened Category	Presence Text
Trichosurus vulpecula arnhemensis Northern Brushtail Possum [83091]	Vulnerable	Species or species habitat likely to occur within area
Xeromys myoides Water Mouse, False Water Rat, Yirrkoo [66]	Vulnerable	Species or species habitat likely to occur within area
PLANT		
Typhonium praetermissum [65859]	Endangered	Species or species habitat likely to occur within area
Typhonium sp. Cox Peninsula (S.Nicholas 15/12/1999) [93623]	Endangered	Species or species habitat likely to occur within area
REPTILE		
Acanthophis hawkei Plains Death Adder [83821]	Vulnerable	Species or species habitat likely to occur within area
Aipysurus apraefrontalis Short-nosed Sea Snake, Short-nosed Seasnake [1115]	Critically Endangered	Species or species habitat likely to occur within area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
Carettochelys insculpta Pig-nosed Turtle, Pitted Shell Turtle [1762]	Vulnerable	Species or species habitat may occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Breeding likely to occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Breeding likely to occur within area

Scientific Name	Threatened Category	Presence Text
Natator depressus		
Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area
Tiliqua scincoides intermedia		
Northern Blue-tongued Skink [89838]	Critically Endangered	Species or species habitat likely to occur within area
Varanus mertensi		
Mertens' Water Monitor [1568]	Endangered	Species or species habitat likely to occur within area
Varanus mitchelli		
Mitchell's Water Monitor [1569]	Critically Endangered	Species or species habitat likely to occur within area
SHARK		
Carcharodon carcharias		
White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat may occur within area
Glyphis garricki		
Northern River Shark, New Guinea River Shark [82454]	Endangered	Species or species habitat likely to occur within area
Glyphis glyphis		
Speartooth Shark [82453]	Critically Endangered	Species or species habitat likely to occur within area
Pristis clavata		
Dwarf Sawfish, Queensland Sawfish [68447]	Vulnerable	Breeding likely to occur within area
Pristis pristis		
Largetooth Sawfish, Freshwater Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Endangered	Species or species habitat likely to occur within area
Pristis zijsron		
Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Breeding likely to occur within area
Rhincodon typus		
Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
Sphyrna lewini		
Scalloped Hammerhead [85267]	Conservation Dependent	Species or species habitat likely to occur within area

Listed Migratory Species		[Resource Information]
Scientific Name	Threatened Category	Presence Text
null		
Balaenoptera omurai		
Omura's Whale [87136]		Species or species habitat likely to occur within area
Migratory Marine Birds		
Anous stolidus		
Common Noddy [825]		Species or species habitat likely to occur within area
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Calonectris leucomelas		
Streaked Shearwater [1077]		Species or species habitat likely to occur within area
Fregata ariel		
Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area
Fregata minor		
Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat likely to occur within area
Phaethon lepturus		
White-tailed Tropicbird [1014]		Species or species habitat may occur within area
Phaethon rubricauda		
Red-tailed Tropicbird [994]		Species or species habitat likely to occur within area
Sternula albifrons		
Little Tern [82849]	Vulnerable	Breeding likely to occur within area
Migratory Marine Species		
Anoxypristis cuspidata		
Narrow Sawfish, Knifetooth Sawfish [68448]		Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Balaenoptera borealis Sei Whale [34]	Vulnerable	Species or species habitat likely to occur within area
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat likely to occur within area
Balaenoptera physalus Fin Whale [37]	Vulnerable	Species or species habitat likely to occur within area
Carcharhinus longimanus Oceanic Whitetip Shark [84108]		Species or species habitat may occur within area
Carcharias taurus Grey Nurse Shark [64469]		Species or species habitat may occur within area
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat may occur within area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Dugong dugon Dugong [28]		Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Breeding likely to occur within area
Isurus oxyrinchus Shortfin Mako, Mako Shark [79073]		Species or species habitat likely to occur within area
Isurus paucus Longfin Mako [82947]		Species or species habitat likely to occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Breeding likely to occur within area
Megaptera novaeangliae Humpback Whale [38]		Species or species habitat likely to occur within area
Mobula alfredi as Manta alfredi Reef Manta Ray, Coastal Manta Ray [90033]		Species or species habitat likely to occur within area
Mobula birostris as Manta birostris Giant Manta Ray [90034]		Species or species habitat likely to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area
Orcaella heinsohni Australian Snubfin Dolphin [81322]	Vulnerable	Species or species habitat likely to occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Pristis clavata Dwarf Sawfish, Queensland Sawfish [68447]	Vulnerable	Breeding likely to occur within area
Pristis pristis Largetooth Sawfish, Freshwater Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Endangered	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Pristis zijsron		
Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Breeding likely to occur within area
Rhincodon typus		
Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
Sousa sahulensis as Sousa chinensis		
Australian Humpback Dolphin [87942]	Vulnerable	Breeding likely to occur within area
Tursiops aduncus (Arafura/Timor Sea populations)		
Spotted Bottlenose Dolphin (Arafura/Timor Sea populations) [78900]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
Cecropis daurica		
Red-rumped Swallow [80610]		Species or species habitat may occur within area
Cuculus optatus		
Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat may occur within area
Hirundo rustica		
Barn Swallow [662]		Species or species habitat may occur within area
Motacilla cinerea		
Grey Wagtail [642]		Species or species habitat may occur within area
Motacilla flava		
Yellow Wagtail [644]		Species or species habitat likely to occur within area
Migratory Wetlands Species		
Acrocephalus orientalis		
Oriental Reed-Warbler [59570]		Species or species habitat may occur within area
Actitis hypoleucos		
Common Sandpiper [59309]		Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Arenaria interpres Ruddy Turnstone [872]	Vulnerable	Species or species habitat likely to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area
Calidris alba Sanderling [875]		Species or species habitat likely to occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat likely to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Calidris tenuirostris Great Knot [862]	Vulnerable	Species or species habitat likely to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Species or species habitat likely to occur within area
Charadrius veredus Oriental Plover, Oriental Dotterel [882]		Species or species habitat may occur within area
Glareola maldivarum Oriental Pratincole [840]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat likely to occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat likely to occur within area
Limosa limosa Black-tailed Godwit [845]	Endangered	Species or species habitat likely to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Numenius phaeopus Whimbrel [849]		Species or species habitat likely to occur within area
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area
Pluvialis squatarola Grey Plover [865]	Vulnerable	Species or species habitat likely to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area

Other Matters Protected by the EPBC Act

Commonwealth Lands [Resource Information]

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Commonwealth Land Name	State
Department of Climate Change, Energy, the Environment and Water	
Bradshaw Defence Area [CHL_105655]	NT
Department of Defence	
Bradshaw Field Training Area [DD_1495]	NT

Commonwealth Land Name	State
JORN Radar Site - Kalkarindji [DD_3210]	NT
JORN Radar Site - Nhulunbuy [DD_3211]	NT
NT Portion 03686 plan CP4953 [AGPR6603]	NT

Commonwealth Heritage Places [Resource Information]

Name	State	Status
Natural		
Bradshaw Defence Area	NT	Listed place

Listed Marine Species [Resource Information]

Scientific Name	Threatened Category	Presence Text
Bird		
Acrocephalus orientalis Oriental Reed-Warbler [59570]		Species or species habitat may occur within area overfly marine area
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat likely to occur within area
Anous stolidus Common Noddy [825]		Species or species habitat likely to occur within area
Anseranas semipalmata Magpie Goose [978]		Species or species habitat may occur within area overfly marine area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area
Arenaria interpres Ruddy Turnstone [872]	Vulnerable	Species or species habitat likely to occur within area
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area
Calidris alba Sanderling [875]		Species or species habitat likely to occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat likely to occur within area overfly marine area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area overfly marine area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area
Calidris tenuirostris Great Knot [862]	Vulnerable	Species or species habitat likely to occur within area overfly marine area
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat likely to occur within area
Cecropis daurica as Hirundo daurica Red-rumped Swallow [80610]		Species or species habitat may occur within area overfly marine area
Chalcites osculans as Chrysococcyx osculans Black-eared Cuckoo [83425]		Species or species habitat likely to occur within area overfly marine area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Species or species habitat likely to occur within area
Charadrius veredus Oriental Plover, Oriental Dotterel [882]		Species or species habitat may occur within area overfly marine area
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat likely to occur within area
Glareola maldivarum Oriental Pratincole [840]		Species or species habitat may occur within area overfly marine area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area
Hirundo rustica Barn Swallow [662]		Species or species habitat may occur within area overfly marine area
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat likely to occur within area overfly marine area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat likely to occur within area
Limosa limosa Black-tailed Godwit [845]	Endangered	Species or species habitat likely to occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area overfly marine area
Motacilla flava Yellow Wagtail [644]		Species or species habitat likely to occur within area overfly marine area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Numenius phaeopus Whimbrel [849]		Species or species habitat likely to occur within area
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area
Phaethon lepturus White-tailed Tropicbird [1014]		Species or species habitat may occur within area
Phaethon rubricauda Red-tailed Tropicbird [994]		Species or species habitat likely to occur within area
Pluvialis squatarola Grey Plover [865]	Vulnerable	Species or species habitat likely to occur within area overfly marine area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat likely to occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Rostratula australis as Rostratula benghalensis (sensu lato)		
Australian Painted Snipe [77037]	Endangered	Species or species habitat may occur within area overfly marine area
Sternula albifrons as Sterna albifrons		
Little Tern [82849]	Vulnerable	Breeding likely to occur within area
Tringa nebularia		
Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area overfly marine area
Fish		
Bhanotia fasciolata		
Corrugated Pipefish, Barbed Pipefish [66188]		Species or species habitat may occur within area
Campichthys tricarinatus		
Three-keel Pipefish [66192]		Species or species habitat may occur within area
Choeroichthys brachysoma		
Pacific Short-bodied Pipefish, Short-bodied Pipefish [66194]		Species or species habitat may occur within area
Choeroichthys suillus		
Pig-snouted Pipefish [66198]		Species or species habitat may occur within area
Corythoichthys amplexus		
Fijian Banded Pipefish, Brown-banded Pipefish [66199]		Species or species habitat may occur within area
Corythoichthys flavofasciatus		
Yellow-banded Pipefish [66200]		Species or species habitat may occur within area
Corythoichthys haematopterus		
Reef-top Pipefish [66201]		Species or species habitat may occur within area
Corythoichthys intestinalis		
Australian Messmate Pipefish, Banded Pipefish [66202]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Corythoichthys schultzi Schultz's Pipefish [66205]		Species or species habitat may occur within area
Cosmocampus banneri Roughridge Pipefish [66206]		Species or species habitat may occur within area
Doryrhamphus dactyliophorus Banded Pipefish, Ringed Pipefish [66210]		Species or species habitat may occur within area
Doryrhamphus excisus Bluestripe Pipefish, Indian Blue-stripe Pipefish, Pacific Blue-stripe Pipefish [66211]		Species or species habitat may occur within area
Doryrhamphus janssi Cleaner Pipefish, Janss' Pipefish [66212]		Species or species habitat may occur within area
Festucalex cinctus Girdled Pipefish [66214]		Species or species habitat may occur within area
Filicampus tigris Tiger Pipefish [66217]		Species or species habitat may occur within area
Halicampus brocki Brock's Pipefish [66219]		Species or species habitat may occur within area
Halicampus dunckeri Red-hair Pipefish, Duncker's Pipefish [66220]		Species or species habitat may occur within area
Halicampus grayi Mud Pipefish, Gray's Pipefish [66221]		Species or species habitat may occur within area
Halicampus spinirostris Spiny-snout Pipefish [66225]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Haliichthys taeniophora as Haliichthys taeniophorus Ribboned Pipehorse, Ribboned Pipefish, Ribboned Seadragon [94706]		Species or species habitat may occur within area
Hippichthys cyanospilos Blue-speckled Pipefish, Blue-spotted Pipefish [66228]		Species or species habitat may occur within area
Hippichthys parvicarinatus Short-keel Pipefish, Short-keeled Pipefish [66230]		Species or species habitat may occur within area
Hippichthys penicillus Beady Pipefish, Steep-nosed Pipefish [66231]		Species or species habitat may occur within area
Hippocampus histrix Spiny Seahorse, Thorny Seahorse [66236]		Species or species habitat may occur within area
Hippocampus kuda Spotted Seahorse, Yellow Seahorse [66237]		Species or species habitat may occur within area
Hippocampus planifrons Flat-face Seahorse [66238]		Species or species habitat may occur within area
Hippocampus spinosissimus Hedgehog Seahorse [66239]		Species or species habitat may occur within area
Micrognathus micronotopterus Tidepool Pipefish [66255]		Species or species habitat may occur within area
Solegnathus hardwickii Pallid Pipehorse, Hardwick's Pipehorse [66272]		Species or species habitat may occur within area
Solegnathus lettiensis Gunther's Pipehorse, Indonesian Pipefish [66273]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Solenostomus cyanopterus Robust Ghostpipefish, Blue-finned Ghost Pipefish, [66183]		Species or species habitat may occur within area
Syngnathoides biaculeatus Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279]		Species or species habitat may occur within area
Trachyrhamphus bicoarctatus Bentstick Pipefish, Bend Stick Pipefish, Short-tailed Pipefish [66280]		Species or species habitat may occur within area
Trachyrhamphus longirostris Straightstick Pipefish, Long-nosed Pipefish, Straight Stick Pipefish [66281]		Species or species habitat may occur within area
Mammal		
Dugong dugon Dugong [28]		Species or species habitat likely to occur within area
Reptile		
Aipysurus apraefrontalis Short-nosed Sea Snake, Short-nosed Seasnake [1115]	Critically Endangered	Species or species habitat likely to occur within area
Aipysurus duboisii Dubois' Sea Snake, Dubois' Seasnake, Reef Shallows Sea Snake [1116]		Species or species habitat may occur within area
Aipysurus laevis Olive Sea Snake, Olive-brown Sea Snake [1120]		Species or species habitat may occur within area
Aipysurus mosaicus as Aipysurus eydouxii Mosaic Sea Snake [87261]		Species or species habitat may occur within area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Breeding likely to occur within area

Scientific Name	Threatened Category	Presence Text
[Crocodylus johnstoni](#) Freshwater Crocodile, Johnston's Crocodile, Johnstone's Crocodile [1773]		Species or species habitat may occur within area
[Crocodylus porosus](#) Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area
[Dermochelys coriacea](#) Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
[Emydocephalus annulatus](#) Eastern Turtle-headed Sea Snake [1125]		Species or species habitat may occur within area
[Eretmochelys imbricata](#) Hawksbill Turtle [1766]	Vulnerable	Breeding likely to occur within area
[Hydrelaps darwiniensis](#) Port Darwin Sea Snake, Black-ringed Mangrove Sea Snake [1100]		Species or species habitat may occur within area
[Hydrophis atriceps](#) Black-headed Sea Snake, Banded Sea Snake [1101]		Species or species habitat may occur within area
[Hydrophis coggeri](#) Cogger's Sea Snake, Black-headed Sea Snake [25925]		Species or species habitat may occur within area
[Hydrophis elegans](#) Elegant Sea Snake, Bar-bellied Sea Snake [1104]		Species or species habitat may occur within area
[Hydrophis hardwickii as Lapemis hardwickii](#) Spine-bellied Sea Snake [93516]		Species or species habitat may occur within area
[Hydrophis inornatus](#) Plain Sea Snake [1107]		Species or species habitat may occur within area
[Hydrophis kingii as Disteira kingii](#) Spectacled Sea Snake [93511]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Hydrophis macdowelli as Hydrophis mcdowelli		
MacDowell's Sea Snake, Small-headed Sea Snake, [75601]		Species or species habitat may occur within area
Hydrophis major as Disteira major		
Olive-headed Sea Snake [93512]		Species or species habitat may occur within area
Hydrophis ornatus		
Spotted Sea Snake, Ornate Reef Sea Snake [1111]		Species or species habitat may occur within area
Hydrophis pacificus		
Pacific Sea Snake, Large-headed Sea Snake [1112]		Species or species habitat may occur within area
Hydrophis peronii as Acalyptophis peronii		
Horned Sea Snake [93509]		Species or species habitat may occur within area
Hydrophis platura as Pelamis platurus		
Yellow-bellied Sea Snake [93746]		Species or species habitat may occur within area
Hydrophis stokesii as Astrotia stokesii		
Stokes' Sea Snake [93510]		Species or species habitat may occur within area
Hydrophis zweifeli as Enhydrina schistosa		
Australian Beaked Sea Snake [93514]		Species or species habitat may occur within area
Lepidochelys olivacea		
Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Breeding likely to occur within area
Natator depressus		
Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area
Parahydrophis mertoni		
Arafura Smooth Sea Snake, Northern Mangrove Sea Snake [1090]		Species or species habitat may occur within area

Whales and Other Cetaceans		[Resource Information]
Current Scientific Name	Status	Type of Presence
Mammal		

Current Scientific Name	Status	Type of Presence
Balaenoptera borealis Sei Whale [34]	Vulnerable	Species or species habitat likely to occur within area
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat likely to occur within area
Balaenoptera omurai Omura's Whale [87136]		Species or species habitat likely to occur within area
Balaenoptera physalus Fin Whale [37]	Vulnerable	Species or species habitat likely to occur within area
Delphinus delphis Common Dolphin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area
Grampus griseus Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area
Megaptera novaeangliae Humpback Whale [38]		Species or species habitat likely to occur within area
Orcaella heinsohni Australian Snubfin Dolphin [81322]	Vulnerable	Species or species habitat likely to occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Pseudorca crassidens False Killer Whale [48]		Species or species habitat likely to occur within area

Current Scientific Name	Status	Type of Presence
Sousa sahulensis Australian Humpback Dolphin [87942]	Vulnerable	Breeding likely to occur within area
Stenella attenuata Spotted Dolphin, Pantropical Spotted Dolphin [51]		Species or species habitat may occur within area
Tursiops aduncus Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat likely to occur within area
Tursiops aduncus (Arafura/Timor Sea populations) Spotted Bottlenose Dolphin (Arafura/Timor Sea populations) [78900]		Species or species habitat likely to occur within area
Tursiops truncatus s. str. Bottlenose Dolphin [68417]		Species or species habitat may occur within area

Australian Marine Parks	[Resource Information]
Park Name	Zone & IUCN Categories
Oceanic Shoals	Habitat Protection Zone (IUCN IV)
Joseph Bonaparte Gulf	Multiple Use Zone (IUCN VI)
Oceanic Shoals	Multiple Use Zone (IUCN VI)
Joseph Bonaparte Gulf	Special Purpose Zone (IUCN VI)
Oceanic Shoals	Special Purpose Zone (Trawl) (IUCN VI)

Habitat Critical to the Survival of Marine Turtles		[Resource Information]
Scientific Name	Behaviour	Presence
All year (Jun - Aug)		
Natator depressus Flatback Turtle [59257]	Nesting	Known to occur
May - Jul		
Lepidochelys olivacea Olive Ridley Turtle [1767]	Nesting	Known to occur

Extra Information

State and Territory Reserves		[Resource Information]
Protected Area Name	Reserve Type	State
North Kimberley	Marine Park	WA

EPBC Act Referrals			[Resource Information]
Title of referral	Reference	Referral Outcome	Assessment Status
Boskalis Cambridge Gulf Marine Sand Sourcing Project	2025/10106		Referral Decision
Construction of dam wall	2004/1365		Post-Approval
Darwin Pipeline Duplication (DPD) Project	2022/09372		Post-Approval
Marine Route Survey for Subsea Fibre Optic Data Cable System - Australia West	2024/09826		Completed
Controlled action			
275 km gas pipeline from Wadeye to existing Darwin gas pipeline	2006/2930	Controlled Action	Post-Approval
Blacktip Project - Wharf Construction	2007/3293	Controlled Action	Completed
Bonaparte Liquified Natural Gas Project	2011/6141	Controlled Action	Post-Approval
Development of Blacktip Gas Field	2003/1180	Controlled Action	Post-Approval
Ichthys Gas Field, Offshore and onshore processing facilities and subsea pipeline	2008/4208	Controlled Action	Post-Approval
Port Patterson Barramundi Sea Cage Farm	2005/2149	Controlled Action	Completed
Project Sea Dragon stage 1 prawn aquaculture project, NT	2015/7527	Controlled Action	Post-Approval
Trans-territory Gas Pipeline	2003/1186	Controlled Action	Completed
Not controlled action			
2D seismic survey, exploration permit NT/P67	2004/1587	Not Controlled Action	Completed
2D Seismic Survey in Permit Areas WA-318-P & WA-319-P, near Cape Londonderry	2004/1687	Not Controlled Action	Completed

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action			
Aquaculture farm	2002/737	Not Controlled Action	Completed
Construction and operation of Radar Infrastructure	2004/1406	Not Controlled Action	Completed
Core Breeding and Broodstock Maturation Centre development, Point Ceylon, NT	2016/7713	Not Controlled Action	Completed
Cox Peninsular Remediation Project, NT	2015/7587	Not Controlled Action	Completed
Marine Survey for the Australia-ASEAN Power Link AAPL	2020/8714	Not Controlled Action	Completed
Nexus Drilling Program NT-P66	2007/3745	Not Controlled Action	Completed
Not controlled action (particular manner)			
2D and 3D Seismic Survey	2011/6197	Not Controlled Action (Particular Manner)	Post-Approval
2D and 3D Seismic Survey WA-405-P	2008/4133	Not Controlled Action (Particular Manner)	Post-Approval
2D and 3D Seismic Survey WA-405-P	2009/5104	Not Controlled Action (Particular Manner)	Post-Approval
2D Marine Seismic Survey	2009/4728	Not Controlled Action (Particular Manner)	Post-Approval
2D marine seismic survey of Braveheart,Kurrajong,Sunshine and Crocodile	2006/2917	Not Controlled Action (Particular Manner)	Post-Approval
2D Seismic survey	2009/5076	Not Controlled Action (Particular Manner)	Post-Approval
2D Seismic Survey in WA Permit Area TP/22 and Commonwealth Permit Area WA-280-P	2005/2100	Not Controlled Action (Particular Manner)	Post-Approval
3D Marine Seismic Survey	2009/4681	Not Controlled Action (Particular	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
		Manner)	
3D Seismic Survey (NT/P68)	2006/2980	Not Controlled Action (Particular Manner)	Post-Approval
Blacktip Gas Project Yelcherr Beach Wharf Construction	2007/3537	Not Controlled Action (Particular Manner)	Post-Approval
Bonaparte 2D & 3D marine seismic survey	2011/5962	Not Controlled Action (Particular Manner)	Post-Approval
Bonaparte Basin Seabed Mapping Survey	2009/4951	Not Controlled Action (Particular Manner)	Post-Approval
Bonaparte Seismic and Bathymetric Survey	2012/6295	Not Controlled Action (Particular Manner)	Post-Approval
Exploration Drilling in Permit Areas WA-402-P & WA-403-P	2010/5297	Not Controlled Action (Particular Manner)	Post-Approval
Joseph Bonaparte Gulf Seabed mapping survey	2010/5517	Not Controlled Action (Particular Manner)	Post-Approval
Kingtree & Ironstone-1 Exploration Wells	2011/5935	Not Controlled Action (Particular Manner)	Post-Approval
Malita West 3D Seismic Survey WA-402-P and WA-403-P	2007/3936	Not Controlled Action (Particular Manner)	Post-Approval
Marine Environmental Survey 2012	2012/6310	Not Controlled Action (Particular Manner)	Post-Approval
Nova 3D Seismic Survey	2013/6825	Not Controlled Action (Particular Manner)	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
NT/P77 3D Marine Seismic Survey	2009/4683	Not Controlled Action (Particular Manner)	Post-Approval
NT/P80 2010 2D Marine Seismic Survey	2010/5487	Not Controlled Action (Particular Manner)	Post-Approval
Offshore Fibre Optic Cable Network Construction & Operation, Port Hedland WA to Darwin NT	2014/7223	Not Controlled Action (Particular Manner)	Post-Approval
Petrel MC2D Marine Seismic Survey	2010/5368	Not Controlled Action (Particular Manner)	Post-Approval
Removal of Potential Unexploded Ordnance within NAXA	2012/6503	Not Controlled Action (Particular Manner)	Post-Approval
Santos Petrel-7 Offshore Appraisal Drilling Programme (Bonaparte Basin)	2011/5934	Not Controlled Action (Particular Manner)	Post-Approval
Sonar and Acoustic Trials	2001/345	Not Controlled Action (Particular Manner)	Post-Approval
Sunshine Infill 2D and Mimosa 2D Marine Seismic Surveys	2009/4699	Not Controlled Action (Particular Manner)	Post-Approval
Westralia SPAN Marine Seismic Survey, WA & NT	2012/6463	Not Controlled Action (Particular Manner)	Post-Approval
Referral decision			
2D Marine Seismic Survey	2008/4623	Referral Decision	Completed
3D Seismic Survey (NT/P68)	2006/2949	Referral Decision	Completed
Nova 3D Seismic Survey, WA 442-NT/P81, Joseph Bonaparte Gulf	2013/6820	Referral Decision	Completed

Key Ecological Features [Resource Information]

Key Ecological Features are the parts of the marine ecosystem that are considered to be important for the biodiversity or ecosystem functioning and integrity of the Commonwealth Marine Area.

Name	Region
Carbonate bank and terrace system of the Sahul Shelf	North-west
Carbonate bank and terrace system of the Van Diemen Rise	North
Pinnacles of the Bonaparte Basin	North-west
Pinnacles of the Bonaparte Basin	North

Biologically Important Areas [Resource Information]

Scientific Name	Behaviour	Presence
Dolphins		
Sousa sahulensis Australian Humpback Dolphin [87942]	Reproduction	Likely to occur
Marine Turtles		
Caretta caretta Loggerhead Turtle [1763]	Foraging	Known to occur
Chelonia mydas Green Turtle [1765]	Foraging	Known to occur
Lepidochelys olivacea Olive Ridley Turtle [1767]	Foraging	Known to occur
Lepidochelys olivacea Olive Ridley Turtle [1767]	Reproduction	Likely to occur
Natator depressus Flatback Turtle [59257]	Foraging	Known to occur
Natator depressus Flatback Turtle [59257]	Reproduction	Known to occur

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data is available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance on the contents of this report.

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions when time permits.

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded breeding sites; and
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management, Northern Territory
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
Forestry Corporation, NSW
-Geoscience Australia
-CSIRO
-Australian Tropical Herbarium, Cairns
-eBird Australia
-Australian Government – Australian Antarctic Data Centre
-Museum and Art Gallery of the Northern Territory
-Australian Government National Environmental Science Program
-Australian Institute of Marine Science
-Reef Life Survey Australia
-American Museum of Natural History
-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
-Tasmanian Museum and Art Gallery, Hobart, Tasmania
-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact us page.

© Commonwealth of Australia
Department of Climate Change, Energy, the Environment and Water
GPO Box 3090
Canberra ACT 2601 Australia
+61 2 6274 1111

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

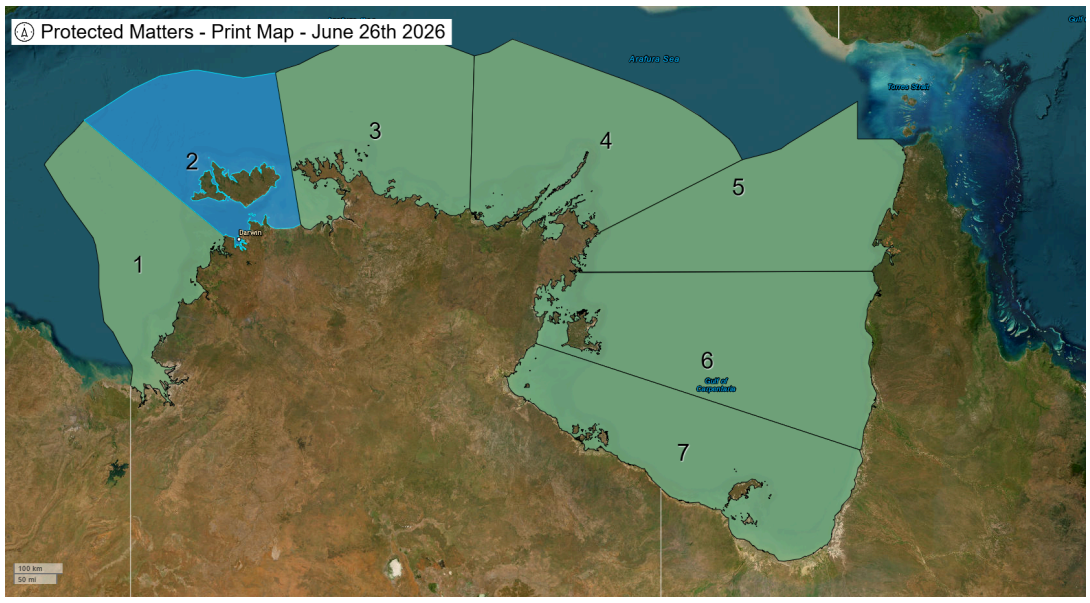


Figure 1: North Marine Region - Part 2

Report created: 26-Jun-2026

Summary
Details
Matters of NES
Other Matters Protected by the EPBC Act
Extra Information
Caveat
Acknowledgements

Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar	1
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	3
Listed Threatened Ecological Communities:	None
Listed Threatened Species:	73
Listed Migratory Species:	79

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at https://www.dcceew.gov.au/parks-heritage/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	30
Commonwealth Heritage Places:	7
Listed Marine Species:	119
Whales and Other Cetaceans:	26
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	4
Habitat Critical to the Survival of Marine Turtles:	3

Extra Information

This part of the report provides information that may also be relevant to the area you have

State and Territory Reserves:	5
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	75
Key Ecological Features (Marine):	3
Biologically Important Areas:	7
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

Wetlands of International Importance (Ramsar Wetlands)	[Resource Information]
Ramsar Site Name	Proximity
Cobourg peninsula	Within 10km of Ramsar site

Commonwealth Marine Area	[Resource Information]

Approval is required for a proposed activity that is located within the Commonwealth Marine Area which has, will have, or is likely to have a significant impact on the environment. Approval may be required for a proposed action taken outside a Commonwealth Marine Area but which has, may have or is likely to have a significant impact on the environment in the Commonwealth Marine Area.

Feature Name
Commonwealth Marine Areas (EPBC Act)
Commonwealth Marine Areas (EPBC Act)
Commonwealth Marine Areas (EPBC Act)

Listed Threatened Species	[Resource Information]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.
Number is the current name ID.

Scientific Name	Threatened Category	Presence Text
BIRD		
Arenaria interpres		
Ruddy Turnstone [872]	Vulnerable	Roosting likely to occur within area
Calidris acuminata		
Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area
Calidris canutus		
Red Knot, Knot [855]	Vulnerable	Species or species habitat likely to occur within area
Calidris ferruginea		
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area
Calidris tenuirostris		
Great Knot [862]	Vulnerable	Roosting likely to occur within area

Scientific Name	Threatened Category	Presence Text
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting likely to occur within area
Chloebia gouldiae listed as Erythrura gouldiae Gouldian Finch [90091]	Endangered	Species or species habitat likely to occur within area
Epthianura crocea tunneyi Alligator Rivers Yellow Chat, Yellow Chat (Alligator Rivers) [67089]	Endangered	Species or species habitat likely to occur within area
Erythrotriorchis radiatus Red Goshawk [942]	Endangered	Species or species habitat likely to occur within area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area
Geophaps smithii smithii Partridge Pigeon (eastern) [64441]	Vulnerable	Species or species habitat likely to occur within area
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat likely to occur within area
Limosa lapponica baueri Nunivak Bar-tailed Godwit, Western Alaskan Bar-tailed Godwit [86380]	Endangered	Species or species habitat may occur within area
Limosa limosa Black-tailed Godwit [845]	Endangered	Roosting likely to occur within area
Melanodryas cucullata melvillensis Tiwi Islands Hooded Robin, Hooded Robin (Tiwi Islands) [67092]	Critically Endangered	Species or species habitat likely to occur within area
Mirafra javanica melvillensis Horsfield's Bushlark (Tiwi Islands) [81011]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Numenius madagascariensis		
Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Phaethon rubricauda westralis		
Red-tailed Tropicbird (Indian Ocean), Indian Ocean Red-tailed Tropicbird [91824]	Endangered	Species or species habitat may occur within area
Pluvialis squatarola		
Grey Plover [865]	Vulnerable	Roosting likely to occur within area
Rostratula australis		
Australian Painted Snipe [77037]	Endangered	Species or species habitat may occur within area
Sternula albifrons		
Little Tern [82849]	Vulnerable	Breeding likely to occur within area
Tringa nebularia		
Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area
Tyto novaehollandiae kimberli		
Masked Owl (northern) [26048]	Vulnerable	Species or species habitat likely to occur within area
Tyto novaehollandiae melvillensis		
Tiwi Masked Owl, Tiwi Islands Masked Owl [26049]	Endangered	Species or species habitat likely to occur within area
Xenus cinereus		
Terek Sandpiper [59300]	Vulnerable	Roosting likely to occur within area
FROG		
Uperoleia daviesae		
Howard River Toadlet, Davies's Toadlet [85375]	Vulnerable	Species or species habitat likely to occur within area
MAMMAL		
Antechinus bellus		
Fawn Antechinus [344]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Balaenoptera borealis Sei Whale [34]	Vulnerable	Species or species habitat likely to occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat likely to occur within area
Balaenoptera physalus Fin Whale [37]	Vulnerable	Species or species habitat likely to occur within area
Conilurus penicillatus Brush-tailed Rabbit-rat, Brush-tailed Tree-rat, Pakooma [132]	Vulnerable	Species or species habitat likely to occur within area
Dasyurus hallucatus Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu] [331]	Endangered	Species or species habitat likely to occur within area
Macroderma gigas Ghost Bat [174]	Vulnerable	Species or species habitat likely to occur within area
Mesembriomys gouldii gouldii Black-footed Tree-rat (Kimberley and mainland Northern Territory), Djintamoonga, Manbul [87618]	Endangered	Species or species habitat likely to occur within area
Mesembriomys gouldii melvillensis Black-footed Tree-rat (Melville Island) [87619]	Vulnerable	Species or species habitat likely to occur within area
Orcaella heinsohni Australian Snubfin Dolphin [81322]	Vulnerable	Breeding likely to occur within area
Petrogale concinna canescens Nabarlek (Top End) [87606]	Endangered	Species or species habitat likely to occur within area
Phascogale pirata Northern Brush-tailed Phascogale [82954]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Saccolaimus saccolaimus nudicluniatus Bare-rumped Sheath-tailed Bat, Bare-rumped Sheathtail Bat [66889]	Vulnerable	Species or species habitat likely to occur within area
Sminthopsis butleri Butler's Dunnart [302]	Vulnerable	Species or species habitat likely to occur within area
Sousa sahulensis Australian Humpback Dolphin [87942]	Vulnerable	Breeding likely to occur within area
Trichosurus vulpecula arnhemensis Northern Brushtail Possum [83091]	Vulnerable	Species or species habitat likely to occur within area
Xeromys myoides Water Mouse, False Water Rat, Yirrkoo [66]	Vulnerable	Species or species habitat likely to occur within area
PLANT		
Burmannia championii listed as Burmannia sp. Bathurst Island (R.Fensham 1021) [93461]	Endangered (listed as Burmannia sp. Bathurst Island	Species or species habitat likely to occur within area
Elaeocarpus miegei [65147]	Endangered	Species or species habitat likely to occur within area
Hoya australis subsp. oramicola a vine [55436]	Vulnerable	Species or species habitat likely to occur within area
Mitrella tiwiensis a vine [82029]	Vulnerable	Species or species habitat likely to occur within area
Stylidium ensatum a triggerplant [86366]	Endangered	Species or species habitat likely to occur within area
Tarennoidea wallichii [65173]	Endangered	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Typhonium jonesii a herb [62412]	Endangered	Species or species habitat likely to occur within area
Typhonium mirabile a herb [79227]	Endangered	Species or species habitat likely to occur within area
Typhonium praetermissum [65859]	Endangered	Species or species habitat likely to occur within area
Typhonium sp. Cox Peninsula (S.Nicholas 15/12/1999) [93623]	Endangered	Species or species habitat likely to occur within area
Xylopia monosperma a shrub [82030]	Endangered	Species or species habitat likely to occur within area
REPTILE		
Acanthophis hawkei Plains Death Adder [83821]	Vulnerable	Species or species habitat likely to occur within area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Breeding likely to occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Breeding likely to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area

Scientific Name	Threatened Category	Presence Text
Tiliqua scincoides intermedia Northern Blue-tongued Skink [89838]	Critically Endangered	Species or species habitat likely to occur within area
Varanus mertensi Mertens' Water Monitor [1568]	Endangered	Species or species habitat likely to occur within area
Varanus mitchelli Mitchell's Water Monitor [1569]	Critically Endangered	Species or species habitat likely to occur within area
SHARK		
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat may occur within area
Glyphis garricki Northern River Shark, New Guinea River Shark [82454]	Endangered	Species or species habitat likely to occur within area
Glyphis glyphis Speartooth Shark [82453]	Critically Endangered	Species or species habitat likely to occur within area
Pristis clavata Dwarf Sawfish, Queensland Sawfish [68447]	Vulnerable	Breeding likely to occur within area
Pristis pristis Largetooth Sawfish, Freshwater Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Endangered	Species or species habitat likely to occur within area
Pristis zijsron Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Breeding likely to occur within area
Rhincodon typus Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
Sphyrna lewini Scalloped Hammerhead [85267]	Conservation Dependent	Species or species habitat likely to occur within area

Listed Migratory Species		[Resource Information]
Scientific Name	Threatened Category	Presence Text
null		

Scientific Name	Threatened Category	Presence Text
Balaenoptera omurai Omura's Whale [87136]		Species or species habitat likely to occur within area
Migratory Marine Birds		
Anous stolidus Common Noddy [825]		Species or species habitat likely to occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat likely to occur within area
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat likely to occur within area
Phaethon lepturus White-tailed Tropicbird [1014]		Species or species habitat may occur within area
Phaethon rubricauda Red-tailed Tropicbird [994]		Species or species habitat may occur within area
Sternula albifrons Little Tern [82849]	Vulnerable	Breeding likely to occur within area
Migratory Marine Species		
Anoxypristis cuspidata Narrow Sawfish, Knifetooth Sawfish [68448]		Species or species habitat likely to occur within area
Balaenoptera borealis Sei Whale [34]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat likely to occur within area
Balaenoptera physalus Fin Whale [37]	Vulnerable	Species or species habitat likely to occur within area
Carcharhinus longimanus Oceanic Whitetip Shark [84108]		Species or species habitat may occur within area
Carcharias taurus Grey Nurse Shark [64469]		Species or species habitat may occur within area
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat may occur within area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Dugong dugon Dugong [28]		Species or species habitat likely to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Breeding likely to occur within area

Scientific Name	Threatened Category	Presence Text
Isurus oxyrinchus Shortfin Mako, Mako Shark [79073]		Species or species habitat likely to occur within area
Isurus paucus Longfin Mako [82947]		Species or species habitat likely to occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Breeding likely to occur within area
Megaptera novaeangliae Humpback Whale [38]		Species or species habitat likely to occur within area
Mobula alfredi as Manta alfredi Reef Manta Ray, Coastal Manta Ray [90033]		Species or species habitat likely to occur within area
Mobula birostris as Manta birostris Giant Manta Ray [90034]		Species or species habitat likely to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area
Orcaella heinsohni Australian Snubfin Dolphin [81322]	Vulnerable	Breeding likely to occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Physeter macrocephalus Sperm Whale [59]		Species or species habitat may occur within area
Pristis clavata Dwarf Sawfish, Queensland Sawfish [68447]	Vulnerable	Breeding likely to occur within area
Pristis pristis Largetooth Sawfish, Freshwater Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Endangered	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Pristis zijsron		
Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Breeding likely to occur within area
Rhincodon typus		
Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
Sousa sahulensis as Sousa chinensis		
Australian Humpback Dolphin [87942]	Vulnerable	Breeding likely to occur within area
Tursiops aduncus (Arafura/Timor Sea populations)		
Spotted Bottlenose Dolphin (Arafura/Timor Sea populations) [78900]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
Cecropis daurica		
Red-rumped Swallow [80610]		Species or species habitat may occur within area
Cuculus optatus		
Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat likely to occur within area
Hirundo rustica		
Barn Swallow [662]		Species or species habitat likely to occur within area
Motacilla cinerea		
Grey Wagtail [642]		Species or species habitat likely to occur within area
Motacilla flava		
Yellow Wagtail [644]		Species or species habitat likely to occur within area
Migratory Wetlands Species		
Acrocephalus orientalis		
Oriental Reed-Warbler [59570]		Species or species habitat may occur within area
Actitis hypoleucos		
Common Sandpiper [59309]		Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Arenaria interpres Ruddy Turnstone [872]	Vulnerable	Roosting likely to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area
Calidris alba Sanderling [875]		Roosting likely to occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat likely to occur within area
Calidris falcinellus as Limicola falcinellus Broad-billed Sandpiper [91731]		Roosting likely to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat likely to occur within area
Calidris ruficollis Red-necked Stint [860]		Roosting likely to occur within area
Calidris subminuta Long-toed Stint [861]		Roosting likely to occur within area
Calidris tenuirostris Great Knot [862]	Vulnerable	Roosting likely to occur within area
Charadrius dubius Little Ringed Plover [896]		Roosting likely to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting likely to occur within area

Scientific Name	Threatened Category	Presence Text
Charadrius veredus Oriental Plover, Oriental Dotterel [882]		Roosting likely to occur within area
Gallinago megala Swinhoe's Snipe [864]		Roosting likely to occur within area
Gallinago stenura Pin-tailed Snipe [841]		Roosting likely to occur within area
Glareola maldivarum Oriental Pratincole [840]		Roosting likely to occur within area
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat likely to occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat likely to occur within area
Limosa limosa Black-tailed Godwit [845]	Endangered	Roosting likely to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Numenius minutus Little Curlew, Little Whimbrel [848]		Roosting likely to occur within area
Numenius phaeopus Whimbrel [849]		Roosting likely to occur within area
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area
Pluvialis fulva Pacific Golden Plover [25545]		Roosting likely to occur within area
Pluvialis squatarola Grey Plover [865]	Vulnerable	Roosting likely to occur within area

Scientific Name	Threatened Category	Presence Text
Thalasseus bergii Greater Crested Tern [83000]		Breeding likely to occur within area
Tringa brevipes Grey-tailed Tattler [851]		Roosting likely to occur within area
Tringa glareola Wood Sandpiper [829]		Roosting likely to occur within area
Tringa incana Wandering Tattler [831]		Roosting likely to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area
Tringa stagnatilis Marsh Sandpiper, Little Greenshank [833]		Roosting likely to occur within area
Xenus cinereus Terek Sandpiper [59300]	Vulnerable	Roosting likely to occur within area

Other Matters Protected by the EPBC Act

Commonwealth Lands [Resource Information]

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Commonwealth Land Name	State
Australian Broadcasting Corporation	
Lot 05808 Town of Darwin plan(s) LTO91/047 [AGPR919]	NT
Australian Communications and Media Authority (ACMA)	
Section 00032 Hundred of Bray plan OP 001510 [AGPR4619]	NT
Section 00033 Hundred of Bray plan A 000715 [AGPR947]	NT
Australian Postal Corporation	
Volume 196 Folio 136 [AGPR7373]	NT
Volume 703 Folio 129 [AGPR7046]	NT
Volume 738 Folio 234 [AGPR7032]	NT
Department of Climate Change, Energy, the Environment and Water	

Commonwealth Land Name	State
Larrakeyah Barracks Headquarters Building [CHL_105192]	NT
Larrakeyah Barracks Precinct [CHL_105251]	NT
Larrakeyah Barracks Sergeants Mess [CHL_105193]	NT
RAAF Base Commanding Officers Residence [CHL_105430]	NT
RAAF Base Precinct [CHL_105252]	NT
RAAF Base Tropical Housing Type 2 [CHL_105194]	NT
RAAF Base Tropical Housing Type 3 [CHL_105195]	NT
Department of Defence	
AAC 76 Army Cadet Unit - Tiwi Islands [DD_3053]	NT
DMFS Tybell Street - Winnellie [DD_3059]	NT
Larrakeyah Defence Precinct [DD_0836]	NT
Larrakeyah Defence Precinct [AGPR6484]	NT
Larrakeyah Defence Precinct [AGPR45]	NT
Lot 05231 Town of Darwin plan S 78/019 [AGPR5900]	NT
Patrol Boat SPO Office - Darwin [DD_3214]	NT
Portion 01609 Hundred of Bagot plan A 000525 [AGPR6569]	NT
Portion 02260 Hundred of Bagot plan S 79/149B [AGPR928]	NT
Portion 02270 Hundred of Bagot plan S 80/045 [AGPR4999]	NT
RAAF Bathurst Island Radar Site [DD_3085]	NT
RAAF Darwin [DD_1302]	NT
Section 05730 Hundred of Bagot plan L2004/063 [AGPR6570]	NT
Shoal Bay Receiving Station [DD_0107]	NT
Stokes Hill Oil Fuel Installation [DD_0108]	NT
Department of Home Affairs	
Unit 132 Lot 06379 Town of Darwin plan UP 94/062 [AGPR6152]	NT
Department of Infrastructure, Transport, Regional Development, Communications and the Arts	
Darwin Airport [AGPR5930]	NT

Commonwealth Heritage Places [Resource Information]

Name	State	Status

Name	State	Status
Historic		
Larrakeyah Barracks Headquarters Building	NT	Listed place
Larrakeyah Barracks Precinct	NT	Listed place
Larrakeyah Barracks Sergeants Mess	NT	Listed place
RAAF Base Commanding Officers Residence	NT	Listed place
RAAF Base Precinct	NT	Listed place
RAAF Base Tropical Housing Type 2	NT	Listed place
RAAF Base Tropical Housing Type 3	NT	Listed place

Listed Marine Species

[Resource Information]

Scientific Name	Threatened Category	Presence Text
Bird		
Acrocephalus orientalis Oriental Reed-Warbler [59570]		Species or species habitat may occur within area overfly marine area
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat likely to occur within area
Anous stolidus Common Noddy [825]		Species or species habitat likely to occur within area
Anseranas semipalmata Magpie Goose [978]		Species or species habitat may occur within area overfly marine area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area
Arenaria interpres Ruddy Turnstone [872]	Vulnerable	Roosting likely to occur within area
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area
Calidris alba Sanderling [875]		Roosting likely to occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat likely to occur within area overfly marine area
Calidris falcinellus as Limicola falcinellus Broad-billed Sandpiper [91731]		Roosting likely to occur within area overfly marine area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area overfly marine area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat likely to occur within area overfly marine area
Calidris ruficollis Red-necked Stint [860]		Roosting likely to occur within area overfly marine area
Calidris subminuta Long-toed Stint [861]		Roosting likely to occur within area overfly marine area
Calidris tenuirostris Great Knot [862]	Vulnerable	Roosting likely to occur within area overfly marine area
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat likely to occur within area
Cecropis daurica as Hirundo daurica Red-rumped Swallow [80610]		Species or species habitat may occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Chalcites osculans as Chrysococcyx osculans		
Black-eared Cuckoo [83425]		Species or species habitat likely to occur within area overfly marine area
Charadrius dubius		
Little Ringed Plover [896]		Roosting likely to occur within area overfly marine area
Charadrius leschenaultii		
Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area
Charadrius mongolus		
Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting likely to occur within area
Charadrius ruficapillus		
Red-capped Plover [881]		Roosting likely to occur within area overfly marine area
Charadrius veredus		
Oriental Plover, Oriental Dotterel [882]		Roosting likely to occur within area overfly marine area
Fregata ariel		
Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area
Fregata minor		
Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat likely to occur within area
Gallinago megala		
Swinhoe's Snipe [864]		Roosting likely to occur within area overfly marine area
Gallinago stenura		
Pin-tailed Snipe [841]		Roosting likely to occur within area overfly marine area
Glareola maldivarum		
Oriental Pratincole [840]		Roosting likely to occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area
Himantopus himantopus Pied Stilt, Black-winged Stilt [870]		Roosting likely to occur within area overfly marine area
Hirundo rustica Barn Swallow [662]		Species or species habitat likely to occur within area overfly marine area
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat likely to occur within area overfly marine area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat likely to occur within area
Limosa limosa Black-tailed Godwit [845]	Endangered	Roosting likely to occur within area overfly marine area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area
Motacilla cinerea Grey Wagtail [642]		Species or species habitat likely to occur within area overfly marine area
Motacilla flava Yellow Wagtail [644]		Species or species habitat likely to occur within area overfly marine area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Numenius minutus Little Curlew, Little Whimbrel [848]		Roosting likely to occur within area overfly marine area
Numenius phaeopus Whimbrel [849]		Roosting likely to occur within area
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area
Phaethon lepturus White-tailed Tropicbird [1014]		Species or species habitat may occur within area
Phaethon rubricauda Red-tailed Tropicbird [994]		Species or species habitat may occur within area
Pluvialis fulva Pacific Golden Plover [25545]		Roosting likely to occur within area
Pluvialis squatarola Grey Plover [865]	Vulnerable	Roosting likely to occur within area overfly marine area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat likely to occur within area overfly marine area
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat may occur within area overfly marine area
Sternula albifrons as Sterna albifrons Little Tern [82849]	Vulnerable	Breeding likely to occur within area
Stiltia isabella Australian Pratincole [818]		Roosting likely to occur within area overfly marine area
Thalasseus bergii as Sterna bergii Greater Crested Tern [83000]		Breeding likely to occur within area

Scientific Name	Threatened Category	Presence Text
[Tringa brevipes as Heteroscelus brevipes](#) Grey-tailed Tattler [851]		Roosting likely to occur within area
[Tringa glareola](#) Wood Sandpiper [829]		Roosting likely to occur within area overfly marine area
[Tringa incana as Heteroscelus incanus](#) Wandering Tattler [831]		Roosting likely to occur within area
[Tringa nebularia](#) Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area overfly marine area
[Tringa stagnatilis](#) Marsh Sandpiper, Little Greenshank [833]		Roosting likely to occur within area overfly marine area
[Xenus cinereus](#) Terek Sandpiper [59300]	Vulnerable	Roosting likely to occur within area overfly marine area
Fish		
[Bhanotia fasciolata](#) Corrugated Pipefish, Barbed Pipefish [66188]		Species or species habitat may occur within area
[Campichthys tricarinatus](#) Three-keel Pipefish [66192]		Species or species habitat may occur within area
[Choeroichthys brachysoma](#) Pacific Short-bodied Pipefish, Short-bodied Pipefish [66194]		Species or species habitat may occur within area
[Choeroichthys suillus](#) Pig-snouted Pipefish [66198]		Species or species habitat may occur within area
[Corythoichthys amplexus](#) Fijian Banded Pipefish, Brown-banded Pipefish [66199]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Corythoichthys flavofasciatus Yellow-banded Pipefish [66200]		Species or species habitat may occur within area
Corythoichthys haematopterus Reef-top Pipefish [66201]		Species or species habitat may occur within area
Corythoichthys intestinalis Australian Messmate Pipefish, Banded Pipefish [66202]		Species or species habitat may occur within area
Corythoichthys schultzi Schultz's Pipefish [66205]		Species or species habitat may occur within area
Cosmocampus banneri Roughridge Pipefish [66206]		Species or species habitat may occur within area
Doryrhamphus dactyliophorus Banded Pipefish, Ringed Pipefish [66210]		Species or species habitat may occur within area
Doryrhamphus excisus Bluestripe Pipefish, Indian Blue-stripe Pipefish, Pacific Blue-stripe Pipefish [66211]		Species or species habitat may occur within area
Doryrhamphus janssi Cleaner Pipefish, Janss' Pipefish [66212]		Species or species habitat may occur within area
Festucalex cinctus Girdled Pipefish [66214]		Species or species habitat may occur within area
Filicampus tigris Tiger Pipefish [66217]		Species or species habitat may occur within area
Halicampus brocki Brock's Pipefish [66219]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Halicampus dunckeri Red-hair Pipefish, Duncker's Pipefish [66220]		Species or species habitat may occur within area
Halicampus grayi Mud Pipefish, Gray's Pipefish [66221]		Species or species habitat may occur within area
Halicampus spinirostris Spiny-snout Pipefish [66225]		Species or species habitat may occur within area
Haliichthys taeniophora as Haliichthys taeniophorus Ribboned Pipehorse, Ribboned Pipefish, Ribboned Seadragon [94706]		Species or species habitat may occur within area
Hippichthys cyanospilos Blue-speckled Pipefish, Blue-spotted Pipefish [66228]		Species or species habitat may occur within area
Hippichthys parvicarinatus Short-keel Pipefish, Short-keeled Pipefish [66230]		Species or species habitat may occur within area
Hippichthys penicillus Beady Pipefish, Steep-nosed Pipefish [66231]		Species or species habitat may occur within area
Hippocampus histrix Spiny Seahorse, Thorny Seahorse [66236]		Species or species habitat may occur within area
Hippocampus kuda Spotted Seahorse, Yellow Seahorse [66237]		Species or species habitat may occur within area
Hippocampus planifrons Flat-face Seahorse [66238]		Species or species habitat may occur within area
Hippocampus spinosissimus Hedgehog Seahorse [66239]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Micrognathus micronotopterus Tidepool Pipefish [66255]		Species or species habitat may occur within area
Solegnathus hardwickii Pallid Pipehorse, Hardwick's Pipehorse [66272]		Species or species habitat may occur within area
Solegnathus lettiensis Gunther's Pipehorse, Indonesian Pipefish [66273]		Species or species habitat may occur within area
Solenostomus cyanopterus Robust Ghostpipefish, Blue-finned Ghost Pipefish, [66183]		Species or species habitat may occur within area
Syngnathoides biaculeatus Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279]		Species or species habitat may occur within area
Trachyrhamphus bicoarctatus Bentstick Pipefish, Bend Stick Pipefish, Short-tailed Pipefish [66280]		Species or species habitat may occur within area
Trachyrhamphus longirostris Straightstick Pipefish, Long-nosed Pipefish, Straight Stick Pipefish [66281]		Species or species habitat may occur within area
Mammal		
Dugong dugon Dugong [28]		Species or species habitat likely to occur within area
Reptile		
Aipysurus duboisii Dubois' Sea Snake, Dubois' Seasnake, Reef Shallows Sea Snake [1116]		Species or species habitat may occur within area
Aipysurus laevis Olive Sea Snake, Olive-brown Sea Snake [1120]		Species or species habitat may occur within area
Aipysurus mosaicus as Aipysurus eydouxii Mosaic Sea Snake [87261]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Caretta caretta Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
Crocodylus johnstoni Freshwater Crocodile, Johnston's Crocodile, Johnstone's Crocodile [1773]		Species or species habitat may occur within area
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Breeding likely to occur within area
Hydrelaps darwiniensis Port Darwin Sea Snake, Black-ringed Mangrove Sea Snake [1100]		Species or species habitat may occur within area
Hydrophis atriceps Black-headed Sea Snake, Banded Sea Snake [1101]		Species or species habitat may occur within area
Hydrophis coggeri Cogger's Sea Snake, Black-headed Sea Snake [25925]		Species or species habitat may occur within area
Hydrophis elegans Elegant Sea Snake, Bar-bellied Sea Snake [1104]		Species or species habitat may occur within area
Hydrophis hardwickii as Lapemis hardwickii Spine-bellied Sea Snake [93516]		Species or species habitat may occur within area
Hydrophis inornatus Plain Sea Snake [1107]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Hydrophis kingii as Disteira kingii Spectacled Sea Snake [93511]		Species or species habitat may occur within area
Hydrophis macdowelli as Hydrophis mcdowelli MacDowell's Sea Snake, Small-headed Sea Snake, [75601]		Species or species habitat may occur within area
Hydrophis major as Disteira major Olive-headed Sea Snake [93512]		Species or species habitat may occur within area
Hydrophis ornatus Spotted Sea Snake, Ornate Reef Sea Snake [1111]		Species or species habitat may occur within area
Hydrophis pacificus Pacific Sea Snake, Large-headed Sea Snake [1112]		Species or species habitat may occur within area
Hydrophis peronii as Acalyptophis peronii Horned Sea Snake [93509]		Species or species habitat may occur within area
Hydrophis platura as Pelamis platurus Yellow-bellied Sea Snake [93746]		Species or species habitat may occur within area
Hydrophis stokesii as Astrotia stokesii Stokes' Sea Snake [93510]		Species or species habitat may occur within area
Hydrophis zweifeli as Enhydrina schistosa Australian Beaked Sea Snake [93514]		Species or species habitat may occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Breeding likely to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area
Parahydrophis mertoni Arafura Smooth Sea Snake, Northern Mangrove Sea Snake [1090]		Species or species habitat may occur within area

Whales and Other Cetaceans		[Resource Information]
Current Scientific Name	Status	Type of Presence
Mammal		
Balaenoptera borealis Sei Whale [34]	Vulnerable	Species or species habitat likely to occur within area
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat likely to occur within area
Balaenoptera omurai Omura's Whale [87136]		Species or species habitat likely to occur within area
Balaenoptera physalus Fin Whale [37]	Vulnerable	Species or species habitat likely to occur within area
Delphinus delphis Common Dolphin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area
Feresa attenuata Pygmy Killer Whale [61]		Species or species habitat may occur within area
Globicephala macrorhynchus Short-finned Pilot Whale [62]		Species or species habitat may occur within area
Grampus griseus Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area
Kogia breviceps Pygmy Sperm Whale [57]		Species or species habitat may occur within area
Kogia sima Dwarf Sperm Whale [85043]		Species or species habitat may occur within area

Current Scientific Name	Status	Type of Presence
[Megaptera novaeangliae](#) Humpback Whale [38]		Species or species habitat likely to occur within area
[Orcaella heinsohni](#) Australian Snubfin Dolphin [81322]	Vulnerable	Breeding likely to occur within area
[Orcinus orca](#) Killer Whale, Orca [46]		Species or species habitat may occur within area
[Peponocephala electra](#) Melon-headed Whale [47]		Species or species habitat may occur within area
[Physeter macrocephalus](#) Sperm Whale [59]		Species or species habitat may occur within area
[Pseudorca crassidens](#) False Killer Whale [48]		Species or species habitat likely to occur within area
[Sousa sahulensis](#) Australian Humpback Dolphin [87942]	Vulnerable	Breeding likely to occur within area
[Stenella attenuata](#) Spotted Dolphin, Pantropical Spotted Dolphin [51]		Species or species habitat may occur within area
[Stenella coeruleoalba](#) Striped Dolphin, Euphrosyne Dolphin [52]		Species or species habitat may occur within area
[Stenella longirostris](#) Long-snouted Spinner Dolphin [29]		Species or species habitat may occur within area
[Steno bredanensis](#) Rough-toothed Dolphin [30]		Species or species habitat may occur within area
[Tursiops aduncus](#) Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat likely to occur within area

Current Scientific Name	Status	Type of Presence
Tursiops aduncus (Arafura/Timor Sea populations)		
Spotted Bottlenose Dolphin (Arafura/Timor Sea populations) [78900]		Species or species habitat likely to occur within area
Tursiops truncatus s. str.		
Bottlenose Dolphin [68417]		Species or species habitat may occur within area
Ziphius cavirostris		
Cuvier's Beaked Whale, Goose-beaked Whale [56]		Species or species habitat may occur within area

Australian Marine Parks	[Resource Information]
Park Name	Zone & IUCN Categories
Oceanic Shoals	Habitat Protection Zone (IUCN IV)
Oceanic Shoals	Multiple Use Zone (IUCN VI)
Oceanic Shoals	National Park Zone (IUCN II)
Oceanic Shoals	Special Purpose Zone (Trawl) (IUCN VI)

Habitat Critical to the Survival of Marine Turtles		[Resource Information]
Scientific Name	Behaviour	Presence
All year (Jun - Aug)		
Natator depressus		
Flatback Turtle [59257]	Nesting	Known to occur
Dec - Jan		
Dermochelys coriacea		
Leatherback Turtle [1768]	Nesting	Known to occur
May - Jul		
Lepidochelys olivacea		
Olive Ridley Turtle [1767]	Nesting	Known to occur

Extra Information

State and Territory Reserves [Resource Information]

Protected Area Name	Reserve Type	State
Casuarina	Coastal Reserve	NT
Charles Darwin	National Park	NT
Djukbinj	National Park	NT
Garig Gunak Barlu	Marine Park	NT
Mary River	National Park	NT

EPBC Act Referrals [Resource Information]

Title of referral	Reference	Referral Outcome	Assessment Status
Bayview, The Boulevarde, Darwin, NT	2015/7466		Completed
Berrimah Freight Terminal Expansion Project	2024/09847		Assessment
Clarence Strait Offshore Tidal Energy Project	2008/4660		Assessment
Darwin Pipeline Duplication (DPD) Project	2022/09372		Post-Approval
Darwin Pipeline Duplication DPD Project	2022/9166		Completed
Darwin Ship Lift Project	2021/9068		Post-Approval
East Arm Marine Industry Park, Darwin, NT	2014/7318		Completed
Establishment and operation of a refinery at Darwin, NT	2015/7604		Assessment
Marine Route Survey for Subsea Fibre Optic Data Cable System - Australia West	2024/09826		Completed
Port Melville marine supply base, Melville Island	2015/7510		Completed
Proposed City of Weddell	2011/6090		Completed
Replacement of the East Point Outfall	2011/6099		Completed
Tiwi H2 Project	2022/09347		Assessment

Title of referral	Reference	Referral Outcome	Assessment Status
Controlled action			
Andranangoo Creek & Lethbridge Bay mineral sand mining	2005/2155	Controlled Action	Completed
Augmentation of the East Point Effluent Rising Main and Extension of East Point Outfall	2009/5113	Controlled Action	Post-Approval
Barramundi Nursery Farm	2005/2378	Controlled Action	Completed
Condensate Processing Facility, East Arm	2006/2734	Controlled Action	Proposed Decision
Darwin to Moomba Gas Pipeline	2001/213	Controlled Action	Completed
East Arm Wharf Expansion Works	2010/5304	Controlled Action	Post-Approval
Glyde Point and Middle Arm Peninsula Infrastructure Support	2001/334	Controlled Action	Completed
Glyde Point Industrial Estate	2001/336	Controlled Action	Completed
Glyde Point Industrial Estate and Associated Infrastructure	2004/1506	Controlled Action	Completed
Hardwood Plantation	2001/229	Controlled Action	Post-Approval
Ichthys Gas Field, Offshore and onshore processing facilities and subsea pipeline	2008/4208	Controlled Action	Post-Approval
Kilimiraka Mineral Sands and Associated Infrastructure (Bathurst Island), NT	2012/6587	Controlled Action	Assessment Approach
Lee Point Master-planned urban development, Darwin, NT	2015/7591	Controlled Action	Post-Approval
Methanol Plant	2001/195	Controlled Action	Completed
Middle Arm Peninsula Industrial Area Development	2001/339	Controlled Action	Completed
Mt Peake iron, vanadium and titanium mining project & assoc infrastructure, 280kms NNW Alice Springs	2013/7027	Controlled Action	Post-Approval
Muirhead Subdivision	2010/5525	Controlled Action	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Controlled action			
Operation of 17 Tiger Helicopters at Robertson Barracks	2004/1459	Controlled Action	Post-Approval
Residential subdivision of Lot 9793 (formerly Lots 9774 and 9779) Lee Point Road	2005/2108	Controlled Action	Post-Approval
Shipping Channel Enhancement	2010/5431	Controlled Action	Completed
Snake Bay Barramundi Sea Cage Farm	2005/2150	Controlled Action	Completed
Talisman Saber 2005 Military Exercise	2004/1819	Controlled Action	Post-Approval
Tassie Shoal Gas Reforming and Methanol Production Plants - NT/P48	2000/108	Controlled Action	Post-Approval
Tassie Shoal LNG Project	2003/1067	Controlled Action	Post-Approval
Tropical Tidal Testing Centre, Clarence Strait, 50km NE Darwin	2014/7299	Controlled Action	Guidelines Issued
Not controlled action			
Andranangoo Mine Site Aircraft Landing Area	2007/3743	Not Controlled Action	Completed
Barossa-1 (NT/P69), Caldita-2 (NT/P61) exploration wells	2006/2793	Not Controlled Action	Completed
Caldita-1 Hydrocarbon Exploration Well, NT/P61	2004/1854	Not Controlled Action	Completed
Channel Island Bridge Pipeline Replacement Project	2020/8672	Not Controlled Action	Completed
Construction and operation of Radar Infrastructure	2004/1406	Not Controlled Action	Completed
Cox Peninsular Remediation Project, NT	2015/7587	Not Controlled Action	Completed
Crowley Government Services Inc Bulk Fuel Storage Facility	2021/9015	Not Controlled Action	Completed
Darwin Port Maintenance Dredging, Darwin Harbour, NT	2017/8122	Not Controlled Action	Completed
Darwin ship lift facility and marine industries project, Darwin Harbour NT	2018/8195	Not Controlled Action	Completed
Marine Survey for the Australia-ASEAN Power Link AAPL	2020/8714	Not Controlled Action	Completed

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action			
NT/P68 2007 Two Well Drilling Program	2007/3569	Not Controlled Action	Completed
Project Sea Dragon Stage 1 Hatchery - Gunn Point, NT	2017/8092	Not Controlled Action	Completed
Residential Complex - Lots 6575 and 6576	2001/163	Not Controlled Action	Completed
Waterfront Redevelopment	2003/1256	Not Controlled Action	Completed
Wickham Point Interconnect Gas Pipeline	2008/4309	Not Controlled Action	Completed
Not controlled action (particular manner)			
2D Marine Seismic Survey	2009/4728	Not Controlled Action (Particular Manner)	Post-Approval
2D marine seismic survey of Braveheart,Kurrajong,Sunshine and Crocodile	2006/2917	Not Controlled Action (Particular Manner)	Post-Approval
2D Seismic survey	2009/5076	Not Controlled Action (Particular Manner)	Post-Approval
2D Seismic Survey - Petroleum Exploration Area NT/P68, Eastern Bonaparte Basin	2006/2922	Not Controlled Action (Particular Manner)	Post-Approval
3D Seismic Survey	2006/2729	Not Controlled Action (Particular Manner)	Post-Approval
3D Seismic Survey (NT/P68)	2006/2980	Not Controlled Action (Particular Manner)	Post-Approval
3D Seismic Survey (NT/P68)	2008/4121	Not Controlled Action (Particular Manner)	Post-Approval
Bonaparte 3D & 2D Seismic Survey, in NT/P82, Timor Sea	2012/6398	Not Controlled Action (Particular Manner)	Post-Approval
Bonaparte Basin Barossa Appraisal Drilling Campaign, NT	2012/6481	Not Controlled Action	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
		(Particular Manner)	
Bonaparte Basin Seabed Mapping Survey	2009/4951	Not Controlled Action (Particular Manner)	Post-Approval
Caldita 3D Marine Seismic Survey - NT/P61, NT/P69, and acreage release area NT06-5	2006/3142	Not Controlled Action (Particular Manner)	Post-Approval
Dredging the outer shipping channels of Darwin Harbour	2013/6988	Not Controlled Action (Particular Manner)	Post-Approval
Eni Bathurst 3D Seismic Survey	2011/6118	Not Controlled Action (Particular Manner)	Post-Approval
Joseph Bonaparte Gulf Seabed mapping survey	2010/5517	Not Controlled Action (Particular Manner)	Post-Approval
Kingtree & Ironstone-1 Exploration Wells	2011/5935	Not Controlled Action (Particular Manner)	Post-Approval
Offshore Fibre Optic Cable Network Construction & Operation, Port Hedland WA to Darwin NT	2014/7223	Not Controlled Action (Particular Manner)	Post-Approval
Panda NT/P76 3D Seismic Acquisition Survey Program	2009/4992	Not Controlled Action (Particular Manner)	Post-Approval
Sunshine Infill 2D and Mimosa 2D Marine Seismic Surveys	2009/4699	Not Controlled Action (Particular Manner)	Post-Approval
Westralia SPAN Marine Seismic Survey, WA & NT	2012/6463	Not Controlled Action (Particular Manner)	Post-Approval
Referral decision			
2D Marine Seismic Survey	2008/4623	Referral Decision	Completed

Title of referral	Reference	Referral Outcome	Assessment Status
Referral decision			
3D Seismic Survey (NT/P68)	2006/2949	Referral Decision	Completed
Phillips Petroleum Wickham Point LNG facility	2001/391	Referral Decision	Completed

Key Ecological Features [Resource Information]

Key Ecological Features are the parts of the marine ecosystem that are considered to be important for the biodiversity or ecosystem functioning and integrity of the Commonwealth Marine Area.

Name	Region
Carbonate bank and terrace system of the Van Diemen Rise	North
Pinnacles of the Bonaparte Basin	North
Shelf break and slope of the Arafura Shelf	North

Biologically Important Areas [Resource Information]

Scientific Name	Behaviour	Presence
Dolphins		
Orcaella heinsohni		
Australian Snubfin Dolphin [81322]	Reproduction	Known to occur
Sousa sahulensis		
Australian Humpback Dolphin [87942]	Reproduction	Likely to occur
Tursiops aduncus		
Indo-Pacific/Spotted Bottlenose Dolphin [68418]	Reproduction	Known to occur
Marine Turtles		
Chelonia mydas		
Green Turtle [1765]	Reproduction	Likely to occur
Lepidochelys olivacea		
Olive Ridley Turtle [1767]	Reproduction	Likely to occur
Natator depressus		
Flatback Turtle [59257]	Reproduction	Known to occur
Seabirds		
Thalasseus bergii		
Crested Tern [83000]	Reproduction	Known to occur

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data is available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance on the contents of this report.

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions when time permits.

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded breeding sites; and
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management, Northern Territory
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
Forestry Corporation, NSW
-Geoscience Australia
-CSIRO
-Australian Tropical Herbarium, Cairns
-eBird Australia
-Australian Government – Australian Antarctic Data Centre
-Museum and Art Gallery of the Northern Territory
-Australian Government National Environmental Science Program
-Australian Institute of Marine Science
-Reef Life Survey Australia
-American Museum of Natural History
-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
-Tasmanian Museum and Art Gallery, Hobart, Tasmania
-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact us page.

© Commonwealth of Australia
Department of Climate Change, Energy, the Environment and Water
GPO Box 3090
Canberra ACT 2601 Australia
+61 2 6274 1111

Australian Government

Department of Climate Change, Energy, the Environment and Water

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 26-Jun-2026

[Summary](#)

[Details](#)

- [Matters of NES](#)
- [Other Matters Protected by the EPBC Act](#)
- [Extra Information](#)

[Caveat](#)

[Acknowledgements](#)

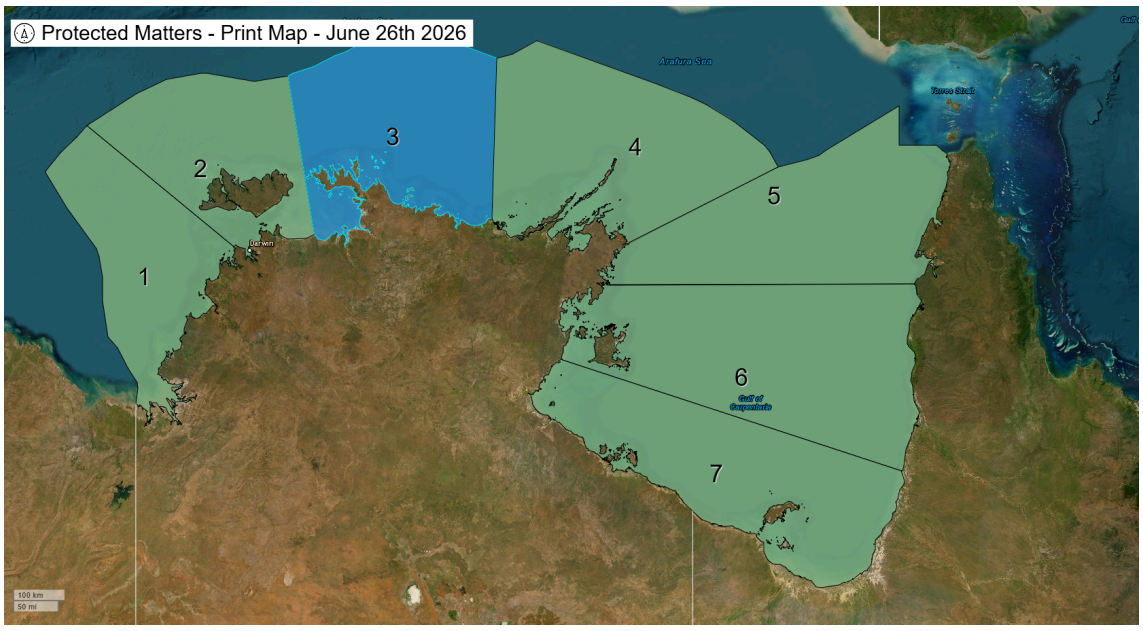


Figure 1: North Marine Region - Part 3

Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	1
National Heritage Places:	1
Wetlands of International Importance (Ramsar	2
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	3
Listed Threatened Ecological Communities:	None
Listed Threatened Species:	58
Listed Migratory Species:	64

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at https://www.dcceew.gov.au/parks-heritage/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	4
Commonwealth Heritage Places:	None
Listed Marine Species:	103
Whales and Other Cetaceans:	26
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	1
Australian Marine Parks:	5
Habitat Critical to the Survival of Marine Turtles:	5

Extra Information

This part of the report provides information that may also be relevant to the area you have

State and Territory Reserves:	3
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	10
Key Ecological Features (Marine):	1
Biologically Important Areas:	12
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

World Heritage Properties [Resource Information]

Name	State	Legal Status
Kakadu National Park	NT	Declared property

National Heritage Places [Resource Information]

Name	State	Legal Status
Natural		
Kakadu National Park	NT	Listed place

Wetlands of International Importance (Ramsar Wetlands) [Resource Information]

Ramsar Site Name	Proximity
Cobourg peninsula	Within Ramsar site
Kakadu national park	Within Ramsar site

Commonwealth Marine Area [Resource Information]

Approval is required for a proposed activity that is located within the Commonwealth Marine Area which has, will have, or is likely to have a significant impact on the environment. Approval may be required for a proposed action taken outside a Commonwealth Marine Area but which has, may have or is likely to have a significant impact on the environment in the Commonwealth Marine Area.

Feature Name
Commonwealth Marine Areas (EPBC Act)
Commonwealth Marine Areas (EPBC Act)
Commonwealth Marine Areas (EPBC Act)

Listed Threatened Species [Resource Information]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.
Number is the current name ID.

Scientific Name	Threatened Category	Presence Text
BIRD		
Calidris acuminata		
Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area
Calidris canutus		
Red Knot, Knot [855]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area
Calidris tenuirostris Great Knot [862]	Vulnerable	Species or species habitat likely to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area
Chloebia gouldiae listed as Erythrura gouldiae Gouldian Finch [90091]	Endangered	Species or species habitat likely to occur within area
Epthianura crocea tunneyi Alligator Rivers Yellow Chat, Yellow Chat (Alligator Rivers) [67089]	Endangered	Species or species habitat likely to occur within area
Erythrotriorchis radiatus Red Goshawk [942]	Endangered	Species or species habitat likely to occur within area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area
Falcunculus frontatus whitei Crested Shrike-tit (northern), Northern Shrike-tit [26013]	Vulnerable	Species or species habitat likely to occur within area
Geophaps smithii smithii Partridge Pigeon (eastern) [64441]	Vulnerable	Species or species habitat likely to occur within area
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat may occur within area
Limosa lapponica baueri Nunivak Bar-tailed Godwit, Western Alaskan Bar-tailed Godwit [86380]	Endangered	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Limosa limosa Black-tailed Godwit [845]	Endangered	Species or species habitat likely to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Pluvialis squatarola Grey Plover [865]	Vulnerable	Species or species habitat likely to occur within area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat may occur within area
Sternula albifrons Little Tern [82849]	Vulnerable	Breeding likely to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area
Tyto novaehollandiae kimberli Masked Owl (northern) [26048]	Vulnerable	Species or species habitat likely to occur within area
Xenus cinereus Terek Sandpiper [59300]	Vulnerable	Species or species habitat likely to occur within area
MAMMAL		
Antechinus bellus Fawn Antechinus [344]	Vulnerable	Species or species habitat likely to occur within area
Balaenoptera borealis Sei Whale [34]	Vulnerable	Species or species habitat likely to occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Balaenoptera physalus Fin Whale [37]	Vulnerable	Species or species habitat likely to occur within area
Conilurus penicillatus Brush-tailed Rabbit-rat, Brush-tailed Tree-rat, Pakooma [132]	Vulnerable	Species or species habitat likely to occur within area
Dasyurus hallucatus Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu] [331]	Endangered	Species or species habitat likely to occur within area
Macroderma gigas Ghost Bat [174]	Vulnerable	Species or species habitat likely to occur within area
Mesembriomys gouldii gouldii Black-footed Tree-rat (Kimberley and mainland Northern Territory), Djintamoonga, Manbul [87618]	Endangered	Species or species habitat likely to occur within area
Orcaella heinsohni Australian Snubfin Dolphin [81322]	Vulnerable	Breeding likely to occur within area
Petrogale concinna canescens Nabarlek (Top End) [87606]	Endangered	Species or species habitat likely to occur within area
Phascogale pirata Northern Brush-tailed Phascogale [82954]	Vulnerable	Species or species habitat likely to occur within area
Saccolaimus saccolaimus nudicluniatus Bare-rumped Sheath-tailed Bat, Bare-rumped Sheathtail Bat [66889]	Vulnerable	Species or species habitat likely to occur within area
Sousa sahulensis Australian Humpback Dolphin [87942]	Vulnerable	Breeding likely to occur within area
Trichosurus vulpecula arnhemensis Northern Brushtail Possum [83091]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Xeromys myoides Water Mouse, False Water Rat, Yirrkoo [66]	Vulnerable	Species or species habitat likely to occur within area
REPTILE		
Acanthophis hawkei Plains Death Adder [83821]	Vulnerable	Species or species habitat likely to occur within area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Carettochelys insculpta Pig-nosed Turtle, Pitted Shell Turtle [1762]	Vulnerable	Species or species habitat may occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
Cryptoblepharus gurrmul Arafura Snake-eyed Skink [83106]	Endangered	Species or species habitat likely to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Breeding likely to occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Breeding likely to occur within area
Lucasium occultum Yellow-snouted Gecko, Yellow-snouted Ground Gecko [82993]	Endangered	Species or species habitat likely to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area

Scientific Name	Threatened Category	Presence Text
Nyctophilopython oenpelliensis		
Nawaran, Oenpelli Python, Oenpelli Rock Python [92941]	Vulnerable	Species or species habitat may occur within area
Tiliqua scincoides intermedia		
Northern Blue-tongued Skink [89838]	Critically Endangered	Species or species habitat likely to occur within area
Varanus mertensi		
Mertens' Water Monitor [1568]	Endangered	Species or species habitat likely to occur within area
Varanus mitchelli		
Mitchell's Water Monitor [1569]	Critically Endangered	Species or species habitat likely to occur within area
SHARK		
Carcharodon carcharias		
White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat may occur within area
Glyphis garricki		
Northern River Shark, New Guinea River Shark [82454]	Endangered	Species or species habitat likely to occur within area
Glyphis glyphis		
Speartooth Shark [82453]	Critically Endangered	Species or species habitat likely to occur within area
Pristis clavata		
Dwarf Sawfish, Queensland Sawfish [68447]	Vulnerable	Breeding likely to occur within area
Pristis pristis		
Largetooth Sawfish, Freshwater Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Endangered	Species or species habitat likely to occur within area
Pristis zijsron		
Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Breeding likely to occur within area
Rhincodon typus		
Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
[Sphyrna lewini](#) Scalloped Hammerhead [85267]	Conservation Dependent	Species or species habitat likely to occur within area

Listed Migratory Species

[Resource Information]

Scientific Name	Threatened Category	Presence Text
null		
[Balaenoptera omurai](#) Omura's Whale [87136]		Species or species habitat likely to occur within area
Migratory Marine Birds		
[Anous stolidus](#) Common Noddy [825]		Species or species habitat likely to occur within area
[Apus pacificus](#) Fork-tailed Swift [678]		Species or species habitat likely to occur within area
[Calonectris leucomelas](#) Streaked Shearwater [1077]		Species or species habitat likely to occur within area
[Fregata ariel](#) Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area
[Fregata minor](#) Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat likely to occur within area
[Phaethon lepturus](#) White-tailed Tropicbird [1014]		Species or species habitat may occur within area
[Phaethon rubricauda](#) Red-tailed Tropicbird [994]		Species or species habitat may occur within area
[Sterna dougallii](#) Roseate Tern [817]		Breeding likely to occur within area
[Sternula albifrons](#) Little Tern [82849]	Vulnerable	Breeding likely to occur within area

Scientific Name	Threatened Category	Presence Text
Migratory Marine Species		
[Anoxypristis cuspidata](#) Narrow Sawfish, Knifetooth Sawfish [68448]		Species or species habitat likely to occur within area
[Balaenoptera borealis](#) Sei Whale [34]	Vulnerable	Species or species habitat likely to occur within area
[Balaenoptera edeni](#) Bryde's Whale [35]		Species or species habitat may occur within area
[Balaenoptera musculus](#) Blue Whale [36]	Endangered	Species or species habitat may occur within area
[Balaenoptera physalus](#) Fin Whale [37]	Vulnerable	Species or species habitat likely to occur within area
[Carcharhinus longimanus](#) Oceanic Whitetip Shark [84108]		Species or species habitat may occur within area
[Carcharias taurus](#) Grey Nurse Shark [64469]		Species or species habitat may occur within area
[Carcharodon carcharias](#) White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat may occur within area
[Caretta caretta](#) Loggerhead Turtle [1763]	Endangered	Foraging, feeding or related behaviour likely to occur within area
[Chelonia mydas](#) Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
[Crocodylus porosus](#) Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Dugong dugon Dugong [28]		Species or species habitat likely to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Breeding likely to occur within area
Isurus paucus Longfin Mako [82947]		Species or species habitat likely to occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Breeding likely to occur within area
Megaptera novaeangliae Humpback Whale [38]		Species or species habitat may occur within area
Mobula alfredi as Manta alfredi Reef Manta Ray, Coastal Manta Ray [90033]		Species or species habitat likely to occur within area
Mobula birostris as Manta birostris Giant Manta Ray [90034]		Species or species habitat likely to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area
Orcaella heinsohni Australian Snubfin Dolphin [81322]	Vulnerable	Breeding likely to occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Physeter macrocephalus Sperm Whale [59]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Pristis clavata		
Dwarf Sawfish, Queensland Sawfish [68447]	Vulnerable	Breeding likely to occur within area
Pristis pristis		
Largetooth Sawfish, Freshwater Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Endangered	Species or species habitat likely to occur within area
Pristis zijsron		
Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Breeding likely to occur within area
Rhincodon typus		
Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
Sousa sahulensis as Sousa chinensis		
Australian Humpback Dolphin [87942]	Vulnerable	Breeding likely to occur within area
Tursiops aduncus (Arafura/Timor Sea populations)		
Spotted Bottlenose Dolphin (Arafura/Timor Sea populations) [78900]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
Cecropis daurica		
Red-rumped Swallow [80610]		Species or species habitat may occur within area
Cuculus optatus		
Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat likely to occur within area
Hirundo rustica		
Barn Swallow [662]		Species or species habitat likely to occur within area
Motacilla flava		
Yellow Wagtail [644]		Species or species habitat likely to occur within area
Migratory Wetlands Species		
Acrocephalus orientalis		
Oriental Reed-Warbler [59570]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat likely to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat likely to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Calidris tenuirostris Great Knot [862]	Vulnerable	Species or species habitat likely to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area
Charadrius veredus Oriental Plover, Oriental Dotterel [882]		Species or species habitat may occur within area
Glareola maldivarum Oriental Pratincole [840]		Species or species habitat may occur within area
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat may occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Limosa limosa Black-tailed Godwit [845]	Endangered	Species or species habitat likely to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Numenius phaeopus Whimbrel [849]		Species or species habitat likely to occur within area
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area
Pluvialis squatarola Grey Plover [865]	Vulnerable	Species or species habitat likely to occur within area
Thalasseus bergii Greater Crested Tern [83000]		Breeding likely to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area
Tringa stagnatilis Marsh Sandpiper, Little Greenshank [833]		Species or species habitat likely to occur within area
Xenus cinereus Terek Sandpiper [59300]	Vulnerable	Species or species habitat likely to occur within area

Other Matters Protected by the EPBC Act

Commonwealth Lands [Resource Information]

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Commonwealth Land Name	State
Australian Maritime Safety Authority	
NT Portion 02380 plan(s) S 80/179B [AGPR37]	NT

Commonwealth Land Name	State
NT Portion 02381 plan(s) S 80/179B [AGPR38]	NT
Department of Climate Change, Energy, the Environment and Water	
Kakadu National Park (Commonwealth) [CAPAD_CWTH_06]	NT
Services Australia	
Lot 00693 Townsite of Maningrida S 891113 [AGPR6612]	NT

Listed Marine Species [Resource Information]

Scientific Name	Threatened Category	Presence Text
Bird		
Acrocephalus orientalis Oriental Reed-Warbler [59570]		Species or species habitat may occur within area overfly marine area
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat likely to occur within area
Anous stolidus Common Noddy [825]		Species or species habitat likely to occur within area
Anseranas semipalmata Magpie Goose [978]		Species or species habitat may occur within area overfly marine area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat likely to occur within area overfly marine area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area overfly marine area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area
Calidris tenuirostris Great Knot [862]	Vulnerable	Species or species habitat likely to occur within area overfly marine area
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat likely to occur within area
Cecropis daurica as Hirundo daurica Red-rumped Swallow [80610]		Species or species habitat may occur within area overfly marine area
Chalcites osculans as Chrysococcyx osculans Black-eared Cuckoo [83425]		Species or species habitat likely to occur within area overfly marine area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area
Charadrius veredus Oriental Plover, Oriental Dotterel [882]		Species or species habitat may occur within area overfly marine area
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat likely to occur within area
Glareola maldivarum Oriental Pratincole [840]		Species or species habitat may occur within area overfly marine area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area
Hirundo rustica Barn Swallow [662]		Species or species habitat likely to occur within area overfly marine area
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat may occur within area overfly marine area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat likely to occur within area
Limosa limosa Black-tailed Godwit [845]	Endangered	Species or species habitat likely to occur within area overfly marine area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area
Motacilla flava Yellow Wagtail [644]		Species or species habitat likely to occur within area overfly marine area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Numenius phaeopus Whimbrel [849]		Species or species habitat likely to occur within area
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area
Phaethon lepturus White-tailed Tropicbird [1014]		Species or species habitat may occur within area
Phaethon rubricauda Red-tailed Tropicbird [994]		Species or species habitat may occur within area
Pluvialis squatarola Grey Plover [865]	Vulnerable	Species or species habitat likely to occur within area overfly marine area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat likely to occur within area overfly marine area
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat may occur within area overfly marine area
Sterna dougallii Roseate Tern [817]		Breeding likely to occur within area
Sternula albifrons as Sterna albifrons Little Tern [82849]	Vulnerable	Breeding likely to occur within area
Thalasseus bergii as Sterna bergii Greater Crested Tern [83000]		Breeding likely to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Tringa stagnatilis Marsh Sandpiper, Little Greenshank [833]		Species or species habitat likely to occur within area overfly marine area
Xenus cinereus Terek Sandpiper [59300]	Vulnerable	Species or species habitat likely to occur within area overfly marine area
Fish		
Bhanotia fasciolata Corrugated Pipefish, Barbed Pipefish [66188]		Species or species habitat may occur within area
Campichthys tricarinatus Three-keel Pipefish [66192]		Species or species habitat may occur within area
Choeroichthys brachysoma Pacific Short-bodied Pipefish, Short-bodied Pipefish [66194]		Species or species habitat may occur within area
Choeroichthys suillus Pig-snouted Pipefish [66198]		Species or species habitat may occur within area
Corythoichthys amplexus Fijian Banded Pipefish, Brown-banded Pipefish [66199]		Species or species habitat may occur within area
Corythoichthys flavofasciatus Yellow-banded Pipefish [66200]		Species or species habitat may occur within area
Corythoichthys haematopterus Reef-top Pipefish [66201]		Species or species habitat may occur within area
Corythoichthys intestinalis Australian Messmate Pipefish, Banded Pipefish [66202]		Species or species habitat may occur within area
Corythoichthys schultzi Schultz's Pipefish [66205]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Cosmocampus banneri Roughridge Pipefish [66206]		Species or species habitat may occur within area
Doryrhamphus dactyliophorus Banded Pipefish, Ringed Pipefish [66210]		Species or species habitat may occur within area
Doryrhamphus excisus Bluestripe Pipefish, Indian Blue-stripe Pipefish, Pacific Blue-stripe Pipefish [66211]		Species or species habitat may occur within area
Doryrhamphus janssi Cleaner Pipefish, Janss' Pipefish [66212]		Species or species habitat may occur within area
Festucalex cinctus Girdled Pipefish [66214]		Species or species habitat may occur within area
Filicampus tigris Tiger Pipefish [66217]		Species or species habitat may occur within area
Halicampus brocki Brock's Pipefish [66219]		Species or species habitat may occur within area
Halicampus dunckeri Red-hair Pipefish, Duncker's Pipefish [66220]		Species or species habitat may occur within area
Halicampus grayi Mud Pipefish, Gray's Pipefish [66221]		Species or species habitat may occur within area
Halicampus spinirostris Spiny-snout Pipefish [66225]		Species or species habitat may occur within area
Haliichthys taeniophora as Haliichthys taeniophorus Ribboned Pipehorse, Ribboned Pipefish, Ribboned Seadragon [94706]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Hippichthys cyanospilos Blue-speckled Pipefish, Blue-spotted Pipefish [66228]		Species or species habitat may occur within area
Hippichthys parvicarinatus Short-keel Pipefish, Short-keeled Pipefish [66230]		Species or species habitat may occur within area
Hippichthys penicillus Beady Pipefish, Steep-nosed Pipefish [66231]		Species or species habitat may occur within area
Hippocampus histrix Spiny Seahorse, Thorny Seahorse [66236]		Species or species habitat may occur within area
Hippocampus kuda Spotted Seahorse, Yellow Seahorse [66237]		Species or species habitat may occur within area
Hippocampus planifrons Flat-face Seahorse [66238]		Species or species habitat may occur within area
Hippocampus spinosissimus Hedgehog Seahorse [66239]		Species or species habitat may occur within area
Micrognathus micronotopterus Tidepool Pipefish [66255]		Species or species habitat may occur within area
Solegnathus hardwickii Pallid Pipehorse, Hardwick's Pipehorse [66272]		Species or species habitat may occur within area
Solegnathus lettiensis Gunther's Pipehorse, Indonesian Pipefish [66273]		Species or species habitat may occur within area
Solenostomus cyanopterus Robust Ghostpipefish, Blue-finned Ghost Pipefish, [66183]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
[Syngnathoides biaculeatus](#) Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279]		Species or species habitat may occur within area
[Trachyrhamphus bicoarctatus](#) Bentstick Pipefish, Bend Stick Pipefish, Short-tailed Pipefish [66280]		Species or species habitat may occur within area
[Trachyrhamphus longirostris](#) Straightstick Pipefish, Long-nosed Pipefish, Straight Stick Pipefish [66281]		Species or species habitat may occur within area
Mammal		
[Dugong dugon](#) Dugong [28]		Species or species habitat likely to occur within area
Reptile		
[Aipysurus duboisii](#) Dubois' Sea Snake, Dubois' Seasnake, Reef Shallows Sea Snake [1116]		Species or species habitat may occur within area
[Aipysurus laevis](#) Olive Sea Snake, Olive-brown Sea Snake [1120]		Species or species habitat may occur within area
[Aipysurus mosaicus as Aipysurus eydouxii](#) Mosaic Sea Snake [87261]		Species or species habitat may occur within area
[Caretta caretta](#) Loggerhead Turtle [1763]	Endangered	Foraging, feeding or related behaviour likely to occur within area
[Chelonia mydas](#) Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
[Crocodylus johnstoni](#) Freshwater Crocodile, Johnston's Crocodile, Johnstone's Crocodile [1773]		Species or species habitat may occur within area
[Crocodylus porosus](#) Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Breeding likely to occur within area
Hydrelaps darwiniensis Port Darwin Sea Snake, Black-ringed Mangrove Sea Snake [1100]		Species or species habitat may occur within area
Hydrophis atriceps Black-headed Sea Snake, Banded Sea Snake [1101]		Species or species habitat may occur within area
Hydrophis coggeri Cogger's Sea Snake, Black-headed Sea Snake [25925]		Species or species habitat may occur within area
Hydrophis czeblukovi Fine-spined Sea Snake [59233]		Species or species habitat may occur within area
Hydrophis elegans Elegant Sea Snake, Bar-bellied Sea Snake [1104]		Species or species habitat may occur within area
Hydrophis hardwickii as Lapemis hardwickii Spine-bellied Sea Snake [93516]		Species or species habitat may occur within area
Hydrophis inornatus Plain Sea Snake [1107]		Species or species habitat may occur within area
Hydrophis kingii as Disteira kingii Spectacled Sea Snake [93511]		Species or species habitat may occur within area
Hydrophis macdowelli as Hydrophis mcdowelli MacDowell's Sea Snake, Small-headed Sea Snake, [75601]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Hydrophis major as Disteira major Olive-headed Sea Snake [93512]		Species or species habitat may occur within area
Hydrophis ornatus Spotted Sea Snake, Ornate Reef Sea Snake [1111]		Species or species habitat may occur within area
Hydrophis pacificus Pacific Sea Snake, Large-headed Sea Snake [1112]		Species or species habitat may occur within area
Hydrophis peronii as Acalyptophis peronii Horned Sea Snake [93509]		Species or species habitat may occur within area
Hydrophis platura as Pelamis platurus Yellow-bellied Sea Snake [93746]		Species or species habitat may occur within area
Hydrophis stokesii as Astrotia stokesii Stokes' Sea Snake [93510]		Species or species habitat may occur within area
Hydrophis zweifeli as Enhydrina schistosa Australian Beaked Sea Snake [93514]		Species or species habitat may occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Breeding likely to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area
Parahydrophis mertoni Arafura Smooth Sea Snake, Northern Mangrove Sea Snake [1090]		Species or species habitat may occur within area

Whales and Other Cetaceans		[Resource Information]
Current Scientific Name	Status	Type of Presence
Mammal		
Balaenoptera borealis Sei Whale [34]	Vulnerable	Species or species habitat likely to occur within area

Current Scientific Name	Status	Type of Presence
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area
Balaenoptera omurai Omura's Whale [87136]		Species or species habitat likely to occur within area
Balaenoptera physalus Fin Whale [37]	Vulnerable	Species or species habitat likely to occur within area
Delphinus delphis Common Dolphin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area
Feresa attenuata Pygmy Killer Whale [61]		Species or species habitat may occur within area
Globicephala macrorhynchus Short-finned Pilot Whale [62]		Species or species habitat may occur within area
Grampus griseus Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area
Kogia breviceps Pygmy Sperm Whale [57]		Species or species habitat may occur within area
Kogia sima Dwarf Sperm Whale [85043]		Species or species habitat may occur within area
Megaptera novaeangliae Humpback Whale [38]		Species or species habitat may occur within area

Current Scientific Name	Status	Type of Presence
Orcaella heinsohni Australian Snubfin Dolphin [81322]	Vulnerable	Breeding likely to occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Peponocephala electra Melon-headed Whale [47]		Species or species habitat may occur within area
Physeter macrocephalus Sperm Whale [59]		Species or species habitat may occur within area
Pseudorca crassidens False Killer Whale [48]		Species or species habitat likely to occur within area
Sousa sahulensis Australian Humpback Dolphin [87942]	Vulnerable	Breeding likely to occur within area
Stenella attenuata Spotted Dolphin, Pantropical Spotted Dolphin [51]		Species or species habitat may occur within area
Stenella coeruleoalba Striped Dolphin, Euphrosyne Dolphin [52]		Species or species habitat may occur within area
Stenella longirostris Long-snouted Spinner Dolphin [29]		Species or species habitat may occur within area
Steno bredanensis Rough-toothed Dolphin [30]		Species or species habitat may occur within area
Tursiops aduncus Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat likely to occur within area
Tursiops aduncus (Arafura/Timor Sea populations) Spotted Bottlenose Dolphin (Arafura/Timor Sea populations) [78900]		Species or species habitat likely to occur within area

Current Scientific Name	Status	Type of Presence
Tursiops truncatus s. str. Bottlenose Dolphin [68417]		Species or species habitat may occur within area
Ziphius cavirostris Cuvier's Beaked Whale, Goose-beaked Whale [56]		Species or species habitat may occur within area

Commonwealth Reserves Terrestrial [Resource Information]

Name	State	Type
Kakadu	NT	National Park (Commonwealth)

Australian Marine Parks [Resource Information]

Park Name	Zone & IUCN Categories
Arafura	Multiple Use Zone (IUCN VI)
Oceanic Shoals	Multiple Use Zone (IUCN VI)
Arafura	Special Purpose Zone (IUCN VI)
Arnhem	Special Purpose Zone (IUCN VI)
Arafura	Special Purpose Zone (Trawl) (IUCN VI)

Habitat Critical to the Survival of Marine Turtles [Resource Information]

Scientific Name	Behaviour	Presence
All year (Jun - Aug)		
Natator depressus Flatback Turtle [59257]	Nesting	Known to occur
Dec - Jan		
Dermochelys coriacea Leatherback Turtle [1768]	Nesting	Known to occur
May - Jul		
Lepidochelys olivacea Olive Ridley Turtle [1767]	Nesting	Known to occur
Oct - Feb		
Eretmochelys imbricata Hawksbill Turtle [1766]	Nesting	Known to occur
Oct - Mar		

Scientific Name	Behaviour	Presence
Chelonia mydas		
Green Turtle [1765]	Nesting	Known to occur

Extra Information

State and Territory Reserves		[Resource Information]
Protected Area Name	Reserve Type	State
Garig Gunak Barlu	National Park	NT
Garig Gunak Barlu	Marine Park	NT
Mary River	National Park	NT

EPBC Act Referrals			[Resource Information]
Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action			
Geo-scientific survey	2005/2004	Not Controlled Action	Completed
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed
Not controlled action (particular manner)			
2D Marine Seismic Survey	2009/4728	Not Controlled Action (Particular Manner)	Post-Approval
2D marine seismic survey of Braveheart,Kurrajong,Sunshine and Crocodile	2006/2917	Not Controlled Action (Particular Manner)	Post-Approval
2D Seismic survey	2009/5076	Not Controlled Action (Particular Manner)	Post-Approval
Kingtree & Ironstone-1 Exploration Wells	2011/5935	Not Controlled Action (Particular Manner)	Post-Approval
NT/P74 & NT/P75 - 2D marine seismic survey	2008/4316	Not Controlled Action (Particular	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
		Manner)	
Westralia SPAN Marine Seismic Survey, WA & NT	2012/6463	Not Controlled Action (Particular Manner)	Post-Approval
Referral decision			
2D Marine Seismic Survey	2008/4623	Referral Decision	Completed
Installation of Telecommunication Facilities	2001/254	Referral Decision	Completed

Key Ecological Features [Resource Information]

Key Ecological Features are the parts of the marine ecosystem that are considered to be important for the biodiversity or ecosystem functioning and integrity of the Commonwealth Marine Area.

Name	Region
Tributary Canyons of the Arafura Depression	North

Biologically Important Areas [Resource Information]

Scientific Name	Behaviour	Presence
Dolphins		
Orcaella heinsohni Australian Snubfin Dolphin [81322]	Reproduction	Known to occur
Sousa sahulensis Australian Humpback Dolphin [87942]	Reproduction	Likely to occur
Tursiops aduncus Indo-Pacific/Spotted Bottlenose Dolphin [68418]	Reproduction	Known to occur
Marine Turtles		
Chelonia mydas Green Turtle [1765]	Foraging	Known to occur
Chelonia mydas Green Turtle [1765]	Reproduction	Likely to occur
Dermochelys coriacea Leatherback Turtle [1768]	Reproduction	Likely to occur
Eretmochelys imbricata Hawksbill Turtle [1766]	Reproduction	Known to occur

Scientific Name	Behaviour	Presence
Lepidochelys olivacea Olive Ridley Turtle [1767]	Reproduction	Likely to occur
Natator depressus Flatback Turtle [59257]	Reproduction	Known to occur
Seabirds		
Onychoprion anaethetus Bridled Tern [82845]	Reproduction	Known to occur
Sterna dougallii Roseate Tern [817]	Reproduction	Known to occur
Thalasseus bergii Crested Tern [83000]	Reproduction	Known to occur

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data is available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance on the contents of this report.

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions when time permits.

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded breeding sites; and
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management, Northern Territory
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
Forestry Corporation, NSW
-Geoscience Australia
-CSIRO
-Australian Tropical Herbarium, Cairns
-eBird Australia
-Australian Government – Australian Antarctic Data Centre
-Museum and Art Gallery of the Northern Territory
-Australian Government National Environmental Science Program
-Australian Institute of Marine Science
-Reef Life Survey Australia
-American Museum of Natural History
-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
-Tasmanian Museum and Art Gallery, Hobart, Tasmania
-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact us page.

© Commonwealth of Australia
Department of Climate Change, Energy, the Environment and Water
GPO Box 3090
Canberra ACT 2601 Australia
+61 2 6274 1111

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 26-Jun-2026

[Summary](#)
[Details](#)
- [Matters of NES](#)
- [Other Matters Protected by the EPBC Act](#)
- [Extra Information](#)

[Caveat](#)
[Acknowledgements](#)

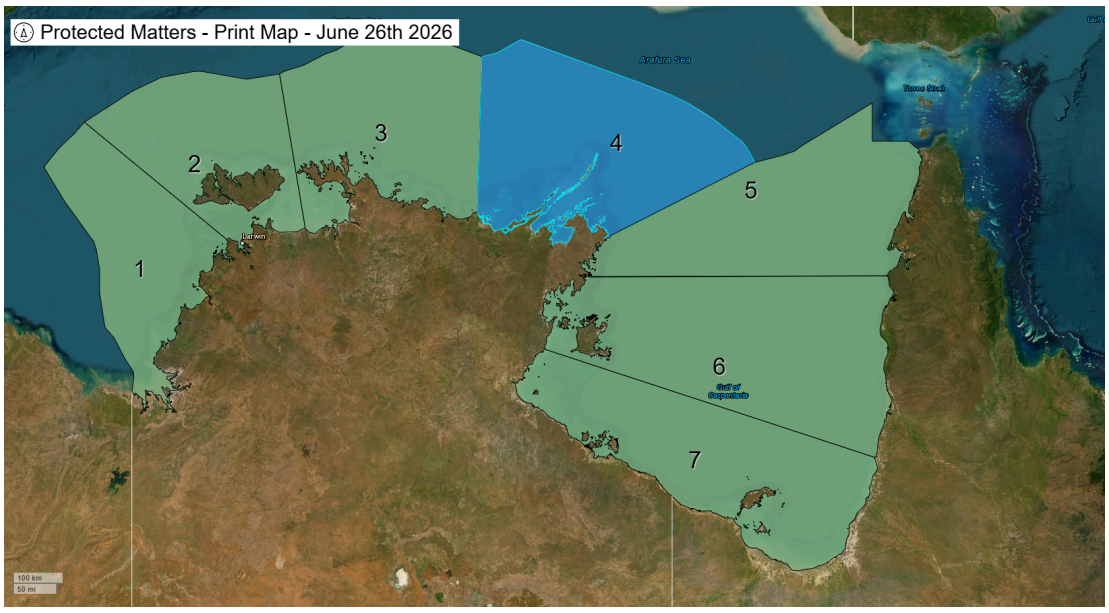


Figure 1: North Marine Region - Part 4

Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	None
National Heritage Places:	1
Wetlands of International Importance (Ramsar	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	2
Listed Threatened Ecological Communities:	None
Listed Threatened Species:	52
Listed Migratory Species:	61

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at https://www.dcceew.gov.au/parks-heritage/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	22
Commonwealth Heritage Places:	None
Listed Marine Species:	92
Whales and Other Cetaceans:	26
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	3
Habitat Critical to the Survival of Marine Turtles:	5

Extra Information

This part of the report provides information that may also be relevant to the area you have

State and Territory Reserves:	None
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	17
Key Ecological Features (Marine):	2
Biologically Important Areas:	9
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

National Heritage Places [Resource Information]

Name	State	Legal Status
Indigenous		
Wurrwurrwuy	NT	Listed place

Commonwealth Marine Area [Resource Information]

Approval is required for a proposed activity that is located within the Commonwealth Marine Area which has, will have, or is likely to have a significant impact on the environment. Approval may be required for a proposed action taken outside a Commonwealth Marine Area but which has, may have or is likely to have a significant impact on the environment in the Commonwealth Marine Area.

Feature Name
Commonwealth Marine Areas (EPBC Act)

Commonwealth Marine Areas (EPBC Act)

Listed Threatened Species [Resource Information]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.
Number is the current name ID.

Scientific Name	Threatened Category	Presence Text
BIRD		
Calidris acuminata		
Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area
Calidris canutus		
Red Knot, Knot [855]	Vulnerable	Species or species habitat likely to occur within area
Calidris ferruginea		
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area
Calidris tenuirostris		
Great Knot [862]	Vulnerable	Species or species habitat likely to occur within area
Charadrius leschenaultii		
Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Chloebia gouldiae listed as Erythrura gouldiae		
Gouldian Finch [90091]	Endangered	Species or species habitat may occur within area
Erythrotriorchis radiatus		
Red Goshawk [942]	Endangered	Species or species habitat likely to occur within area
Falcunculus frontatus whitei		
Crested Shrike-tit (northern), Northern Shrike-tit [26013]	Vulnerable	Species or species habitat likely to occur within area
Geophaps smithii smithii		
Partridge Pigeon (eastern) [64441]	Vulnerable	Species or species habitat likely to occur within area
Limnodromus semipalmatus		
Asian Dowitcher [843]	Vulnerable	Species or species habitat may occur within area
Limosa lapponica baueri		
Nunivak Bar-tailed Godwit, Western Alaskan Bar-tailed Godwit [86380]	Endangered	Species or species habitat may occur within area
Limosa limosa		
Black-tailed Godwit [845]	Endangered	Species or species habitat likely to occur within area
Numenius madagascariensis		
Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Rostratula australis		
Australian Painted Snipe [77037]	Endangered	Species or species habitat may occur within area
Sternula albifrons		
Little Tern [82849]	Vulnerable	Breeding likely to occur within area
Tringa nebularia		
Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Tyto novaehollandiae kimberli		
Masked Owl (northern) [26048]	Vulnerable	Species or species habitat likely to occur within area
MAMMAL		
Antechinus bellus		
Fawn Antechinus [344]	Vulnerable	Species or species habitat likely to occur within area
Balaenoptera borealis		
Sei Whale [34]	Vulnerable	Species or species habitat likely to occur within area
Balaenoptera musculus		
Blue Whale [36]	Endangered	Species or species habitat may occur within area
Balaenoptera physalus		
Fin Whale [37]	Vulnerable	Species or species habitat likely to occur within area
Conilurus penicillatus		
Brush-tailed Rabbit-rat, Brush-tailed Tree-rat, Pakooma [132]	Vulnerable	Species or species habitat likely to occur within area
Dasyurus hallucatus		
Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu] [331]	Endangered	Translocated population known to occur within area
Isoodon auratus auratus		
Golden Bandicoot (mainland) [66665]	Vulnerable	Translocated population known to occur within area
Macroderma gigas		
Ghost Bat [174]	Vulnerable	Species or species habitat likely to occur within area
Mesembriomys gouldii gouldii		
Black-footed Tree-rat (Kimberley and mainland Northern Territory), Djintamoonga, Manbul [87618]	Endangered	Species or species habitat likely to occur within area
Notomys aquilo		
Northern Hopping-mouse, Woorrentinta [123]	Endangered	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Orcaella heinsohni		
Australian Snubfin Dolphin [81322]	Vulnerable	Species or species habitat likely to occur within area
Petrogale concinna canescens		
Nabarlek (Top End) [87606]	Endangered	Species or species habitat likely to occur within area
Phascogale pirata		
Northern Brush-tailed Phascogale [82954]	Vulnerable	Species or species habitat may occur within area
Saccolaimus saccolaimus nudicluniatus		
Bare-rumped Sheath-tailed Bat, Bare-rumped Sheathtail Bat [66889]	Vulnerable	Species or species habitat likely to occur within area
Sousa sahulensis		
Australian Humpback Dolphin [87942]	Vulnerable	Species or species habitat likely to occur within area
Trichosurus vulpecula arnhemensis		
Northern Brushtail Possum [83091]	Vulnerable	Species or species habitat likely to occur within area
Xeromys myoides		
Water Mouse, False Water Rat, Yirrkoo [66]	Vulnerable	Species or species habitat likely to occur within area
PLANT		
Erythroxylum sp. Cholmondely Creek (J.R.Clarkson 9367) (Northern Territory Population)		
[91740]	Vulnerable	Species or species habitat likely to occur within area
REPTILE		
Acanthophis hawkei		
Plains Death Adder [83821]	Vulnerable	Species or species habitat may occur within area
Caretta caretta		
Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
Chelonia mydas		
Green Turtle [1765]	Vulnerable	Breeding likely to occur within area

Scientific Name	Threatened Category	Presence Text
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Breeding likely to occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Breeding likely to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area
Tiliqua scincoides intermedia Northern Blue-tongued Skink [89838]	Critically Endangered	Species or species habitat likely to occur within area
Varanus mertensi Mertens' Water Monitor [1568]	Endangered	Species or species habitat likely to occur within area
Varanus mitchelli Mitchell's Water Monitor [1569]	Critically Endangered	Species or species habitat may occur within area
SHARK		
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat may occur within area
Glyphis glyphis Speartooth Shark [82453]	Critically Endangered	Species or species habitat likely to occur within area
Pristis clavata Dwarf Sawfish, Queensland Sawfish [68447]	Vulnerable	Breeding likely to occur within area
Pristis pristis Largetooth Sawfish, Freshwater Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Endangered	Species or species habitat may occur within area
Pristis zijsron Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Breeding likely to occur within area

Scientific Name	Threatened Category	Presence Text
[Rhincodon typus](#) Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
[Sphyrna lewini](#) Scalloped Hammerhead [85267]	Conservation Dependent	Species or species habitat likely to occur within area

Listed Migratory Species		[Resource Information]
Scientific Name	Threatened Category	Presence Text
null		
[Balaenoptera omurai](#) Omura's Whale [87136]		Species or species habitat likely to occur within area
Migratory Marine Birds		
[Anous stolidus](#) Common Noddy [825]		Breeding likely to occur within area
[Apus pacificus](#) Fork-tailed Swift [678]		Species or species habitat likely to occur within area
[Calonectris leucomelas](#) Streaked Shearwater [1077]		Species or species habitat likely to occur within area
[Fregata ariel](#) Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area
[Fregata minor](#) Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat likely to occur within area
[Onychoprion anaethetus](#) Bridled Tern [82845]		Breeding likely to occur within area
[Phaethon lepturus](#) White-tailed Tropicbird [1014]		Species or species habitat may occur within area
[Phaethon rubricauda](#) Red-tailed Tropicbird [994]		Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Sterna dougallii		
Roseate Tern [817]		Breeding likely to occur within area
Sterna sumatrana		
Black-naped Tern [800]		Breeding likely to occur within area
Sternula albifrons		
Little Tern [82849]	Vulnerable	Breeding likely to occur within area
Migratory Marine Species		
Anoxypristis cuspidata		
Narrow Sawfish, Knifetooth Sawfish [68448]		Species or species habitat likely to occur within area
Balaenoptera borealis		
Sei Whale [34]	Vulnerable	Species or species habitat likely to occur within area
Balaenoptera edeni		
Bryde's Whale [35]		Species or species habitat may occur within area
Balaenoptera musculus		
Blue Whale [36]	Endangered	Species or species habitat may occur within area
Balaenoptera physalus		
Fin Whale [37]	Vulnerable	Species or species habitat likely to occur within area
Carcharhinus longimanus		
Oceanic Whitetip Shark [84108]		Species or species habitat may occur within area
Carcharias taurus		
Grey Nurse Shark [64469]		Species or species habitat may occur within area
Carcharodon carcharias		
White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat may occur within area
Caretta caretta		
Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area

Scientific Name	Threatened Category	Presence Text
Chelonia mydas Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Dugong dugon Dugong [28]		Species or species habitat likely to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Breeding likely to occur within area
Isurus paucus Longfin Mako [82947]		Species or species habitat likely to occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Breeding likely to occur within area
Megaptera novaeangliae Humpback Whale [38]		Species or species habitat may occur within area
Mobula alfredi as Manta alfredi Reef Manta Ray, Coastal Manta Ray [90033]		Species or species habitat likely to occur within area
Mobula birostris as Manta birostris Giant Manta Ray [90034]		Species or species habitat likely to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area
Orcaella heinsohni Australian Snubfin Dolphin [81322]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
[Orcinus orca](#) Killer Whale, Orca [46]		Species or species habitat may occur within area
[Physeter macrocephalus](#) Sperm Whale [59]		Species or species habitat may occur within area
[Pristis clavata](#) Dwarf Sawfish, Queensland Sawfish [68447]	Vulnerable	Breeding likely to occur within area
[Pristis pristis](#) Largetooth Sawfish, Freshwater Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Endangered	Species or species habitat may occur within area
[Pristis zijsron](#) Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Breeding likely to occur within area
[Rhincodon typus](#) Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
[Sousa sahulensis as Sousa chinensis](#) Australian Humpback Dolphin [87942]	Vulnerable	Species or species habitat likely to occur within area
[Tursiops aduncus (Arafura/Timor Sea populations)](#) Spotted Bottlenose Dolphin (Arafura/Timor Sea populations) [78900]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
[Cecropis daurica](#) Red-rumped Swallow [80610]		Species or species habitat may occur within area
[Cuculus optatus](#) Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat may occur within area
[Hirundo rustica](#) Barn Swallow [662]		Species or species habitat may occur within area
Migratory Wetlands Species		

Scientific Name	Threatened Category	Presence Text
Acrocephalus orientalis Oriental Reed-Warbler [59570]		Species or species habitat may occur within area
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat likely to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat likely to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Calidris tenuirostris Great Knot [862]	Vulnerable	Species or species habitat likely to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area
Charadrius veredus Oriental Plover, Oriental Dotterel [882]		Species or species habitat may occur within area
Glareola maldivarum Oriental Pratincole [840]		Species or species habitat may occur within area
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Limosa lapponica		
Bar-tailed Godwit [844]		Species or species habitat likely to occur within area
Limosa limosa		
Black-tailed Godwit [845]	Endangered	Species or species habitat likely to occur within area
Numenius madagascariensis		
Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Pandion haliaetus		
Osprey [952]		Species or species habitat likely to occur within area
Thalasseus bergii		
Greater Crested Tern [83000]		Breeding likely to occur within area
Tringa nebularia		
Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area

Other Matters Protected by the EPBC Act

Commonwealth Lands [Resource Information]

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Commonwealth Land Name	State
Department of Defence	
NHULUNBUY JORN SITE [DD_0486]	NT
Nhulunbuy Training Depot [DD_1520]	NT
Department of Finance	
N.T. Portion 01045 plan(s) A 000776 [AGPR6610]	NT
N.T. Portion 01045 plan(s) A 000776 [AGPR007680]	NT
National Indigenous Australians Agency	
Lot 00983 Plan S72/248H [AGPR180]	NT
Lot 01240 Plan S80/140A [AGPR5951]	NT
Lot 1238 Plan S80/140A [AGPR5950]	NT

Commonwealth Land Name	State
Lot 1239 Plan S80/140A [AGPR5952]	NT
Lot 1361 S88/264 [AGPR923]	NT
Lot 1362 Plan S88/264 [AGPR922]	NT
Lot 1378 Plan S89/335 [AGPR6141]	NT
Lot 1382 Plan S89/335 [AGPR6140]	NT
Lot 1444 Plan S94/186 [AGPR6500]	NT
Lot 1490 Plan S89/335 [AGPR6488]	NT
Lot 1521 Plan S99/24 [AGPR5960]	NT
Lot 627 Plan S89/335 [AGPR6609]	NT
Lot 667 Plan S73/023 [AGPR6022]	NT
Lot 914 Plan S89/335 [AGPR300]	NT
Unit A and B Lot 1404 Plan 92/216 [AGPR5893]	NT
Unit A and B Lot 607 Plan S89/335 [AGPR6487]	NT
Services Australia	
Lot 01030 S 74/048A [AGPR6532]	NT
Lot 01325 S 83/152 [AGPR6608]	NT

Listed Marine Species [Resource Information]

Scientific Name	Threatened Category	Presence Text
Bird		
Acrocephalus orientalis Oriental Reed-Warbler [59570]		Species or species habitat may occur within area overfly marine area
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat likely to occur within area
Anous stolidus Common Noddy [825]		Breeding likely to occur within area

Scientific Name	Threatened Category	Presence Text
Anseranas semipalmata Magpie Goose [978]		Species or species habitat may occur within area overfly marine area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat likely to occur within area overfly marine area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area overfly marine area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area
Calidris tenuirostris Great Knot [862]	Vulnerable	Species or species habitat likely to occur within area overfly marine area
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat likely to occur within area
Cecropis daurica as Hirundo daurica Red-rumped Swallow [80610]		Species or species habitat may occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Chalcites osculans as Chrysococcyx osculans		
Black-eared Cuckoo [83425]		Species or species habitat may occur within area overfly marine area
Charadrius leschenaultii		
Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area
Charadrius veredus		
Oriental Plover, Oriental Dotterel [882]		Species or species habitat may occur within area overfly marine area
Fregata ariel		
Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area
Fregata minor		
Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat likely to occur within area
Glareola maldivarum		
Oriental Pratincole [840]		Species or species habitat may occur within area overfly marine area
Haliaeetus leucogaster		
White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area
Hirundo rustica		
Barn Swallow [662]		Species or species habitat may occur within area overfly marine area
Limnodromus semipalmatus		
Asian Dowitcher [843]	Vulnerable	Species or species habitat may occur within area overfly marine area
Limosa lapponica		
Bar-tailed Godwit [844]		Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Limosa limosa Black-tailed Godwit [845]	Endangered	Species or species habitat likely to occur within area overfly marine area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Onychoprion anaethetus as Sterna anaethetus Bridled Tern [82845]		Breeding likely to occur within area
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area
Phaethon lepturus White-tailed Tropicbird [1014]		Species or species habitat may occur within area
Phaethon rubricauda Red-tailed Tropicbird [994]		Species or species habitat likely to occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat likely to occur within area overfly marine area
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat may occur within area overfly marine area
Sterna dougallii Roseate Tern [817]		Breeding likely to occur within area
Sterna sumatrana Black-naped Tern [800]		Breeding likely to occur within area

Scientific Name	Threatened Category	Presence Text
[Sternula albifrons as Sterna albifrons](#) Little Tern [82849]	Vulnerable	Breeding likely to occur within area
[Thalasseus bergii as Sterna bergii](#) Greater Crested Tern [83000]		Breeding likely to occur within area
[Tringa nebularia](#) Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area overfly marine area
Fish		
[Campichthys tricarinatus](#) Three-keel Pipefish [66192]		Species or species habitat may occur within area
[Choeroichthys brachysoma](#) Pacific Short-bodied Pipefish, Short-bodied Pipefish [66194]		Species or species habitat may occur within area
[Choeroichthys suillus](#) Pig-snouted Pipefish [66198]		Species or species habitat may occur within area
[Corythoichthys amplexus](#) Fijian Banded Pipefish, Brown-banded Pipefish [66199]		Species or species habitat may occur within area
[Corythoichthys flavofasciatus](#) Yellow-banded Pipefish [66200]		Species or species habitat may occur within area
[Corythoichthys haematopterus](#) Reef-top Pipefish [66201]		Species or species habitat may occur within area
[Corythoichthys schultzi](#) Schultz's Pipefish [66205]		Species or species habitat may occur within area
[Doryrhamphus dactyliophorus](#) Banded Pipefish, Ringed Pipefish [66210]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Doryrhamphus excisus Bluestripe Pipefish, Indian Blue-stripe Pipefish, Pacific Blue-stripe Pipefish [66211]		Species or species habitat may occur within area
Doryrhamphus janssi Cleaner Pipefish, Janss' Pipefish [66212]		Species or species habitat may occur within area
Festucalex cinctus Girdled Pipefish [66214]		Species or species habitat may occur within area
Halicampus brocki Brock's Pipefish [66219]		Species or species habitat may occur within area
Halicampus grayi Mud Pipefish, Gray's Pipefish [66221]		Species or species habitat may occur within area
Halicampus spinirostris Spiny-snout Pipefish [66225]		Species or species habitat may occur within area
Haliichthys taeniophora as Haliichthys taeniophorus Ribboned Pipehorse, Ribboned Pipefish, Ribboned Seadragon [94706]		Species or species habitat may occur within area
Hippichthys cyanospilos Blue-speckled Pipefish, Blue-spotted Pipefish [66228]		Species or species habitat may occur within area
Hippichthys parvicarinatus Short-keel Pipefish, Short-keeled Pipefish [66230]		Species or species habitat may occur within area
Hippichthys penicillus Beady Pipefish, Steep-nosed Pipefish [66231]		Species or species habitat may occur within area
Hippocampus angustus Western Spiny Seahorse, Narrow-bellied Seahorse [66234]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Hippocampus histrix Spiny Seahorse, Thorny Seahorse [66236]		Species or species habitat may occur within area
Hippocampus kuda Spotted Seahorse, Yellow Seahorse [66237]		Species or species habitat may occur within area
Hippocampus planifrons Flat-face Seahorse [66238]		Species or species habitat may occur within area
Hippocampus spinosissimus Hedgehog Seahorse [66239]		Species or species habitat may occur within area
Micrognathus micronotopterus Tidepool Pipefish [66255]		Species or species habitat may occur within area
Solegnathus hardwickii Pallid Pipehorse, Hardwick's Pipehorse [66272]		Species or species habitat may occur within area
Trachyrhamphus bicoarctatus Bentstick Pipefish, Bend Stick Pipefish, Short-tailed Pipefish [66280]		Species or species habitat may occur within area
Trachyrhamphus longirostris Straightstick Pipefish, Long-nosed Pipefish, Straight Stick Pipefish [66281]		Species or species habitat may occur within area
Mammal		
Dugong dugon Dugong [28]		Species or species habitat likely to occur within area
Reptile		
Aipysurus duboisii Dubois' Sea Snake, Dubois' Seasnake, Reef Shallows Sea Snake [1116]		Species or species habitat may occur within area
Aipysurus laevis Olive Sea Snake, Olive-brown Sea Snake [1120]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Aipysurus mosaicus as Aipysurus eydouxii Mosaic Sea Snake [87261]		Species or species habitat may occur within area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
Crocodylus johnstoni Freshwater Crocodile, Johnston's Crocodile, Johnstone's Crocodile [1773]		Species or species habitat may occur within area
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Breeding likely to occur within area
Hydrelaps darwiniensis Port Darwin Sea Snake, Black-ringed Mangrove Sea Snake [1100]		Species or species habitat may occur within area
Hydrophis atriceps Black-headed Sea Snake, Banded Sea Snake [1101]		Species or species habitat may occur within area
Hydrophis czeblukovi Fine-spined Sea Snake [59233]		Species or species habitat may occur within area
Hydrophis elegans Elegant Sea Snake, Bar-bellied Sea Snake [1104]		Species or species habitat may occur within area
Hydrophis hardwickii as Lapemis hardwickii Spine-bellied Sea Snake [93516]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Hydrophis inornatus Plain Sea Snake [1107]		Species or species habitat may occur within area
Hydrophis kingii as Disteira kingii Spectacled Sea Snake [93511]		Species or species habitat may occur within area
Hydrophis macdowelli as Hydrophis mcdowelli MacDowell's Sea Snake, Small-headed Sea Snake, [75601]		Species or species habitat may occur within area
Hydrophis major as Disteira major Olive-headed Sea Snake [93512]		Species or species habitat may occur within area
Hydrophis ornatus Spotted Sea Snake, Ornate Reef Sea Snake [1111]		Species or species habitat may occur within area
Hydrophis pacificus Pacific Sea Snake, Large-headed Sea Snake [1112]		Species or species habitat may occur within area
Hydrophis peronii as Acalyptophis peronii Horned Sea Snake [93509]		Species or species habitat may occur within area
Hydrophis platura as Pelamis platurus Yellow-bellied Sea Snake [93746]		Species or species habitat may occur within area
Hydrophis stokesii as Astrotia stokesii Stokes' Sea Snake [93510]		Species or species habitat may occur within area
Hydrophis zweifeli as Enhydrina schistosa Australian Beaked Sea Snake [93514]		Species or species habitat may occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Breeding likely to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area

Scientific Name	Threatened Category	Presence Text
Parahydrophis mertoni Arafura Smooth Sea Snake, Northern Mangrove Sea Snake [1090]		Species or species habitat may occur within area

Whales and Other Cetaceans		[Resource Information]
Current Scientific Name	Status	Type of Presence
Mammal		
Balaenoptera borealis Sei Whale [34]	Vulnerable	Species or species habitat likely to occur within area
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area
Balaenoptera omurai Omura's Whale [87136]		Species or species habitat likely to occur within area
Balaenoptera physalus Fin Whale [37]	Vulnerable	Species or species habitat likely to occur within area
Delphinus delphis Common Dolphin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area
Feresa attenuata Pygmy Killer Whale [61]		Species or species habitat may occur within area
Globicephala macrorhynchus Short-finned Pilot Whale [62]		Species or species habitat may occur within area
Grampus griseus Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area

Current Scientific Name	Status	Type of Presence
Kogia breviceps Pygmy Sperm Whale [57]		Species or species habitat may occur within area
Kogia sima Dwarf Sperm Whale [85043]		Species or species habitat may occur within area
Megaptera novaeangliae Humpback Whale [38]		Species or species habitat may occur within area
Orcaella heinsohni Australian Snubfin Dolphin [81322]	Vulnerable	Species or species habitat likely to occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Peponocephala electra Melon-headed Whale [47]		Species or species habitat may occur within area
Physeter macrocephalus Sperm Whale [59]		Species or species habitat may occur within area
Pseudorca crassidens False Killer Whale [48]		Species or species habitat likely to occur within area
Sousa sahulensis Australian Humpback Dolphin [87942]	Vulnerable	Species or species habitat likely to occur within area
Stenella attenuata Spotted Dolphin, Pantropical Spotted Dolphin [51]		Species or species habitat may occur within area
Stenella coeruleoalba Striped Dolphin, Euphrosyne Dolphin [52]		Species or species habitat may occur within area

Current Scientific Name	Status	Type of Presence
Stenella longirostris Long-snouted Spinner Dolphin [29]		Species or species habitat may occur within area
Steno bredanensis Rough-toothed Dolphin [30]		Species or species habitat may occur within area
Tursiops aduncus Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat likely to occur within area
Tursiops aduncus (Arafura/Timor Sea populations) Spotted Bottlenose Dolphin (Arafura/Timor Sea populations) [78900]		Species or species habitat likely to occur within area
Tursiops truncatus s. str. Bottlenose Dolphin [68417]		Species or species habitat may occur within area
Ziphius cavirostris Cuvier's Beaked Whale, Goose-beaked Whale [56]		Species or species habitat may occur within area

Australian Marine Parks	[Resource Information]
Park Name	Zone & IUCN Categories
Wessel	Habitat Protection Zone (IUCN IV)
Arafura	Special Purpose Zone (Trawl) (IUCN VI)
Wessel	Special Purpose Zone (Trawl) (IUCN VI)

Habitat Critical to the Survival of Marine Turtles		[Resource Information]
Scientific Name	Behaviour	Presence
All year (Jun - Aug)		
Natator depressus Flatback Turtle [59257]	Nesting	Known to occur
Dec - Jan		
Dermochelys coriacea Leatherback Turtle [1768]	Nesting	Known to occur
May - Jul		

Scientific Name	Behaviour	Presence
Lepidochelys olivacea Olive Ridley Turtle [1767]	Nesting	Known to occur
Oct - Feb		
Eretmochelys imbricata Hawksbill Turtle [1766]	Nesting	Known to occur
Oct - Mar		
Chelonia mydas Green Turtle [1765]	Nesting	Known to occur

Extra Information

EPBC Act Referrals [Resource Information]

Title of referral	Reference	Referral Outcome	Assessment Status
Arnhem Space Centre Operations (Down Range Recovery)	2023/09657		Completed
Controlled action			
Katherine to Gove Gas Pipeline Project	2012/6605	Controlled Action	Post-Approval
PNG-Qld Gas Pipeline - Gove Lateral	2006/2615	Controlled Action	Completed
Trans-territory Gas Pipeline	2003/1186	Controlled Action	Completed
Not controlled action			
Borrow area development, Gove operations, Rio Tinto Aluminium, Nhulunbuy NT	2017/8114	Not Controlled Action	Completed
External Borrow Pit for Pond 6 South	2011/5970	Not Controlled Action	Completed
Geo-scientific survey	2005/2004	Not Controlled Action	Completed
Gove Alumina Refinery Expansion	2003/1068	Not Controlled Action	Completed
Not controlled action (particular manner)			
2D Marine Seismic Survey	2009/4728	Not Controlled Action (Particular Manner)	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
2D Seismic survey	2009/5076	Not Controlled Action (Particular Manner)	Post-Approval
External Borrow Pit for Stage 2 Construction of Additional Waste Storage Pond 8, NT	2011/5849	Not Controlled Action (Particular Manner)	Post-Approval
Kingtree & Ironstone-1 Exploration Wells	2011/5935	Not Controlled Action (Particular Manner)	Post-Approval
NT/P74 & NT/P75 - 2D marine seismic survey	2008/4316	Not Controlled Action (Particular Manner)	Post-Approval
temporary boat disposal	2005/2281	Not Controlled Action (Particular Manner)	Post-Approval
Westralia SPAN Marine Seismic Survey, WA & NT	2012/6463	Not Controlled Action (Particular Manner)	Post-Approval
Referral decision			
2D Marine Seismic Survey	2008/4623	Referral Decision	Completed
Addtional , Standalone Containment Pond	2012/6347	Referral Decision	Completed

Key Ecological Features

[Resource Information]

Key Ecological Features are the parts of the marine ecosystem that are considered to be important for the biodiversity or ecosystem functioning and integrity of the Commonwealth Marine Area.

Name	Region
Gulf of Carpentaria basin	North
Tributary Canyons of the Arafura Depression	North

Biologically Important Areas

[Resource Information]

Scientific Name	Behaviour	Presence
Marine Turtles		
Chelonia mydas		
Green Turtle [1765]	Foraging	Known to occur

Scientific Name	Behaviour	Presence
Chelonia mydas Green Turtle [1765]	Reproduction	Likely to occur
Eretmochelys imbricata Hawksbill Turtle [1766]	Reproduction	Known to occur
Lepidochelys olivacea Olive Ridley Turtle [1767]	Reproduction	Likely to occur
Natator depressus Flatback Turtle [59257]	Reproduction	Known to occur
Seabirds		
Anous stolidus Common Noddy [825]	Reproduction	Known to occur
Onychoprion anaethetus Bridled Tern [82845]	Reproduction	Known to occur
Sterna dougallii Roseate Tern [817]	Reproduction	Known to occur
Thalasseus bergii Crested Tern [83000]	Reproduction	Known to occur

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data is available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance on the contents of this report.

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions when time permits.

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded breeding sites; and
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management, Northern Territory
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
Forestry Corporation, NSW
-Geoscience Australia
-CSIRO
-Australian Tropical Herbarium, Cairns
-eBird Australia
-Australian Government – Australian Antarctic Data Centre
-Museum and Art Gallery of the Northern Territory
-Australian Government National Environmental Science Program
-Australian Institute of Marine Science
-Reef Life Survey Australia
-American Museum of Natural History
-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
-Tasmanian Museum and Art Gallery, Hobart, Tasmania
-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact us page.

© Commonwealth of Australia
Department of Climate Change, Energy, the Environment and Water
GPO Box 3090
Canberra ACT 2601 Australia
+61 2 6274 1111

Australian Government

Department of Climate Change, Energy, the Environment and Water

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 26-Jun-2026

Summary

Details

- Matters of NES
- Other Matters Protected by the EPBC Act
- Extra Information

Caveat

Acknowledgements

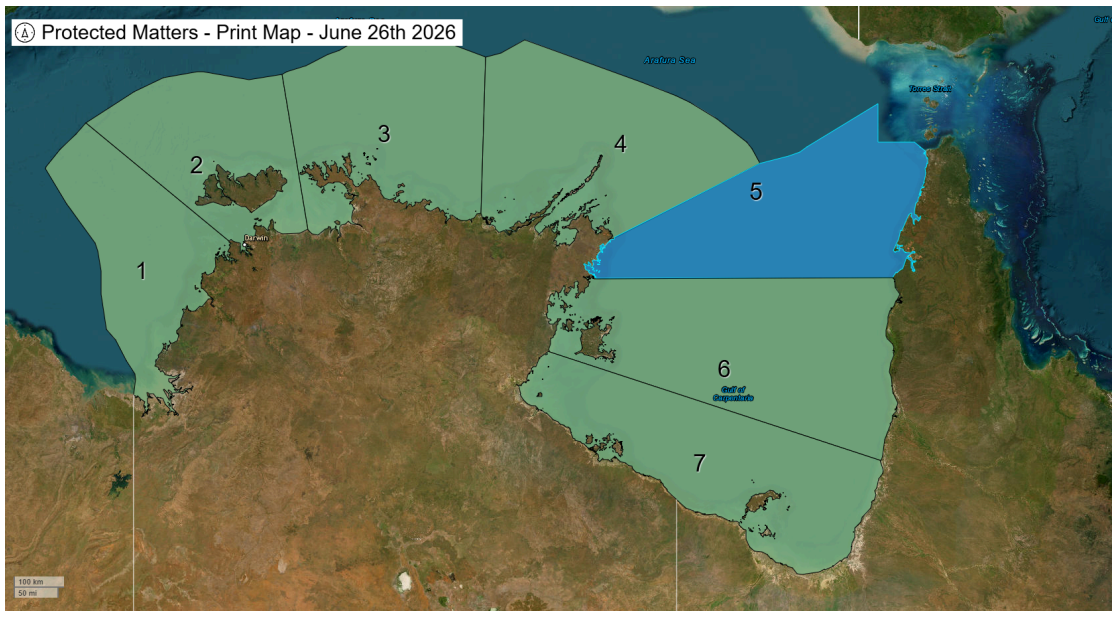


Figure 1: North Marine Region - Part 5

Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	2
Listed Threatened Ecological Communities:	None
Listed Threatened Species:	61
Listed Migratory Species:	59

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at https://www.dcceew.gov.au/parks-heritage/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	7
Commonwealth Heritage Places:	None
Listed Marine Species:	115
Whales and Other Cetaceans:	14
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	5
Habitat Critical to the Survival of Marine Turtles:	5

Extra Information

This part of the report provides information that may also be relevant to the area you have

State and Territory Reserves:	2
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	18
Key Ecological Features (Marine):	2
Biologically Important Areas:	11
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

Commonwealth Marine Area [Resource Information]

Approval is required for a proposed activity that is located within the Commonwealth Marine Area which has, will have, or is likely to have a significant impact on the environment. Approval may be required for a proposed action taken outside a Commonwealth Marine Area but which has, may have or is likely to have a significant impact on the environment in the Commonwealth Marine Area.

Feature Name
Commonwealth Marine Areas (EPBC Act)
Commonwealth Marine Areas (EPBC Act)

Listed Threatened Species [Resource Information]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.
Number is the current name ID.

Scientific Name	Threatened Category	Presence Text
BIRD		
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat likely to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area
Chloebia gouldiae listed as Erythrura gouldiae Gouldian Finch [90091]	Endangered	Species or species habitat may occur within area
Erythrotriorchis radiatus Red Goshawk [942]	Endangered	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Falcunculus frontatus whitei Crested Shrike-tit (northern), Northern Shrike-tit [26013]	Vulnerable	Species or species habitat likely to occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat likely to occur within area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat likely to occur within area
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat may occur within area
Limosa lapponica baueri Nunivak Bar-tailed Godwit, Western Alaskan Bar-tailed Godwit [86380]	Endangered	Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Probosciger aterrimus macgillivrayi Palm Cockatoo (Australian) [67033]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
Sternula albifrons Little Tern [82849]	Vulnerable	Breeding likely to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area
Tyto novaehollandiae kimberli Masked Owl (northern) [26048]	Vulnerable	Species or species habitat likely to occur within area
MAMMAL		

Scientific Name	Threatened Category	Presence Text
Balaenoptera borealis Sei Whale [34]	Vulnerable	Species or species habitat may occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area
Balaenoptera physalus Fin Whale [37]	Vulnerable	Species or species habitat may occur within area
Conilurus penicillatus Brush-tailed Rabbit-rat, Brush-tailed Tree-rat, Pakooma [132]	Vulnerable	Species or species habitat may occur within area
Dasyurus hallucatus Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu] [331]	Endangered	Species or species habitat likely to occur within area
Hipposideros semoni Semon's Leaf-nosed Bat, Greater Wart-nosed Horseshoe-bat [180]	Vulnerable	Species or species habitat may occur within area
Macroderma gigas Ghost Bat [174]	Vulnerable	Species or species habitat likely to occur within area
Mesembriomys gouldii gouldii Black-footed Tree-rat (Kimberley and mainland Northern Territory), Djintamoonga, Manbul [87618]	Endangered	Species or species habitat likely to occur within area
Mesembriomys gouldii rattoides Black-footed Tree-rat (north Queensland), Shaggy Rabbit-rat [87620]	Vulnerable	Species or species habitat likely to occur within area
Notomys aquilo Northern Hopping-mouse, Woorrentinta [123]	Endangered	Species or species habitat may occur within area
Orcaella heinsohni Australian Snubfin Dolphin [81322]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Petrogale concinna canescens Nabarlek (Top End) [87606]	Endangered	Species or species habitat may occur within area
Phascogale pirata Northern Brush-tailed Phascogale [82954]	Vulnerable	Species or species habitat may occur within area
Rhinolophus robertsi Large-eared Horseshoe Bat, Greater Large-eared Horseshoe Bat, Lesser Large-eared Horseshoe Bat [87639]	Vulnerable	Species or species habitat may occur within area
Saccolaimus saccolaimus nudicluniatus Bare-rumped Sheath-tailed Bat, Bare-rumped Sheathtail Bat [66889]	Vulnerable	Species or species habitat likely to occur within area
Sousa sahulensis Australian Humpback Dolphin [87942]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Trichosurus vulpecula arnhemensis Northern Brushtail Possum [83091]	Vulnerable	Species or species habitat likely to occur within area
Xeromys myoides Water Mouse, False Water Rat, Yirrkoo [66]	Vulnerable	Species or species habitat likely to occur within area
PLANT		
Bruguiera x hainesii Haines's Orange Mangrove [91351]	Critically Endangered	Species or species habitat may occur within area
Calophyllum bicolor [11371]	Vulnerable	Species or species habitat likely to occur within area
Dendrobium bigibbum Cooktown Orchid [10306]	Vulnerable	Species or species habitat likely to occur within area
Dendrobium carronii listed as Cepobaculum carronii an orchid [10822]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Dendrobium johannis		
Chocolate Tea Tree Orchid [13585]	Vulnerable	Species or species habitat likely to occur within area
Erythroxylum sp. Cholmondely Creek (J.R.Clarkson 9367) (Northern Territory Population)		
[91740]	Vulnerable	Species or species habitat may occur within area
Solanum dunalianum		
[13819]	Vulnerable	Species or species habitat likely to occur within area
Vappodes phalaenopsis		
Cooktown Orchid [78894]	Vulnerable	Species or species habitat may occur within area
Xylopia monosperma		
a shrub [82030]	Endangered	Species or species habitat likely to occur within area
REPTILE		
Acanthophis hawkei		
Plains Death Adder [83821]	Vulnerable	Species or species habitat may occur within area
Caretta caretta		
Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
Chelonia mydas		
Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
Dermochelys coriacea		
Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Egernia rugosa		
Yakka Skink [1420]	Vulnerable	Species or species habitat may occur within area
Eretmochelys imbricata		
Hawksbill Turtle [1766]	Vulnerable	Breeding likely to occur within area
Lepidochelys olivacea		
Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Breeding likely to occur within area

Scientific Name	Threatened Category	Presence Text
Natator depressus Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area
Tiliqua scincoides intermedia Northern Blue-tongued Skink [89838]	Critically Endangered	Species or species habitat likely to occur within area
Varanus mertensi Mertens' Water Monitor [1568]	Endangered	Species or species habitat likely to occur within area
SHARK		
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat may occur within area
Glyphis glyphis Speartooth Shark [82453]	Critically Endangered	Species or species habitat likely to occur within area
Pristis clavata Dwarf Sawfish, Queensland Sawfish [68447]	Vulnerable	Breeding likely to occur within area
Pristis pristis Largetooth Sawfish, Freshwater Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Endangered	Species or species habitat likely to occur within area
Pristis zijsron Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Breeding likely to occur within area
Rhincodon typus Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
Sphyrna lewini Scalloped Hammerhead [85267]	Conservation Dependent	Species or species habitat likely to occur within area

Listed Migratory Species		[Resource Information]
Scientific Name	Threatened Category	Presence Text
null		
Balaenoptera omurai Omura's Whale [87136]		Species or species habitat likely to occur within area
Migratory Marine Birds		

Scientific Name	Threatened Category	Presence Text
Anous stolidus Common Noddy [825]		Breeding likely to occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat likely to occur within area
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat likely to occur within area
Phaethon lepturus White-tailed Tropicbird [1014]		Species or species habitat may occur within area
Phaethon rubricauda Red-tailed Tropicbird [994]		Species or species habitat likely to occur within area
Sterna dougallii Roseate Tern [817]		Breeding likely to occur within area
Sternula albifrons Little Tern [82849]	Vulnerable	Breeding likely to occur within area
Migratory Marine Species		
Anoxypristis cuspidata Narrow Sawfish, Knifetooth Sawfish [68448]		Species or species habitat likely to occur within area
Balaenoptera borealis Sei Whale [34]	Vulnerable	Species or species habitat may occur within area
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area
Balaenoptera physalus Fin Whale [37]	Vulnerable	Species or species habitat may occur within area
Carcharias taurus Grey Nurse Shark [64469]		Species or species habitat may occur within area
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat may occur within area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Dugong dugon Dugong [28]		Species or species habitat likely to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Breeding likely to occur within area
Isurus paucus Longfin Mako [82947]		Species or species habitat likely to occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Breeding likely to occur within area

Scientific Name	Threatened Category	Presence Text
Mobula alfredi as Manta alfredi		
Reef Manta Ray, Coastal Manta Ray [90033]		Species or species habitat likely to occur within area
Mobula birostris as Manta birostris		
Giant Manta Ray [90034]		Species or species habitat likely to occur within area
Natator depressus		
Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area
Orcaella heinsohni		
Australian Snubfin Dolphin [81322]	Vulnerable	Species or species habitat likely to occur within area
Orcinus orca		
Killer Whale, Orca [46]		Species or species habitat may occur within area
Pristis clavata		
Dwarf Sawfish, Queensland Sawfish [68447]	Vulnerable	Breeding likely to occur within area
Pristis pristis		
Largetooth Sawfish, Freshwater Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Endangered	Species or species habitat likely to occur within area
Pristis zijsron		
Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Breeding likely to occur within area
Rhincodon typus		
Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
Sousa sahulensis as Sousa chinensis		
Australian Humpback Dolphin [87942]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Migratory Terrestrial Species		
Cecropis daurica		
Red-rumped Swallow [80610]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Cuculus optatus Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat likely to occur within area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat likely to occur within area
Hirundo rustica Barn Swallow [662]		Species or species habitat may occur within area
Migratory Wetlands Species		
Acrocephalus orientalis Oriental Reed-Warbler [59570]		Species or species habitat may occur within area
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat likely to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat likely to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area
Charadrius veredus Oriental Plover, Oriental Dotterel [882]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat likely to occur within area
Gallinago megala Swinhoe's Snipe [864]		Roosting likely to occur within area
Gallinago stenura Pin-tailed Snipe [841]		Roosting likely to occur within area
Glareola maldivarum Oriental Pratincole [840]		Species or species habitat may occur within area
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat may occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat likely to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Numenius minutus Little Curlew, Little Whimbrel [848]		Roosting likely to occur within area
Numenius phaeopus Whimbrel [849]		Roosting likely to occur within area
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area
Tringa stagnatilis Marsh Sandpiper, Little Greenshank [833]		Roosting likely to occur within area

Other Matters Protected by the EPBC Act

Commonwealth Lands [Resource Information]

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Commonwealth Land Name	State
Bureau of Meteorology	
Lot 1 on MPH35644 [AGPR2812]	QLD
Department of Defence	
Weipa Training Depot - Kerr Point Drive [DD_3131]	QLD
Department of Home Affairs	
Lot 42 on MP37500 [AGPR2804]	QLD
Lot 44 on MP37500 [AGPR2806]	QLD
Lot 50 on MP37500 [AGPR2807]	QLD
Lot 51 on MP37500 [AGPR2805]	QLD
Services Australia	
Lot 217 on MPH41093 [AGPR2813]	QLD

Listed Marine Species [Resource Information]

Scientific Name	Threatened Category	Presence Text
Bird		
Acrocephalus orientalis Oriental Reed-Warbler [59570]		Species or species habitat may occur within area overfly marine area
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat likely to occur within area
Anous stolidus Common Noddy [825]		Breeding likely to occur within area
Anseranas semipalmata Magpie Goose [978]		Species or species habitat may occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat likely to occur within area overfly marine area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area overfly marine area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat likely to occur within area
Cecropis daurica as Hirundo daurica Red-rumped Swallow [80610]		Species or species habitat may occur within area overfly marine area
Chalcites osculans as Chrysococcyx osculans Black-eared Cuckoo [83425]		Species or species habitat may occur within area overfly marine area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Charadrius veredus Oriental Plover, Oriental Dotterel [882]		Species or species habitat may occur within area overfly marine area
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat likely to occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat likely to occur within area overfly marine area
Gallinago megala Swinhoe's Snipe [864]		Roosting likely to occur within area overfly marine area
Gallinago stenura Pin-tailed Snipe [841]		Roosting likely to occur within area overfly marine area
Glareola maldivarum Oriental Pratincole [840]		Species or species habitat may occur within area overfly marine area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area
Himantopus himantopus Pied Stilt, Black-winged Stilt [870]		Roosting likely to occur within area overfly marine area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat likely to occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Hirundo rustica Barn Swallow [662]		Species or species habitat may occur within area overfly marine area
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat may occur within area overfly marine area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat likely to occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat may occur within area overfly marine area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat likely to occur within area overfly marine area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Numenius minutus Little Curlew, Little Whimbrel [848]		Roosting likely to occur within area overfly marine area
Numenius phaeopus Whimbrel [849]		Roosting likely to occur within area
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Phaethon lepturus White-tailed Tropicbird [1014]		Species or species habitat may occur within area
Phaethon rubricauda Red-tailed Tropicbird [994]		Species or species habitat likely to occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat likely to occur within area overfly marine area
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area
Sterna dougallii Roseate Tern [817]		Breeding likely to occur within area
Sternula albifrons as Sterna albifrons Little Tern [82849]	Vulnerable	Breeding likely to occur within area
Symposiachrus trivirgatus as Monarcha trivirgatus Spectacled Monarch [83946]		Species or species habitat likely to occur within area overfly marine area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area overfly marine area
Tringa stagnatilis Marsh Sandpiper, Little Greenshank [833]		Roosting likely to occur within area overfly marine area
Fish		
Acentronura tentaculata Shortpouch Pygmy Pipehorse [66187]		Species or species habitat may occur within area
Campichthys tricarinatus Three-keel Pipefish [66192]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Choeroichthys brachysoma Pacific Short-bodied Pipefish, Short-bodied Pipefish [66194]		Species or species habitat may occur within area
Choeroichthys suillus Pig-snouted Pipefish [66198]		Species or species habitat may occur within area
Corythoichthys amplexus Fijian Banded Pipefish, Brown-banded Pipefish [66199]		Species or species habitat may occur within area
Corythoichthys flavofasciatus Yellow-banded Pipefish [66200]		Species or species habitat may occur within area
Corythoichthys intestinalis Australian Messmate Pipefish, Banded Pipefish [66202]		Species or species habitat may occur within area
Corythoichthys ocellatus Orange-spotted Pipefish, Ocellated Pipefish [66203]		Species or species habitat may occur within area
Corythoichthys schultzi Schultz's Pipefish [66205]		Species or species habitat may occur within area
Cosmocampus maxweberi Maxweber's Pipefish [66209]		Species or species habitat may occur within area
Doryrhamphus dactyliophorus Banded Pipefish, Ringed Pipefish [66210]		Species or species habitat may occur within area
Doryrhamphus excisus Bluestripe Pipefish, Indian Blue-stripe Pipefish, Pacific Blue-stripe Pipefish [66211]		Species or species habitat may occur within area
Doryrhamphus janssi Cleaner Pipefish, Janss' Pipefish [66212]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Festucalex cinctus Girdled Pipefish [66214]		Species or species habitat may occur within area
Halicampus brocki Brock's Pipefish [66219]		Species or species habitat may occur within area
Halicampus dunckeri Red-hair Pipefish, Duncker's Pipefish [66220]		Species or species habitat may occur within area
Halicampus grayi Mud Pipefish, Gray's Pipefish [66221]		Species or species habitat may occur within area
Halicampus macrorhynchus Whiskered Pipefish, Ornate Pipefish [66222]		Species or species habitat may occur within area
Halicampus spinirostris Spiny-snout Pipefish [66225]		Species or species habitat may occur within area
Haliichthys taeniophora as Haliichthys taeniophorus Ribboned Pipehorse, Ribboned Pipefish, Ribboned Seadragon [94706]		Species or species habitat may occur within area
Hippichthys cyanospilos Blue-speckled Pipefish, Blue-spotted Pipefish [66228]		Species or species habitat may occur within area
Hippichthys heptagonus Madura Pipefish, Reticulated Freshwater Pipefish [66229]		Species or species habitat may occur within area
Hippichthys penicillus Beady Pipefish, Steep-nosed Pipefish [66231]		Species or species habitat may occur within area
Hippichthys spicifer Belly-barred Pipefish, Banded Freshwater Pipefish [66232]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Hippocampus angustus Western Spiny Seahorse, Narrow-bellied Seahorse [66234]		Species or species habitat may occur within area
Hippocampus histrix Spiny Seahorse, Thorny Seahorse [66236]		Species or species habitat may occur within area
Hippocampus kuda Spotted Seahorse, Yellow Seahorse [66237]		Species or species habitat may occur within area
Hippocampus planifrons Flat-face Seahorse [66238]		Species or species habitat may occur within area
Hippocampus spinosissimus Hedgehog Seahorse [66239]		Species or species habitat may occur within area
Hippocampus trimaculatus Three-spot Seahorse, Low-crowned Seahorse, Flat-faced Seahorse [66720]		Species or species habitat may occur within area
Hippocampus zebra Zebra Seahorse [66241]		Species or species habitat may occur within area
Micrognathus brevirostris thorntail Pipefish, Thorn-tailed Pipefish [66254]		Species or species habitat may occur within area
Micrognathus micronotopterus Tidepool Pipefish [66255]		Species or species habitat may occur within area
Microphis brachyurus Short-tail Pipefish, Short-tailed River Pipefish [66257]		Species or species habitat may occur within area
Solegnathus hardwickii Pallid Pipehorse, Hardwick's Pipehorse [66272]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
[Solenostomus cyanopterus](#) Robust Ghostpipefish, Blue-finned Ghost Pipefish, [66183]		Species or species habitat may occur within area
[Syngnathoides biaculeatus](#) Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279]		Species or species habitat may occur within area
[Trachyrhamphus bicoarctatus](#) Bentstick Pipefish, Bend Stick Pipefish, Short-tailed Pipefish [66280]		Species or species habitat may occur within area
[Trachyrhamphus longirostris](#) Straightstick Pipefish, Long-nosed Pipefish, Straight Stick Pipefish [66281]		Species or species habitat may occur within area
Mammal		
[Dugong dugon](#) Dugong [28]		Species or species habitat likely to occur within area
Reptile		
[Aipysurus duboisii](#) Dubois' Sea Snake, Dubois' Seasnake, Reef Shallows Sea Snake [1116]		Species or species habitat may occur within area
[Aipysurus laevis](#) Olive Sea Snake, Olive-brown Sea Snake [1120]		Species or species habitat may occur within area
[Aipysurus mosaicus as Aipysurus eydouxii](#) Mosaic Sea Snake [87261]		Species or species habitat may occur within area
[Caretta caretta](#) Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
[Chelonia mydas](#) Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
[Crocodylus johnstoni](#) Freshwater Crocodile, Johnston's Crocodile, Johnstone's Crocodile [1773]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Breeding likely to occur within area
Hydrelaps darwiniensis Port Darwin Sea Snake, Black-ringed Mangrove Sea Snake [1100]		Species or species habitat may occur within area
Hydrophis atriceps Black-headed Sea Snake, Banded Sea Snake [1101]		Species or species habitat may occur within area
Hydrophis czeblukovi Fine-spined Sea Snake [59233]		Species or species habitat may occur within area
Hydrophis elegans Elegant Sea Snake, Bar-bellied Sea Snake [1104]		Species or species habitat may occur within area
Hydrophis hardwickii as Lapemis hardwickii Spine-bellied Sea Snake [93516]		Species or species habitat may occur within area
Hydrophis inornatus Plain Sea Snake [1107]		Species or species habitat may occur within area
Hydrophis kingii as Disteira kingii Spectacled Sea Snake [93511]		Species or species habitat may occur within area
Hydrophis macdowelli as Hydrophis mcdowelli MacDowell's Sea Snake, Small-headed Sea Snake, [75601]		Species or species habitat may occur within area
Hydrophis major as Disteira major Olive-headed Sea Snake [93512]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Hydrophis melanosoma Black-banded Robust Sea Snake [1109]		Species or species habitat may occur within area
Hydrophis ornatus Spotted Sea Snake, Ornate Reef Sea Snake [1111]		Species or species habitat may occur within area
Hydrophis pacificus Pacific Sea Snake, Large-headed Sea Snake [1112]		Species or species habitat may occur within area
Hydrophis peronii as Acalyptophis peronii Horned Sea Snake [93509]		Species or species habitat may occur within area
Hydrophis platura as Pelamis platurus Yellow-bellied Sea Snake [93746]		Species or species habitat may occur within area
Hydrophis stokesii as Astrotia stokesii Stokes' Sea Snake [93510]		Species or species habitat may occur within area
Hydrophis vorisi Estuarine Sea Snake [25927]		Species or species habitat may occur within area
Hydrophis zweifeli as Enhydrina schistosa Australian Beaked Sea Snake [93514]		Species or species habitat may occur within area
Laticauda colubrina Yellow-lipped Sea Krait [1092]		Species or species habitat may occur within area
Laticauda laticaudata a sea krait [1093]		Species or species habitat may occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Breeding likely to occur within area

Scientific Name	Threatened Category	Presence Text
Microcephalophis gracilis as Hydrophis gracilis		
Graceful Small-headed Sea Snake, Slender Sea Snake [87375]		Species or species habitat may occur within area
Natator depressus		
Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area
Parahydrophis mertoni		
Arafura Smooth Sea Snake, Northern Mangrove Sea Snake [1090]		Species or species habitat may occur within area

Whales and Other Cetaceans [Resource Information]

Current Scientific Name	Status	Type of Presence
Mammal		
Balaenoptera borealis		
Sei Whale [34]	Vulnerable	Species or species habitat may occur within area
Balaenoptera edeni		
Bryde's Whale [35]		Species or species habitat may occur within area
Balaenoptera musculus		
Blue Whale [36]	Endangered	Species or species habitat may occur within area
Balaenoptera omurai		
Omura's Whale [87136]		Species or species habitat likely to occur within area
Balaenoptera physalus		
Fin Whale [37]	Vulnerable	Species or species habitat may occur within area
Delphinus delphis		
Common Dolphin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area
Grampus griseus		
Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area
Orcaella heinsohni		
Australian Snubfin Dolphin [81322]	Vulnerable	Species or species habitat likely to occur within area

Current Scientific Name	Status	Type of Presence
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Pseudorca crassidens False Killer Whale [48]		Species or species habitat likely to occur within area
Sousa sahulensis Australian Humpback Dolphin [87942]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Stenella attenuata Spotted Dolphin, Pantropical Spotted Dolphin [51]		Species or species habitat may occur within area
Tursiops aduncus Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat likely to occur within area
Tursiops truncatus s. str. Bottlenose Dolphin [68417]		Species or species habitat may occur within area

Australian Marine Parks	[Resource Information]
Park Name	Zone & IUCN Categories
Wessel	Habitat Protection Zone (IUCN IV)
West Cape York	Habitat Protection Zone (IUCN IV)
West Cape York	National Park Zone (IUCN II)
West Cape York	National Park Zone (IUCN II)
West Cape York	Special Purpose Zone (IUCN VI)

Habitat Critical to the Survival of Marine Turtles		[Resource Information]
Scientific Name	Behaviour	Presence
All year (Jun - Aug)		
Natator depressus Flatback Turtle [59257]	Nesting	Known to occur

Scientific Name	Behaviour	Presence
Dec - Jan		
Dermochelys coriacea Leatherback Turtle [1768]	Nesting	Known to occur
May - Jul		
Lepidochelys olivacea Olive Ridley Turtle [1767]	Nesting	Known to occur
Oct - Feb		
Eretmochelys imbricata Hawksbill Turtle [1766]	Nesting	Known to occur
Oct - Mar		
Chelonia mydas Green Turtle [1765]	Nesting	Known to occur

Extra Information

State and Territory Reserves [Resource Information]

Protected Area Name	Reserve Type	State
Pine River Bay	Fish Habitat Area (A)	QLD
Pine River Bay	Fish Habitat Area (B)	QLD

EPBC Act Referrals [Resource Information]

Title of referral	Reference	Referral Outcome	Assessment Status
Arnhem Space Centre Operations (Down Range Recovery)	2023/09657		Completed
Aurukun Bauxite Project	2020/8624		Assessment
Controlled action			
Bauxite Hill Mining and Barging Project	2015/7538	Controlled Action	Post-Approval
Bauxite Hills Mine and Port Project	2012/6246	Controlled Action	Completed
Hey Point bauxite mining project, approx 10kms south Weipa, Qld	2014/7382	Controlled Action	Post-Approval
Pisolite Hills bauxite mine and associated infrast	2008/4046	Controlled Action	Completed
PNG-Qld Gas Pipeline - Gove Lateral	2006/2615	Controlled Action	Completed

Title of referral	Reference	Referral Outcome	Assessment Status
Controlled action			
Skardon River Bauxite Mining Project, Weipa, QLD	2014/7305	Controlled Action	Post-Approval
South of the Embley Bauxite Mine Extension, including Construction of Port and Infrastructure	2008/4435	Controlled Action	Completed
South of the Embley Bauxite Mining Project	2010/5642	Controlled Action	Post-Approval
Urquhart Bauxite Project, North Qld	2016/7706	Controlled Action	Post-Approval
Urquhart Point mineral sands project	2010/5707	Controlled Action	Post-Approval
Not controlled action			
Dredging of Weipa South Channel	2003/1311	Not Controlled Action	Completed
Extension of Lorim Point Wharf	2004/1749	Not Controlled Action	Completed
Not controlled action (particular manner)			
2D Seismic Survey, Permit Area Q23P	2009/4925	Not Controlled Action (Particular Manner)	Post-Approval
Kingtree & Ironstone-1 Exploration Wells	2011/5935	Not Controlled Action (Particular Manner)	Post-Approval
Two dimensional (2d) seismic survey in Gulf of Carpentaria	2013/6991	Not Controlled Action (Particular Manner)	Post-Approval
Referral decision			
Capital Dredging Weipa South Channel	2003/1302	Referral Decision	Completed

Key Ecological Features [Resource Information]

Key Ecological Features are the parts of the marine ecosystem that are considered to be important for the biodiversity or ecosystem functioning and integrity of the Commonwealth Marine Area.

Name	Region
Gulf of Carpentaria basin	North
Gulf of Carpentaria coastal zone	North

Biologically Important Areas [Resource Information]

Scientific Name	Behaviour	Presence
Dolphins		
Sousa sahulensis Australian Humpback Dolphin [87942]	Foraging	Likely to occur
Tursiops aduncus Indo-Pacific/Spotted Bottlenose Dolphin [68418]	Reproduction	Known to occur
Marine Turtles		
Chelonia mydas Green Turtle [1765]	Foraging	Known to occur
Chelonia mydas Green Turtle [1765]	Reproduction	Likely to occur
Eretmochelys imbricata Hawksbill Turtle [1766]	Reproduction	Known to occur
Lepidochelys olivacea Olive Ridley Turtle [1767]	Reproduction	Likely to occur
Natator depressus Flatback Turtle [59257]	Reproduction	Known to occur
Seabirds		
Anous stolidus Common Noddy [825]	Reproduction	Known to occur
Fregata ariel Lesser Frigatebird [1012]	Foraging	Likely to occur
Onychoprion anaethetus Bridled Tern [82845]	Reproduction	Known to occur
Sterna dougallii Roseate Tern [817]	Reproduction	Known to occur

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data is available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance on the contents of this report.

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions when time permits.

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded breeding sites; and
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management, Northern Territory
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
Forestry Corporation, NSW
-Geoscience Australia
-CSIRO
-Australian Tropical Herbarium, Cairns
-eBird Australia
-Australian Government – Australian Antarctic Data Centre
-Museum and Art Gallery of the Northern Territory
-Australian Government National Environmental Science Program
-Australian Institute of Marine Science
-Reef Life Survey Australia
-American Museum of Natural History
-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
-Tasmanian Museum and Art Gallery, Hobart, Tasmania
-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact us page.

© Commonwealth of Australia
Department of Climate Change, Energy, the Environment and Water
GPO Box 3090
Canberra ACT 2601 Australia
+61 2 6274 1111

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 26-Jun-2026

[Summary](#)
[Details](#)
- [Matters of NES](#)
- [Other Matters Protected by the EPBC Act](#)
- [Extra Information](#)

[Caveat](#)
[Acknowledgements](#)

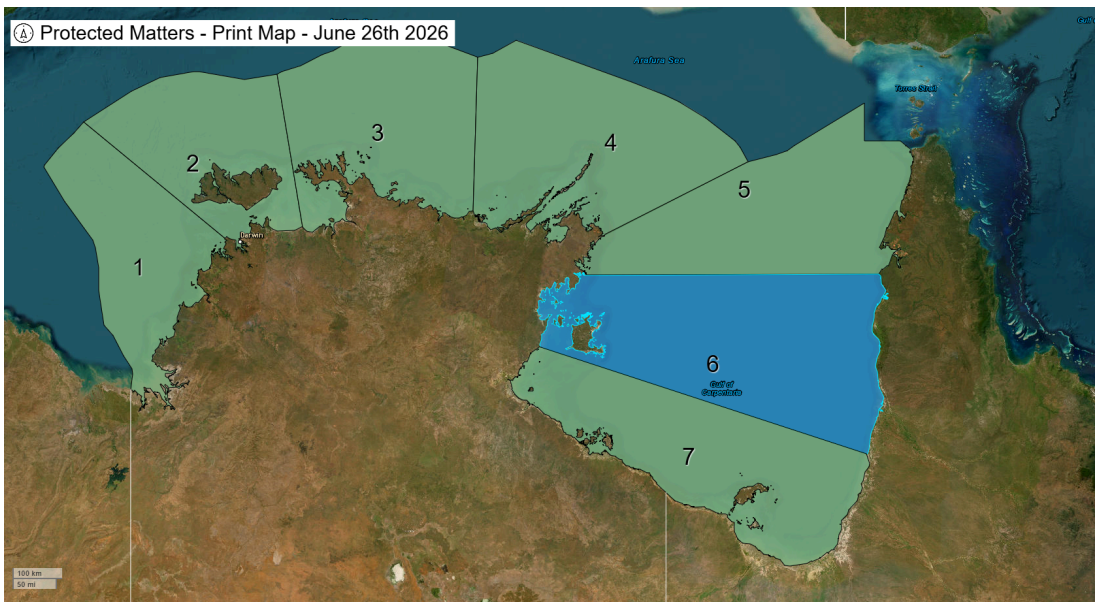


Figure 1: North Marine Region - Part 6

Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	2
Listed Threatened Ecological Communities:	None
Listed Threatened Species:	61
Listed Migratory Species:	72

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at https://www.dcceew.gov.au/parks-heritage/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	4
Commonwealth Heritage Places:	None
Listed Marine Species:	119
Whales and Other Cetaceans:	14
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	2
Habitat Critical to the Survival of Marine Turtles:	4

Extra Information

This part of the report provides information that may also be relevant to the area you have

State and Territory Reserves:	2
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	13
Key Ecological Features (Marine):	3
Biologically Important Areas:	10
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

Commonwealth Marine Area [Resource Information]

Approval is required for a proposed activity that is located within the Commonwealth Marine Area which has, will have, or is likely to have a significant impact on the environment. Approval may be required for a proposed action taken outside a Commonwealth Marine Area but which has, may have or is likely to have a significant impact on the environment in the Commonwealth Marine Area.

Feature Name
Commonwealth Marine Areas (EPBC Act)
Commonwealth Marine Areas (EPBC Act)

Listed Threatened Species [Resource Information]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.
Number is the current name ID.

Scientific Name	Threatened Category	Presence Text
BIRD		
Arenaria interpres Ruddy Turnstone [872]	Vulnerable	Roosting likely to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat likely to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area
Calidris tenuirostris Great Knot [862]	Vulnerable	Roosting likely to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting likely to occur within area
Chloebia gouldiae listed as Erythrura gouldiae Gouldian Finch [90091]	Endangered	Species or species habitat may occur within area
Erythrotriorchis radiatus Red Goshawk [942]	Endangered	Species or species habitat likely to occur within area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat may occur within area
Falcunculus frontatus whitei Crested Shrike-tit (northern), Northern Shrike-tit [26013]	Vulnerable	Species or species habitat likely to occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat may occur within area
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat likely to occur within area
Limosa lapponica baueri Nunivak Bar-tailed Godwit, Western Alaskan Bar-tailed Godwit [86380]	Endangered	Species or species habitat may occur within area
Limosa limosa Black-tailed Godwit [845]	Endangered	Roosting likely to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Pluvialis squatarola Grey Plover [865]	Vulnerable	Roosting likely to occur within area
Probosciger aterrimus macgillivrayi Palm Cockatoo (Australian) [67033]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area

Scientific Name	Threatened Category	Presence Text
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
Sternula albifrons Little Tern [82849]	Vulnerable	Breeding likely to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area
Tyto novaehollandiae kimberli Masked Owl (northern) [26048]	Vulnerable	Species or species habitat likely to occur within area
Xenus cinereus Terek Sandpiper [59300]	Vulnerable	Roosting likely to occur within area
MAMMAL		
Antechinus bellus Fawn Antechinus [344]	Vulnerable	Species or species habitat likely to occur within area
Balaenoptera borealis Sei Whale [34]	Vulnerable	Species or species habitat may occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area
Balaenoptera physalus Fin Whale [37]	Vulnerable	Species or species habitat may occur within area
Conilurus penicillatus Brush-tailed Rabbit-rat, Brush-tailed Tree-rat, Pakooma [132]	Vulnerable	Species or species habitat likely to occur within area
Dasyurus hallucatus Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu] [331]	Endangered	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Macroderma gigas Ghost Bat [174]	Vulnerable	Species or species habitat likely to occur within area
Mesembriomys gouldii rattoides Black-footed Tree-rat (north Queensland), Shaggy Rabbit-rat [87620]	Vulnerable	Species or species habitat may occur within area
Notomys aquilo Northern Hopping-mouse, Woorrentinta [123]	Endangered	Species or species habitat likely to occur within area
Orcaella heinsohni Australian Snubfin Dolphin [81322]	Vulnerable	Species or species habitat likely to occur within area
Petrogale concinna canescens Nabarlek (Top End) [87606]	Endangered	Species or species habitat likely to occur within area
Phascogale pirata Northern Brush-tailed Phascogale [82954]	Vulnerable	Species or species habitat may occur within area
Rhinolophus robertsi Large-eared Horseshoe Bat, Greater Large-eared Horseshoe Bat, Lesser Large-eared Horseshoe Bat [87639]	Vulnerable	Species or species habitat may occur within area
Saccolaimus saccolaimus nudicluniatus Bare-rumped Sheath-tailed Bat, Bare-rumped Sheathtail Bat [66889]	Vulnerable	Species or species habitat likely to occur within area
Sousa sahulensis Australian Humpback Dolphin [87942]	Vulnerable	Species or species habitat likely to occur within area
Trichosurus vulpecula arnhemensis Northern Brushtail Possum [83091]	Vulnerable	Species or species habitat likely to occur within area
Xeromys myoides Water Mouse, False Water Rat, Yirrkoo [66]	Vulnerable	Species or species habitat likely to occur within area
PLANT		

Scientific Name	Threatened Category	Presence Text
[Dendrobium bigibbum](#) Cooktown Orchid [10306]	Vulnerable	Species or species habitat likely to occur within area
[Dendrobium johannis](#) Chocolate Tea Tree Orchid [13585]	Vulnerable	Species or species habitat likely to occur within area
[Vappodes phalaenopsis](#) Cooktown Orchid [78894]	Vulnerable	Species or species habitat likely to occur within area
REPTILE		
[Acanthophis hawkei](#) Plains Death Adder [83821]	Vulnerable	Species or species habitat may occur within area
[Caretta caretta](#) Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
[Chelonia mydas](#) Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
[Dermochelys coriacea](#) Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
[Egernia rugosa](#) Yakka Skink [1420]	Vulnerable	Species or species habitat likely to occur within area
[Eretmochelys imbricata](#) Hawksbill Turtle [1766]	Vulnerable	Breeding likely to occur within area
[Lepidochelys olivacea](#) Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Breeding likely to occur within area
[Natator depressus](#) Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area
[Tiliqua scincoides intermedia](#) Northern Blue-tongued Skink [89838]	Critically Endangered	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Varanus mertensi		
Mertens' Water Monitor [1568]	Endangered	Species or species habitat likely to occur within area
Varanus mitchelli		
Mitchell's Water Monitor [1569]	Critically Endangered	Species or species habitat may occur within area
SHARK		
Carcharodon carcharias		
White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat may occur within area
Glyphis glyphis		
Speartooth Shark [82453]	Critically Endangered	Species or species habitat may occur within area
Pristis clavata		
Dwarf Sawfish, Queensland Sawfish [68447]	Vulnerable	Breeding likely to occur within area
Pristis pristis		
Largetooth Sawfish, Freshwater Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Endangered	Species or species habitat likely to occur within area
Pristis zijsron		
Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Breeding likely to occur within area
Rhincodon typus		
Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
Sphyrna lewini		
Scalloped Hammerhead [85267]	Conservation Dependent	Species or species habitat likely to occur within area

Listed Migratory Species		[Resource Information]
Scientific Name	Threatened Category	Presence Text
null		
Balaenoptera omurai		
Omura's Whale [87136]		Species or species habitat likely to occur within area
Migratory Marine Birds		

Scientific Name	Threatened Category	Presence Text
Anous stolidus Common Noddy [825]		Species or species habitat likely to occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat likely to occur within area
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat likely to occur within area
Phaethon lepturus White-tailed Tropicbird [1014]		Species or species habitat may occur within area
Phaethon rubricauda Red-tailed Tropicbird [994]		Species or species habitat likely to occur within area
Sterna dougallii Roseate Tern [817]		Breeding likely to occur within area
Sternula albifrons Little Tern [82849]	Vulnerable	Breeding likely to occur within area
Migratory Marine Species		
Anoxypristis cuspidata Narrow Sawfish, Knifetooth Sawfish [68448]		Species or species habitat likely to occur within area
Balaenoptera borealis Sei Whale [34]	Vulnerable	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area
Balaenoptera physalus Fin Whale [37]	Vulnerable	Species or species habitat may occur within area
Carcharias taurus Grey Nurse Shark [64469]		Species or species habitat may occur within area
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat may occur within area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Dugong dugon Dugong [28]		Species or species habitat likely to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Breeding likely to occur within area
Isurus paucus Longfin Mako [82947]		Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Breeding likely to occur within area
Mobula alfredi as Manta alfredi Reef Manta Ray, Coastal Manta Ray [90033]		Species or species habitat likely to occur within area
Mobula birostris as Manta birostris Giant Manta Ray [90034]		Species or species habitat likely to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area
Orcaella heinsohni Australian Snubfin Dolphin [81322]	Vulnerable	Species or species habitat likely to occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Pristis clavata Dwarf Sawfish, Queensland Sawfish [68447]	Vulnerable	Breeding likely to occur within area
Pristis pristis Largetooth Sawfish, Freshwater Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Endangered	Species or species habitat likely to occur within area
Pristis zijsron Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Breeding likely to occur within area
Rhincodon typus Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
Sousa sahulensis as Sousa chinensis Australian Humpback Dolphin [87942]	Vulnerable	Species or species habitat likely to occur within area
Migratory Terrestrial Species		
Cecropis daurica Red-rumped Swallow [80610]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
[Cuculus optatus](#) Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat may occur within area
[Hirundo rustica](#) Barn Swallow [662]		Species or species habitat may occur within area
[Motacilla cinerea](#) Grey Wagtail [642]		Species or species habitat may occur within area
[Motacilla flava](#) Yellow Wagtail [644]		Species or species habitat may occur within area
Migratory Wetlands Species		
[Acrocephalus orientalis](#) Oriental Reed-Warbler [59570]		Species or species habitat may occur within area
[Actitis hypoleucos](#) Common Sandpiper [59309]		Species or species habitat likely to occur within area
[Arenaria interpres](#) Ruddy Turnstone [872]	Vulnerable	Roosting likely to occur within area
[Calidris acuminata](#) Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area
[Calidris alba](#) Sanderling [875]		Roosting likely to occur within area
[Calidris canutus](#) Red Knot, Knot [855]	Vulnerable	Species or species habitat likely to occur within area
[Calidris falcinellus as Limicola falcinellus](#) Broad-billed Sandpiper [91731]		Roosting likely to occur within area
[Calidris ferruginea](#) Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat likely to occur within area
Calidris ruficollis Red-necked Stint [860]		Roosting likely to occur within area
Calidris tenuirostris Great Knot [862]	Vulnerable	Roosting likely to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting likely to occur within area
Charadrius veredus Oriental Plover, Oriental Dotterel [882]		Species or species habitat may occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat may occur within area
Gallinago megala Swinhoe's Snipe [864]		Roosting likely to occur within area
Gallinago stenura Pin-tailed Snipe [841]		Roosting likely to occur within area
Glareola maldivarum Oriental Pratincole [840]		Roosting may occur within area
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat likely to occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat likely to occur within area
Limosa limosa Black-tailed Godwit [845]	Endangered	Roosting likely to occur within area

Scientific Name	Threatened Category	Presence Text
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Numenius minutus Little Curlew, Little Whimbrel [848]		Roosting likely to occur within area
Numenius phaeopus Whimbrel [849]		Roosting likely to occur within area
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area
Pluvialis fulva Pacific Golden Plover [25545]		Roosting likely to occur within area
Pluvialis squatarola Grey Plover [865]	Vulnerable	Roosting likely to occur within area
Thalasseus bergii Greater Crested Tern [83000]		Breeding likely to occur within area
Tringa brevipes Grey-tailed Tattler [851]		Roosting likely to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area
Tringa stagnatilis Marsh Sandpiper, Little Greenshank [833]		Roosting likely to occur within area
Xenus cinereus Terek Sandpiper [59300]	Vulnerable	Roosting likely to occur within area

Other Matters Protected by the EPBC Act

Commonwealth Lands [Resource Information]

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Commonwealth Land Name	State
Department of Defence	
Aurukun Training Depot [DD_3134]	QLD
Groote Eylandt Training Depot [DD_0833]	NT
JORN Radar Site - Groote Eylandt [DD_3212]	NT
Pormpuraaw Training Depot [DD_3133]	QLD

Listed Marine Species [Resource Information]

Scientific Name	Threatened Category	Presence Text
Bird		
Acrocephalus orientalis Oriental Reed-Warbler [59570]		Species or species habitat may occur within area overfly marine area
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat likely to occur within area
Anous stolidus Common Noddy [825]		Species or species habitat likely to occur within area
Anseranas semipalmata Magpie Goose [978]		Species or species habitat may occur within area overfly marine area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area
Arenaria interpres Ruddy Turnstone [872]	Vulnerable	Roosting likely to occur within area

Scientific Name	Threatened Category	Presence Text
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area
Calidris alba Sanderling [875]		Roosting likely to occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat likely to occur within area overfly marine area
Calidris falcinellus as Limicola falcinellus Broad-billed Sandpiper [91731]		Roosting likely to occur within area overfly marine area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area overfly marine area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat likely to occur within area overfly marine area
Calidris ruficollis Red-necked Stint [860]		Roosting likely to occur within area overfly marine area
Calidris tenuirostris Great Knot [862]	Vulnerable	Roosting likely to occur within area overfly marine area
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Cecropis daurica as Hirundo daurica Red-rumped Swallow [80610]		Species or species habitat may occur within area overfly marine area
Chalcites osculans as Chrysococcyx osculans Black-eared Cuckoo [83425]		Species or species habitat may occur within area overfly marine area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting likely to occur within area
Charadrius ruficapillus Red-capped Plover [881]		Species or species habitat likely to occur within area overfly marine area
Charadrius veredus Oriental Plover, Oriental Dotterel [882]		Species or species habitat may occur within area overfly marine area
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat likely to occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat may occur within area overfly marine area
Gallinago megala Swinhoe's Snipe [864]		Roosting likely to occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Gallinago stenura Pin-tailed Snipe [841]		Roosting likely to occur within area overfly marine area
Glareola maldivarum Oriental Pratincole [840]		Roosting may occur within area overfly marine area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area
Himantopus himantopus Pied Stilt, Black-winged Stilt [870]		Roosting likely to occur within area overfly marine area
Hirundo rustica Barn Swallow [662]		Species or species habitat may occur within area overfly marine area
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat likely to occur within area overfly marine area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat likely to occur within area
Limosa limosa Black-tailed Godwit [845]	Endangered	Roosting likely to occur within area overfly marine area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area overfly marine area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat may occur within area overfly marine area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Numenius minutus Little Curlew, Little Whimbrel [848]		Roosting likely to occur within area overfly marine area
Numenius phaeopus Whimbrel [849]		Roosting likely to occur within area
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area
Phaethon lepturus White-tailed Tropicbird [1014]		Species or species habitat may occur within area
Phaethon rubricauda Red-tailed Tropicbird [994]		Species or species habitat likely to occur within area
Pluvialis fulva Pacific Golden Plover [25545]		Roosting likely to occur within area
Pluvialis squatarola Grey Plover [865]	Vulnerable	Roosting likely to occur within area overfly marine area
Recurvirostra novaehollandiae Red-necked Avocet [871]		Species or species habitat likely to occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat likely to occur within area overfly marine area
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area
Sterna dougallii Roseate Tern [817]		Breeding likely to occur within area
Sternula albifrons as Sterna albifrons Little Tern [82849]	Vulnerable	Breeding likely to occur within area
Stiltia isabella Australian Pratincole [818]		Species or species habitat likely to occur within area overfly marine area
Thalasseus bergii as Sterna bergii Greater Crested Tern [83000]		Breeding likely to occur within area
Tringa brevipes as Heteroscelus brevipes Grey-tailed Tattler [851]		Roosting likely to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area overfly marine area
Tringa stagnatilis Marsh Sandpiper, Little Greenshank [833]		Roosting likely to occur within area overfly marine area
Xenus cinereus Terek Sandpiper [59300]	Vulnerable	Roosting likely to occur within area overfly marine area
Fish		
Acentronura tentaculata Shortpouch Pygmy Pipehorse [66187]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Campichthys tricarinatus Three-keel Pipefish [66192]		Species or species habitat may occur within area
Choeroichthys brachysoma Pacific Short-bodied Pipefish, Short-bodied Pipefish [66194]		Species or species habitat may occur within area
Choeroichthys suillus Pig-snouted Pipefish [66198]		Species or species habitat may occur within area
Corythoichthys amplexus Fijian Banded Pipefish, Brown-banded Pipefish [66199]		Species or species habitat may occur within area
Corythoichthys flavofasciatus Yellow-banded Pipefish [66200]		Species or species habitat may occur within area
Corythoichthys intestinalis Australian Messmate Pipefish, Banded Pipefish [66202]		Species or species habitat may occur within area
Corythoichthys ocellatus Orange-spotted Pipefish, Ocellated Pipefish [66203]		Species or species habitat may occur within area
Corythoichthys schultzi Schultz's Pipefish [66205]		Species or species habitat may occur within area
Cosmocampus maxweberi Maxweber's Pipefish [66209]		Species or species habitat may occur within area
Doryrhamphus dactyliophorus Banded Pipefish, Ringed Pipefish [66210]		Species or species habitat may occur within area
Doryrhamphus excisus Bluestripe Pipefish, Indian Blue-stripe Pipefish, Pacific Blue-stripe Pipefish [66211]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Doryrhamphus janssi Cleaner Pipefish, Janss' Pipefish [66212]		Species or species habitat may occur within area
Festucalex cinctus Girdled Pipefish [66214]		Species or species habitat may occur within area
Halicampus brocki Brock's Pipefish [66219]		Species or species habitat may occur within area
Halicampus dunckeri Red-hair Pipefish, Duncker's Pipefish [66220]		Species or species habitat may occur within area
Halicampus grayi Mud Pipefish, Gray's Pipefish [66221]		Species or species habitat may occur within area
Halicampus spinirostris Spiny-snout Pipefish [66225]		Species or species habitat may occur within area
Haliichthys taeniophora as Haliichthys taeniophorus Ribboned Pipehorse, Ribboned Pipefish, Ribboned Seadragon [94706]		Species or species habitat may occur within area
Hippichthys cyanospilos Blue-speckled Pipefish, Blue-spotted Pipefish [66228]		Species or species habitat may occur within area
Hippichthys penicillus Beady Pipefish, Steep-nosed Pipefish [66231]		Species or species habitat may occur within area
Hippocampus angustus Western Spiny Seahorse, Narrow-bellied Seahorse [66234]		Species or species habitat may occur within area
Hippocampus histrix Spiny Seahorse, Thorny Seahorse [66236]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Hippocampus kuda Spotted Seahorse, Yellow Seahorse [66237]		Species or species habitat may occur within area
Hippocampus planifrons Flat-face Seahorse [66238]		Species or species habitat may occur within area
Hippocampus spinosissimus Hedgehog Seahorse [66239]		Species or species habitat may occur within area
Hippocampus trimaculatus Three-spot Seahorse, Low-crowned Seahorse, Flat-faced Seahorse [66720]		Species or species habitat may occur within area
Micrognathus brevirostris thorntail Pipefish, Thorn-tailed Pipefish [66254]		Species or species habitat may occur within area
Micrognathus micronotopterus Tidepool Pipefish [66255]		Species or species habitat may occur within area
Solegnathus hardwickii Pallid Pipehorse, Hardwick's Pipehorse [66272]		Species or species habitat may occur within area
Solenostomus cyanopterus Robust Ghostpipefish, Blue-finned Ghost Pipefish, [66183]		Species or species habitat may occur within area
Syngnathoides biaculeatus Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279]		Species or species habitat may occur within area
Trachyrhamphus bicoarctatus Bentstick Pipefish, Bend Stick Pipefish, Short-tailed Pipefish [66280]		Species or species habitat may occur within area
Trachyrhamphus longirostris Straightstick Pipefish, Long-nosed Pipefish, Straight Stick Pipefish [66281]		Species or species habitat may occur within area
Mammal		

Scientific Name	Threatened Category	Presence Text
[Dugong dugon](#) Dugong [28]		Species or species habitat likely to occur within area
Reptile		
[Aipysurus duboisii](#) Dubois' Sea Snake, Dubois' Seasnake, Reef Shallows Sea Snake [1116]		Species or species habitat may occur within area
[Aipysurus laevis](#) Olive Sea Snake, Olive-brown Sea Snake [1120]		Species or species habitat may occur within area
[Aipysurus mosaicus as Aipysurus eydouxii](#) Mosaic Sea Snake [87261]		Species or species habitat may occur within area
[Caretta caretta](#) Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
[Chelonia mydas](#) Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
[Crocodylus johnstoni](#) Freshwater Crocodile, Johnston's Crocodile, Johnstone's Crocodile [1773]		Species or species habitat may occur within area
[Crocodylus porosus](#) Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area
[Dermochelys coriacea](#) Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
[Eretmochelys imbricata](#) Hawksbill Turtle [1766]	Vulnerable	Breeding likely to occur within area
[Hydrelaps darwiniensis](#) Port Darwin Sea Snake, Black-ringed Mangrove Sea Snake [1100]		Species or species habitat may occur within area
[Hydrophis atriceps](#) Black-headed Sea Snake, Banded Sea Snake [1101]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Hydrophis caerulescens Dwarf Sea Snake [1103]		Species or species habitat may occur within area
Hydrophis elegans Elegant Sea Snake, Bar-bellied Sea Snake [1104]		Species or species habitat may occur within area
Hydrophis hardwickii as Lapemis hardwickii Spine-bellied Sea Snake [93516]		Species or species habitat may occur within area
Hydrophis inornatus Plain Sea Snake [1107]		Species or species habitat may occur within area
Hydrophis kingii as Disteira kingii Spectacled Sea Snake [93511]		Species or species habitat may occur within area
Hydrophis macdowelli as Hydrophis mcdowelli MacDowell's Sea Snake, Small-headed Sea Snake, [75601]		Species or species habitat may occur within area
Hydrophis major as Disteira major Olive-headed Sea Snake [93512]		Species or species habitat may occur within area
Hydrophis ornatus Spotted Sea Snake, Ornate Reef Sea Snake [1111]		Species or species habitat may occur within area
Hydrophis pacificus Pacific Sea Snake, Large-headed Sea Snake [1112]		Species or species habitat may occur within area
Hydrophis peronii as Acalyptophis peronii Horned Sea Snake [93509]		Species or species habitat may occur within area
Hydrophis platura as Pelamis platurus Yellow-bellied Sea Snake [93746]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Hydrophis stokesii as Astrotia stokesii Stokes' Sea Snake [93510]		Species or species habitat may occur within area
Hydrophis zweifeli as Enhydrina schistosa Australian Beaked Sea Snake [93514]		Species or species habitat may occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Breeding likely to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area
Parahydrophis mertoni Arafura Smooth Sea Snake, Northern Mangrove Sea Snake [1090]		Species or species habitat may occur within area

Whales and Other Cetaceans		[Resource Information]
Current Scientific Name	Status	Type of Presence
Mammal		
Balaenoptera borealis Sei Whale [34]	Vulnerable	Species or species habitat may occur within area
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area
Balaenoptera omurai Omura's Whale [87136]		Species or species habitat likely to occur within area
Balaenoptera physalus Fin Whale [37]	Vulnerable	Species or species habitat may occur within area
Delphinus delphis Common Dolphin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area

Current Scientific Name	Status	Type of Presence
Grampus griseus Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area
Orcaella heinsohni Australian Snubfin Dolphin [81322]	Vulnerable	Species or species habitat likely to occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Pseudorca crassidens False Killer Whale [48]		Species or species habitat likely to occur within area
Sousa sahulensis Australian Humpback Dolphin [87942]	Vulnerable	Species or species habitat likely to occur within area
Stenella attenuata Spotted Dolphin, Pantropical Spotted Dolphin [51]		Species or species habitat may occur within area
Tursiops aduncus Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat likely to occur within area
Tursiops truncatus s. str. Bottlenose Dolphin [68417]		Species or species habitat may occur within area

Australian Marine Parks	[Resource Information]
Park Name	Zone & IUCN Categories
Gulf of Carpentaria	National Park Zone (IUCN II)
Gulf of Carpentaria	Special Purpose Zone (Trawl) (IUCN VI)

Habitat Critical to the Survival of Marine Turtles		[Resource Information]
Scientific Name	Behaviour	Presence
All year (Jun - Aug)		
Natator depressus Flatback Turtle [59257]	Nesting	Known to occur

Scientific Name	Behaviour	Presence
May - Jul		
Lepidochelys olivacea Olive Ridley Turtle [1767]	Nesting	Known to occur
Oct - Feb		
Eretmochelys imbricata Hawksbill Turtle [1766]	Nesting	Known to occur
Oct - Mar		
Chelonia mydas Green Turtle [1765]	Nesting	Known to occur

Extra Information

State and Territory Reserves [Resource Information]

Protected Area Name	Reserve Type	State
Nassau River	Fish Habitat Area (A)	QLD
Rutland Plains	Nature Refuge	QLD

EPBC Act Referrals [Resource Information]

Title of referral	Reference	Referral Outcome	Assessment Status
Arnhem Space Centre Operations (Down Range Recovery)	2023/09657		Completed
Aurukun Bauxite Project	2020/8624		Assessment
Southern Lease Mining Project	2023/09457		Assessment
Winchelsea Island Manganese Mine Project, NT	2021/8877		Assessment
Controlled action			
Eastern Leases Project, Groote Eylandt, Northern Territory	2014/7228	Controlled Action	Post-Approval
South of the Embley Bauxite Mine Extension, including Construction of Port and Infrastructure	2008/4435	Controlled Action	Completed
South of the Embley Bauxite Mining Project	2010/5642	Controlled Action	Post-Approval
Not controlled action			
Eastern Leases 2010 Exploration Drilling Program	2010/5455	Not Controlled Action	Completed

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action			
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed
Pormpuraaw Community Sewerage Facility	2002/690	Not Controlled Action	Completed
Not controlled action (particular manner)			
Acoustic and Resistivity Sub-Bottom Profiling Survey	2011/6116	Not Controlled Action (Particular Manner)	Post-Approval
Eastern Leases 2013 Exploration Drilling Program, Groote Eylandt, NT	2013/6848	Not Controlled Action (Particular Manner)	Post-Approval
Referral decision			
Groote Eylandt Offshore Marine Surveys	2010/5643	Referral Decision	Completed

Key Ecological Features [Resource Information]

Key Ecological Features are the parts of the marine ecosystem that are considered to be important for the biodiversity or ecosystem functioning and integrity of the Commonwealth Marine Area.

Name	Region
Gulf of Carpentaria basin	North
Gulf of Carpentaria coastal zone	North
Submerged coral reefs of the Gulf of Carpentaria	North

Biologically Important Areas [Resource Information]

Scientific Name	Behaviour	Presence
Marine Turtles		
Chelonia mydas Green Turtle [1765]	Foraging	Known to occur
Chelonia mydas Green Turtle [1765]	Reproduction	Likely to occur
Eretmochelys imbricata Hawksbill Turtle [1766]	Reproduction	Known to occur
Lepidochelys olivacea Olive Ridley Turtle [1767]	Reproduction	Likely to occur

Scientific Name	Behaviour	Presence
Natator depressus Flatback Turtle [59257]	Reproduction	Known to occur
Seabirds		
Fregata ariel Lesser Frigatebird [1012]	Foraging	Likely to occur
Fregata ariel Lesser Frigatebird [1012]	Reproduction	Known to occur
Onychoprion anaethetus Bridled Tern [82845]	Reproduction	Known to occur
Sterna dougallii Roseate Tern [817]	Reproduction	Known to occur
Thalasseus bergii Crested Tern [83000]	Reproduction	Known to occur

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data is available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance on the contents of this report.

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions when time permits.

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded breeding sites; and
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management, Northern Territory
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
Forestry Corporation, NSW
-Geoscience Australia
-CSIRO
-Australian Tropical Herbarium, Cairns
-eBird Australia
-Australian Government – Australian Antarctic Data Centre
-Museum and Art Gallery of the Northern Territory
-Australian Government National Environmental Science Program
-Australian Institute of Marine Science
-Reef Life Survey Australia
-American Museum of Natural History
-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
-Tasmanian Museum and Art Gallery, Hobart, Tasmania
-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact us page.

© Commonwealth of Australia
Department of Climate Change, Energy, the Environment and Water
GPO Box 3090
Canberra ACT 2601 Australia
+61 2 6274 1111

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

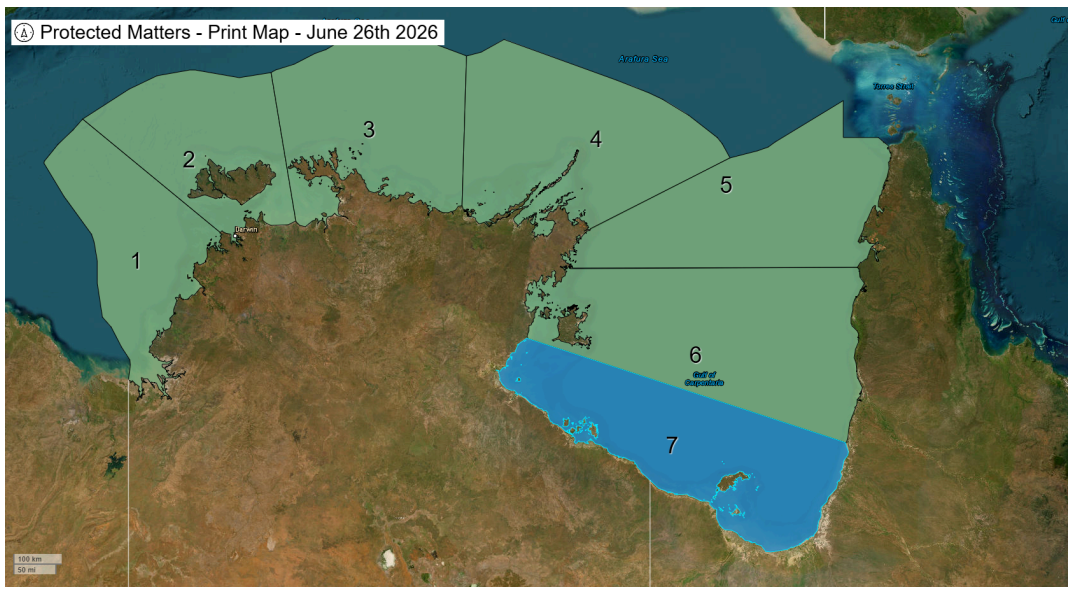


Figure 1: North Marine Region - Part 7

Report created: 26-Jun-2026

Summary
Details
Matters of NES
Other Matters Protected by the EPBC Act
Extra Information
Caveat
Acknowledgements

Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	2
Listed Threatened Ecological Communities:	None
Listed Threatened Species:	53
Listed Migratory Species:	75

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at https://www.dcceew.gov.au/parks-heritage/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	1
Commonwealth Heritage Places:	None
Listed Marine Species:	113
Whales and Other Cetaceans:	14
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	4
Habitat Critical to the Survival of Marine Turtles:	3

Extra Information

This part of the report provides information that may also be relevant to the area you have

State and Territory Reserves:	9
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	9
Key Ecological Features (Marine):	4
Biologically Important Areas:	11
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

Commonwealth Marine Area [Resource Information]

Approval is required for a proposed activity that is located within the Commonwealth Marine Area which has, will have, or is likely to have a significant impact on the environment. Approval may be required for a proposed action taken outside a Commonwealth Marine Area but which has, may have or is likely to have a significant impact on the environment in the Commonwealth Marine Area.

Feature Name
Commonwealth Marine Areas (EPBC Act)
Commonwealth Marine Areas (EPBC Act)

Listed Threatened Species [Resource Information]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.
Number is the current name ID.

Scientific Name	Threatened Category	Presence Text
BIRD		
Arenaria interpres Ruddy Turnstone [872]	Vulnerable	Roosting likely to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat likely to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area
Calidris tenuirostris Great Knot [862]	Vulnerable	Roosting likely to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting likely to occur within area
Chloebia gouldiae listed as Erythrura gouldiae Gouldian Finch [90091]	Endangered	Species or species habitat likely to occur within area
Erythrotriorchis radiatus Red Goshawk [942]	Endangered	Species or species habitat likely to occur within area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area
Falcunculus frontatus whitei Crested Shrike-tit (northern), Northern Shrike-tit [26013]	Vulnerable	Species or species habitat likely to occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat likely to occur within area
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat likely to occur within area
Limosa lapponica baueri Nunivak Bar-tailed Godwit, Western Alaskan Bar-tailed Godwit [86380]	Endangered	Species or species habitat may occur within area
Limosa limosa Black-tailed Godwit [845]	Endangered	Roosting likely to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Pluvialis squatarola Grey Plover [865]	Vulnerable	Roosting likely to occur within area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Sternula albifrons Little Tern [82849]	Vulnerable	Breeding likely to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area
Tyto novaehollandiae kimberli Masked Owl (northern) [26048]	Vulnerable	Species or species habitat likely to occur within area
Xenus cinereus Terek Sandpiper [59300]	Vulnerable	Roosting likely to occur within area
MAMMAL		
Antechinus bellus Fawn Antechinus [344]	Vulnerable	Species or species habitat may occur within area
Balaenoptera borealis Sei Whale [34]	Vulnerable	Species or species habitat may occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area
Balaenoptera physalus Fin Whale [37]	Vulnerable	Species or species habitat may occur within area
Dasyurus hallucatus Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu] [331]	Endangered	Species or species habitat likely to occur within area
Macroderma gigas Ghost Bat [174]	Vulnerable	Species or species habitat likely to occur within area
Orcaella heinsohni Australian Snubfin Dolphin [81322]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Phascogale pirata		
Northern Brush-tailed Phascogale [82954]	Vulnerable	Species or species habitat may occur within area
Saccolaimus saccolaimus nudicluniatus		
Bare-rumped Sheath-tailed Bat, Bare-rumped Sheathtail Bat [66889]	Vulnerable	Species or species habitat likely to occur within area
Sousa sahulensis		
Australian Humpback Dolphin [87942]	Vulnerable	Species or species habitat likely to occur within area
Trichosurus vulpecula arnhemensis		
Northern Brushtail Possum [83091]	Vulnerable	Species or species habitat likely to occur within area
Xeromys myoides		
Water Mouse, False Water Rat, Yirrkoo [66]	Vulnerable	Species or species habitat likely to occur within area
PLANT		
Vappodes phalaenopsis		
Cooktown Orchid [78894]	Vulnerable	Species or species habitat may occur within area
REPTILE		
Acanthophis hawkei		
Plains Death Adder [83821]	Vulnerable	Species or species habitat may occur within area
Caretta caretta		
Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
Chelonia mydas		
Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
Dermochelys coriacea		
Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Elseya lavarackorum		
Gulf Snapping Turtle [67197]	Endangered	Species or species habitat may occur within area
Eretmochelys imbricata		
Hawksbill Turtle [1766]	Vulnerable	Breeding likely to occur within area

Scientific Name	Threatened Category	Presence Text
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Breeding likely to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area
Tiliqua scincoides intermedia Northern Blue-tongued Skink [89838]	Critically Endangered	Species or species habitat likely to occur within area
Varanus mertensi Mertens' Water Monitor [1568]	Endangered	Species or species habitat likely to occur within area
Varanus mitchelli Mitchell's Water Monitor [1569]	Critically Endangered	Species or species habitat may occur within area
SHARK		
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat may occur within area
Glyphis glyphis Speartooth Shark [82453]	Critically Endangered	Species or species habitat likely to occur within area
Pristis clavata Dwarf Sawfish, Queensland Sawfish [68447]	Vulnerable	Breeding likely to occur within area
Pristis pristis Largetooth Sawfish, Freshwater Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Endangered	Species or species habitat likely to occur within area
Pristis zijsron Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Breeding likely to occur within area
Rhincodon typus Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
Sphyrna lewini Scalloped Hammerhead [85267]	Conservation Dependent	Species or species habitat likely to occur within area

Listed Migratory Species		[Resource Information]
Scientific Name	Threatened Category	Presence Text
null		
Balaenoptera omurai Omura's Whale [87136]		Species or species habitat likely to occur within area
Migratory Marine Birds		
Anous stolidus Common Noddy [825]		Species or species habitat may occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat likely to occur within area
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Breeding likely to occur within area
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Foraging, feeding or related behaviour likely to occur within area
Onychoprion anaethetus Bridled Tern [82845]		Breeding likely to occur within area
Phaethon lepturus White-tailed Tropicbird [1014]		Species or species habitat may occur within area
Phaethon rubricauda Red-tailed Tropicbird [994]		Species or species habitat may occur within area
Sterna dougallii Roseate Tern [817]		Breeding likely to occur within area
Sterna sumatrana Black-naped Tern [800]		Breeding likely to occur within area

Scientific Name	Threatened Category	Presence Text
Sternula albifrons Little Tern [82849]	Vulnerable	Breeding likely to occur within area
Sula leucogaster Brown Booby [1022]		Breeding likely to occur within area
Migratory Marine Species		
Anoxypristis cuspidata Narrow Sawfish, Knifetooth Sawfish [68448]		Species or species habitat likely to occur within area
Balaenoptera borealis Sei Whale [34]	Vulnerable	Species or species habitat may occur within area
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area
Balaenoptera physalus Fin Whale [37]	Vulnerable	Species or species habitat may occur within area
Carcharias taurus Grey Nurse Shark [64469]		Species or species habitat may occur within area
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat may occur within area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Dugong dugon Dugong [28]		Species or species habitat likely to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Breeding likely to occur within area
Isurus paucus Longfin Mako [82947]		Species or species habitat likely to occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Breeding likely to occur within area
Mobula alfredi as Manta alfredi Reef Manta Ray, Coastal Manta Ray [90033]		Species or species habitat likely to occur within area
Mobula birostris as Manta birostris Giant Manta Ray [90034]		Species or species habitat likely to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area
Orcaella heinsohni Australian Snubfin Dolphin [81322]	Vulnerable	Species or species habitat likely to occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Pristis clavata Dwarf Sawfish, Queensland Sawfish [68447]	Vulnerable	Breeding likely to occur within area
Pristis pristis Largetooth Sawfish, Freshwater Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Endangered	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Pristis zijsron		
Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Breeding likely to occur within area
Rhincodon typus		
Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
Sousa sahulensis as Sousa chinensis		
Australian Humpback Dolphin [87942]	Vulnerable	Species or species habitat likely to occur within area
Migratory Terrestrial Species		
Cecropis daurica		
Red-rumped Swallow [80610]		Species or species habitat likely to occur within area
Cuculus optatus		
Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat may occur within area
Hirundo rustica		
Barn Swallow [662]		Species or species habitat likely to occur within area
Motacilla cinerea		
Grey Wagtail [642]		Species or species habitat may occur within area
Motacilla flava		
Yellow Wagtail [644]		Species or species habitat likely to occur within area
Migratory Wetlands Species		
Acrocephalus orientalis		
Oriental Reed-Warbler [59570]		Species or species habitat may occur within area
Actitis hypoleucos		
Common Sandpiper [59309]		Species or species habitat likely to occur within area
Arenaria interpres		
Ruddy Turnstone [872]	Vulnerable	Roosting likely to occur within area

Scientific Name	Threatened Category	Presence Text
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area
Calidris alba Sanderling [875]		Roosting likely to occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat likely to occur within area
Calidris falcinellus as Limicola falcinellus Broad-billed Sandpiper [91731]		Roosting likely to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Calidris ruficollis Red-necked Stint [860]		Roosting likely to occur within area
Calidris tenuirostris Great Knot [862]	Vulnerable	Roosting likely to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting likely to occur within area
Charadrius veredus Oriental Plover, Oriental Dotterel [882]		Roosting likely to occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat likely to occur within area
Gallinago megala Swinhoe's Snipe [864]		Roosting likely to occur within area

Scientific Name	Threatened Category	Presence Text
Gallinago stenura Pin-tailed Snipe [841]		Roosting likely to occur within area
Glareola maldivarum Oriental Pratincole [840]		Roosting may occur within area
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat likely to occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat likely to occur within area
Limosa limosa Black-tailed Godwit [845]	Endangered	Roosting likely to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Numenius minutus Little Curlew, Little Whimbrel [848]		Roosting likely to occur within area
Numenius phaeopus Whimbrel [849]		Roosting likely to occur within area
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area
Pluvialis fulva Pacific Golden Plover [25545]		Roosting likely to occur within area
Pluvialis squatarola Grey Plover [865]	Vulnerable	Roosting likely to occur within area
Thalasseus bergii Greater Crested Tern [83000]		Breeding likely to occur within area
Tringa brevipes Grey-tailed Tattler [851]		Roosting likely to occur within area

Scientific Name	Threatened Category	Presence Text
Tringa nebularia		
Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area
Tringa stagnatilis		
Marsh Sandpiper, Little Greenshank [833]		Roosting likely to occur within area
Xenus cinereus		
Terek Sandpiper [59300]	Vulnerable	Roosting likely to occur within area

Other Matters Protected by the EPBC Act

Commonwealth Lands	[Resource Information]

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Commonwealth Land Name	State
Department of Defence	
Mornington Island Training Depot [DD_3143]	QLD

Listed Marine Species		[Resource Information]
Scientific Name	Threatened Category	Presence Text
Bird		
Acrocephalus orientalis		
Oriental Reed-Warbler [59570]		Species or species habitat may occur within area overfly marine area
Actitis hypoleucos		
Common Sandpiper [59309]		Species or species habitat likely to occur within area
Anous stolidus		
Common Noddy [825]		Species or species habitat may occur within area
Anseranas semipalmata		
Magpie Goose [978]		Species or species habitat may occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area
Arenaria interpres Ruddy Turnstone [872]	Vulnerable	Roosting likely to occur within area
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area
Calidris alba Sanderling [875]		Roosting likely to occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat likely to occur within area overfly marine area
Calidris falcinellus as Limicola falcinellus Broad-billed Sandpiper [91731]		Roosting likely to occur within area overfly marine area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area overfly marine area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area
Calidris ruficollis Red-necked Stint [860]		Roosting likely to occur within area overfly marine area
Calidris tenuirostris Great Knot [862]	Vulnerable	Roosting likely to occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat likely to occur within area
Cecropis daurica as Hirundo daurica Red-rumped Swallow [80610]		Species or species habitat likely to occur within area overfly marine area
Chalcites osculans as Chrysococcyx osculans Black-eared Cuckoo [83425]		Species or species habitat likely to occur within area overfly marine area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting likely to occur within area
Charadrius ruficapillus Red-capped Plover [881]		Roosting likely to occur within area overfly marine area
Charadrius veredus Oriental Plover, Oriental Dotterel [882]		Roosting likely to occur within area overfly marine area
Chroicocephalus novaehollandiae as Larus novaehollandiae Silver Gull [82326]		Breeding likely to occur within area
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Breeding likely to occur within area
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Foraging, feeding or related behaviour likely to occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat likely to occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Gallinago megala Swinhoe's Snipe [864]		Roosting likely to occur within area overfly marine area
Gallinago stenura Pin-tailed Snipe [841]		Roosting likely to occur within area overfly marine area
Glareola maldivarum Oriental Pratincole [840]		Roosting may occur within area overfly marine area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area
Himantopus himantopus Pied Stilt, Black-winged Stilt [870]		Roosting likely to occur within area overfly marine area
Hirundo rustica Barn Swallow [662]		Species or species habitat likely to occur within area overfly marine area
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat likely to occur within area overfly marine area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat likely to occur within area
Limosa limosa Black-tailed Godwit [845]	Endangered	Roosting likely to occur within area overfly marine area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area overfly marine area
Motacilla flava Yellow Wagtail [644]		Species or species habitat likely to occur within area overfly marine area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Numenius minutus Little Curlew, Little Whimbrel [848]		Roosting likely to occur within area overfly marine area
Numenius phaeopus Whimbrel [849]		Roosting likely to occur within area
Onychoprion anaethetus as Sterna anaethetus Bridled Tern [82845]		Breeding likely to occur within area
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area
Phaethon lepturus White-tailed Tropicbird [1014]		Species or species habitat may occur within area
Phaethon rubricauda Red-tailed Tropicbird [994]		Species or species habitat may occur within area
Pluvialis fulva Pacific Golden Plover [25545]		Roosting likely to occur within area
Pluvialis squatarola Grey Plover [865]	Vulnerable	Roosting likely to occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Recurvirostra novaehollandiae Red-necked Avocet [871]		Roosting likely to occur within area overfly marine area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat likely to occur within area overfly marine area
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area
Sterna dougallii Roseate Tern [817]		Breeding likely to occur within area
Sterna sumatrana Black-naped Tern [800]		Breeding likely to occur within area
Sternula albifrons as Sterna albifrons Little Tern [82849]	Vulnerable	Breeding likely to occur within area
Stiltia isabella Australian Pratincole [818]		Roosting likely to occur within area overfly marine area
Sula leucogaster Brown Booby [1022]		Breeding likely to occur within area
Thalasseus bengalensis as Sterna bengalensis Lesser Crested Tern [66546]		Breeding likely to occur within area
Thalasseus bergii as Sterna bergii Greater Crested Tern [83000]		Breeding likely to occur within area
Tringa brevipes as Heteroscelus brevipes Grey-tailed Tattler [851]		Roosting likely to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
[Tringa stagnatilis](#) Marsh Sandpiper, Little Greenshank [833]		Roosting likely to occur within area overfly marine area
[Xenus cinereus](#) Terek Sandpiper [59300]	Vulnerable	Roosting likely to occur within area overfly marine area
Fish		
[Campichthys tricarinatus](#) Three-keel Pipefish [66192]		Species or species habitat may occur within area
[Choeroichthys brachysoma](#) Pacific Short-bodied Pipefish, Short-bodied Pipefish [66194]		Species or species habitat may occur within area
[Choeroichthys suillus](#) Pig-snouted Pipefish [66198]		Species or species habitat may occur within area
[Corythoichthys amplexus](#) Fijian Banded Pipefish, Brown-banded Pipefish [66199]		Species or species habitat may occur within area
[Corythoichthys flavofasciatus](#) Yellow-banded Pipefish [66200]		Species or species habitat may occur within area
[Doryrhamphus excisus](#) Bluestripe Pipefish, Indian Blue-stripe Pipefish, Pacific Blue-stripe Pipefish [66211]		Species or species habitat may occur within area
[Doryrhamphus janssi](#) Cleaner Pipefish, Janss' Pipefish [66212]		Species or species habitat may occur within area
[Festucalex cinctus](#) Girdled Pipefish [66214]		Species or species habitat may occur within area
[Halicampus brocki](#) Brock's Pipefish [66219]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Halicampus grayi Mud Pipefish, Gray's Pipefish [66221]		Species or species habitat may occur within area
Halicampus spinirostris Spiny-snout Pipefish [66225]		Species or species habitat may occur within area
Haliichthys taeniophora as Haliichthys taeniophorus Ribboned Pipehorse, Ribboned Pipefish, Ribboned Seadragon [94706]		Species or species habitat may occur within area
Hippichthys cyanospilos Blue-speckled Pipefish, Blue-spotted Pipefish [66228]		Species or species habitat may occur within area
Hippichthys penicillus Beady Pipefish, Steep-nosed Pipefish [66231]		Species or species habitat may occur within area
Hippocampus angustus Western Spiny Seahorse, Narrow-bellied Seahorse [66234]		Species or species habitat may occur within area
Hippocampus histrix Spiny Seahorse, Thorny Seahorse [66236]		Species or species habitat may occur within area
Hippocampus kuda Spotted Seahorse, Yellow Seahorse [66237]		Species or species habitat may occur within area
Hippocampus planifrons Flat-face Seahorse [66238]		Species or species habitat may occur within area
Hippocampus spinosissimus Hedgehog Seahorse [66239]		Species or species habitat may occur within area
Hippocampus trimaculatus Three-spot Seahorse, Low-crowned Seahorse, Flat-faced Seahorse [66720]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
[Micrognathus micronotopterus](#) Tidepool Pipefish [66255]		Species or species habitat may occur within area
[Solegnathus hardwickii](#) Pallid Pipehorse, Hardwick's Pipehorse [66272]		Species or species habitat may occur within area
[Trachyrhamphus bicoarctatus](#) Bentstick Pipefish, Bend Stick Pipefish, Short-tailed Pipefish [66280]		Species or species habitat may occur within area
[Trachyrhamphus longirostris](#) Straightstick Pipefish, Long-nosed Pipefish, Straight Stick Pipefish [66281]		Species or species habitat may occur within area
Mammal		
[Dugong dugon](#) Dugong [28]		Species or species habitat likely to occur within area
Reptile		
[Aipysurus duboisii](#) Dubois' Sea Snake, Dubois' Seasnake, Reef Shallows Sea Snake [1116]		Species or species habitat may occur within area
[Aipysurus laevis](#) Olive Sea Snake, Olive-brown Sea Snake [1120]		Species or species habitat may occur within area
[Aipysurus mosaicus as Aipysurus eydouxii](#) Mosaic Sea Snake [87261]		Species or species habitat may occur within area
[Caretta caretta](#) Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
[Chelonia mydas](#) Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
[Crocodylus johnstoni](#) Freshwater Crocodile, Johnston's Crocodile, Johnstone's Crocodile [1773]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Breeding likely to occur within area
Hydrelaps darwiniensis Port Darwin Sea Snake, Black-ringed Mangrove Sea Snake [1100]		Species or species habitat may occur within area
Hydrophis atriceps Black-headed Sea Snake, Banded Sea Snake [1101]		Species or species habitat may occur within area
Hydrophis caerulescens Dwarf Sea Snake [1103]		Species or species habitat may occur within area
Hydrophis elegans Elegant Sea Snake, Bar-bellied Sea Snake [1104]		Species or species habitat may occur within area
Hydrophis hardwickii as Lapemis hardwickii Spine-bellied Sea Snake [93516]		Species or species habitat may occur within area
Hydrophis inornatus Plain Sea Snake [1107]		Species or species habitat may occur within area
Hydrophis kingii as Disteira kingii Spectacled Sea Snake [93511]		Species or species habitat may occur within area
Hydrophis macdowelli as Hydrophis mcdowelli MacDowell's Sea Snake, Small-headed Sea Snake, [75601]		Species or species habitat may occur within area
Hydrophis major as Disteira major Olive-headed Sea Snake [93512]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Hydrophis ornatus Spotted Sea Snake, Ornate Reef Sea Snake [1111]		Species or species habitat may occur within area
Hydrophis pacificus Pacific Sea Snake, Large-headed Sea Snake [1112]		Species or species habitat may occur within area
Hydrophis peronii as Acalyptophis peronii Horned Sea Snake [93509]		Species or species habitat may occur within area
Hydrophis platura as Pelamis platurus Yellow-bellied Sea Snake [93746]		Species or species habitat may occur within area
Hydrophis stokesii as Astrotia stokesii Stokes' Sea Snake [93510]		Species or species habitat may occur within area
Hydrophis zweifeli as Enhydrina schistosa Australian Beaked Sea Snake [93514]		Species or species habitat may occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Breeding likely to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area
Parahydrophis mertoni Arafura Smooth Sea Snake, Northern Mangrove Sea Snake [1090]		Species or species habitat may occur within area

Whales and Other Cetaceans		[Resource Information]
Current Scientific Name	Status	Type of Presence
Mammal		
Balaenoptera borealis Sei Whale [34]	Vulnerable	Species or species habitat may occur within area
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area

Current Scientific Name	Status	Type of Presence
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area
Balaenoptera omurai Omura's Whale [87136]		Species or species habitat likely to occur within area
Balaenoptera physalus Fin Whale [37]	Vulnerable	Species or species habitat may occur within area
Delphinus delphis Common Dolphin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area
Grampus griseus Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area
Orcaella heinsohni Australian Snubfin Dolphin [81322]	Vulnerable	Species or species habitat likely to occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Pseudorca crassidens False Killer Whale [48]		Species or species habitat likely to occur within area
Sousa sahulensis Australian Humpback Dolphin [87942]	Vulnerable	Species or species habitat likely to occur within area
Stenella attenuata Spotted Dolphin, Pantropical Spotted Dolphin [51]		Species or species habitat may occur within area
Tursiops aduncus Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat likely to occur within area

Current Scientific Name	Status	Type of Presence
Tursiops truncatus s. str. Bottlenose Dolphin [68417]		Species or species habitat may occur within area

Australian Marine Parks [Resource Information]

Park Name	Zone & IUCN Categories
Limmen	Habitat Protection Zone (IUCN IV)
Gulf of Carpentaria	National Park Zone (IUCN II)
Gulf of Carpentaria	Special Purpose Zone (Trawl) (IUCN VI)
Gulf of Carpentaria	Special Purpose Zone (Trawl) (IUCN VI)

Habitat Critical to the Survival of Marine Turtles [Resource Information]

Scientific Name	Behaviour	Presence
All year (Jun - Aug)		
Natator depressus Flatback Turtle [59257]	Nesting	Known to occur
Oct - Feb		
Eretmochelys imbricata Hawksbill Turtle [1766]	Nesting	Known to occur
Oct - Mar		
Chelonia mydas Green Turtle [1765]	Nesting	Known to occur

Extra Information

State and Territory Reserves [Resource Information]

Protected Area Name	Reserve Type	State
Barranyi (North Island)	National Park	NT
Eight Mile Creek	Fish Habitat Area (A)	QLD
Finucane Island	National Park	QLD
Limmen	National Park	NT
Limmen Bight	Marine Park	NT
Morning Inlet - Bynoe River	Fish Habitat Area (A)	QLD

Protected Area Name	Reserve Type	State
Nassau River	Fish Habitat Area (A)	QLD
Rutland Plains	Nature Refuge	QLD
Staaten-Gilbert	Fish Habitat Area (A)	QLD

EPBC Act Referrals [Resource Information]

Title of referral	Reference	Referral Outcome	Assessment Status
Arnhem Space Centre Operations (Down Range Recovery)	2023/09657		Completed
Blue Carbon Ecosystem Restoration - Research Pilot Project Northern Territory Portion 4319 - Kangaroo Island	2023/09565		Completed
Roper Valley Iron Ore Project, NT	2017/7929		Completed
Controlled action			
Roper Bar Iron Ore Mine and Transport Infrastructure	2012/6242	Controlled Action	Post-Approval
Roper Bar Iron Ore Mine and Transport Infrastructure	2011/6079	Controlled Action	Completed
Not controlled action			
Eastern Leases 2010 Exploration Drilling Program	2010/5455	Not Controlled Action	Completed
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed
Sewerage Network and Sewerage Treatment Plant	2009/4775	Not Controlled Action	Completed
Referral decision			
Groote Eylandt Offshore Marine Surveys	2010/5643	Referral Decision	Completed

Key Ecological Features [Resource Information]

Key Ecological Features are the parts of the marine ecosystem that are considered to be important for the biodiversity or ecosystem functioning and integrity of the Commonwealth Marine Area.

Name	Region
Gulf of Carpentaria basin	North
Gulf of Carpentaria coastal zone	North

Name	Region
Plateaux and saddle north-west of the Wellesley Islands	North
Submerged coral reefs of the Gulf of Carpentaria	North

Biologically Important Areas		[Resource Information]
Scientific Name	Behaviour	Presence
Marine Turtles		
Chelonia mydas Green Turtle [1765]	Foraging	Known to occur
Chelonia mydas Green Turtle [1765]	Reproduction	Likely to occur
Eretmochelys imbricata Hawksbill Turtle [1766]	Reproduction	Known to occur
Lepidochelys olivacea Olive Ridley Turtle [1767]	Reproduction	Likely to occur
Natator depressus Flatback Turtle [59257]	Reproduction	Known to occur
Seabirds		
Fregata ariel Lesser Frigatebird [1012]	Reproduction	Known to occur
Onychoprion anaethetus Bridled Tern [82845]	Reproduction	Known to occur
Sterna dougallii Roseate Tern [817]	Reproduction	Known to occur
Sula leucogaster Brown Booby [1022]	Reproduction	Known to occur
Thalasseus bengalensis Lesser Crested Tern [66546]	Reproduction	Known to occur
Thalasseus bergii Crested Tern [83000]	Reproduction	Known to occur

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data is available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance on the contents of this report.

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions when time permits.

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded breeding sites; and
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management, Northern Territory
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
Forestry Corporation, NSW
-Geoscience Australia
-CSIRO
-Australian Tropical Herbarium, Cairns
-eBird Australia
-Australian Government – Australian Antarctic Data Centre
-Museum and Art Gallery of the Northern Territory
-Australian Government National Environmental Science Program
-Australian Institute of Marine Science
-Reef Life Survey Australia
-American Museum of Natural History
-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
-Tasmanian Museum and Art Gallery, Hobart, Tasmania
-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact us page.

© Commonwealth of Australia
Department of Climate Change, Energy, the Environment and Water
GPO Box 3090
Canberra ACT 2601 Australia
+61 2 6274 1111

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 25-Jun-2026

Summary
Details
Matters of NES
Other Matters Protected by the EPBC Act
Extra Information
Caveat
Acknowledgements

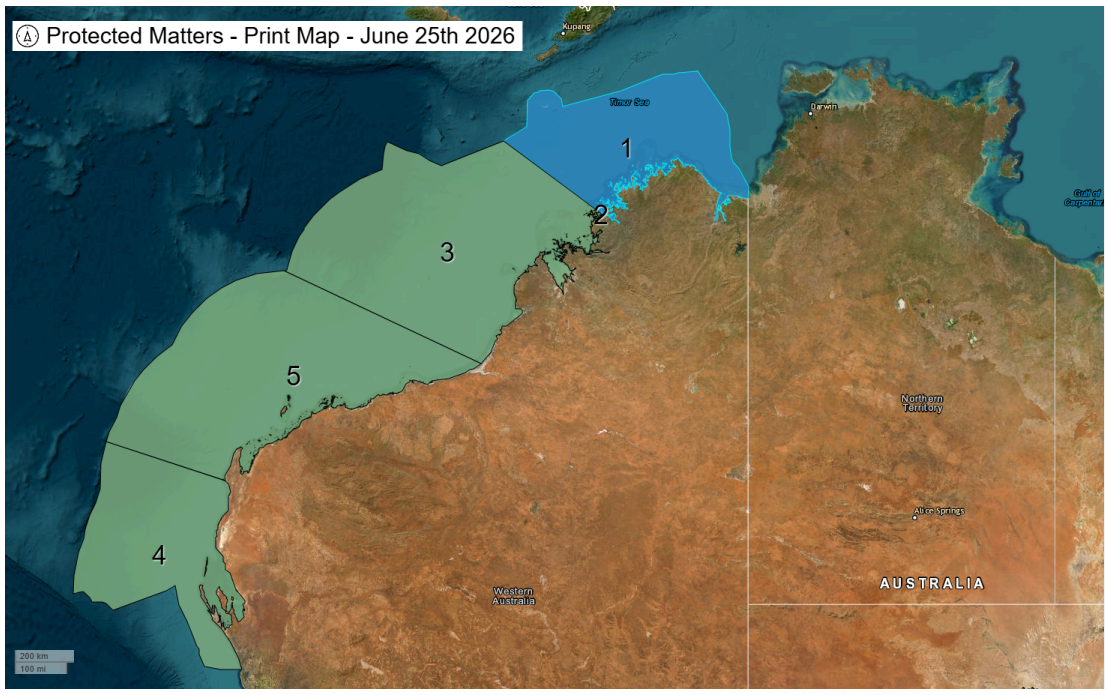


Figure 1: North West Marine Region - North (Part 1)

Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	None
National Heritage Places:	1
Wetlands of International Importance (Ramsar	2
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	8
Listed Threatened Ecological Communities:	None
Listed Threatened Species:	59
Listed Migratory Species:	69

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at https://www.dcceew.gov.au/parks-heritage/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	1
Commonwealth Heritage Places:	1
Listed Marine Species:	115
Whales and Other Cetaceans:	28
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	8
Habitat Critical to the Survival of Marine Turtles:	3

Extra Information

This part of the report provides information that may also be relevant to the area you have

State and Territory Reserves:	15
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	116
Key Ecological Features (Marine):	7
Biologically Important Areas:	33
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

National Heritage Places		[Resource Information]
Name	State	Legal Status
Natural		
The West Kimberley	WA	Listed place

Wetlands of International Importance (Ramsar Wetlands)	[Resource Information]
Ramsar Site Name	Proximity
Ashmore reef national nature reserve	Within Ramsar site
Ord river floodplain	Within Ramsar site

Commonwealth Marine Area	[Resource Information]

Approval is required for a proposed activity that is located within the Commonwealth Marine Area which has, will have, or is likely to have a significant impact on the environment. Approval may be required for a proposed action taken outside a Commonwealth Marine Area but which has, may have or is likely to have a significant impact on the environment in the Commonwealth Marine Area.

Feature Name
Commonwealth Marine Areas (EPBC Act)
Commonwealth Marine Areas (EPBC Act)
Commonwealth Marine Areas (EPBC Act)
Commonwealth Marine Areas (EPBC Act)
Commonwealth Marine Areas (EPBC Act)
Commonwealth Marine Areas (EPBC Act)
Commonwealth Marine Areas (EPBC Act)
Commonwealth Marine Areas (EPBC Act)

Listed Threatened Species		[Resource Information]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.
Number is the current name ID.

Scientific Name	Threatened Category	Presence Text
BIRD		
Anous tenuirostris melanops		
Australian Lesser Noddy [26000]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area

Scientific Name	Threatened Category	Presence Text
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat likely to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area
Chloebia gouldiae listed as Erythrura gouldiae Gouldian Finch [90091]	Endangered	Species or species habitat likely to occur within area
Erythrotriorchis radiatus Red Goshawk [942]	Endangered	Species or species habitat likely to occur within area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area
Falcunculus frontatus whitei Crested Shrike-tit (northern), Northern Shrike-tit [26013]	Vulnerable	Species or species habitat likely to occur within area
Geophaps smithii blaauwi Partridge Pigeon (western) [66501]	Vulnerable	Species or species habitat likely to occur within area
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat likely to occur within area
Limosa lapponica baueri Nunivak Bar-tailed Godwit, Western Alaskan Bar-tailed Godwit [86380]	Endangered	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Limosa lapponica menzbieri Northern Siberian Bar-tailed Godwit, Russkoye Bar-tailed Godwit [86432]	Endangered	Species or species habitat likely to occur within area
Limosa limosa Black-tailed Godwit [845]	Endangered	Species or species habitat likely to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Papasula abbotti Abbott's Booby [59297]	Endangered	Species or species habitat may occur within area
Pezoporus occidentalis Night Parrot [59350]	Critically Endangered	Species or species habitat may occur within area
Phaethon lepturus fulvus Christmas Island White-tailed Tropicbird, Golden Bosunbird [26021]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Phaethon rubricauda westralis Red-tailed Tropicbird (Indian Ocean), Indian Ocean Red-tailed Tropicbird [91824]	Endangered	Breeding likely to occur within area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
Sternula albifrons Little Tern [82849]	Vulnerable	Breeding likely to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area
Tyto novaehollandiae kimberli Masked Owl (northern) [26048]	Vulnerable	Species or species habitat likely to occur within area
MAMMAL		

Scientific Name	Threatened Category	Presence Text
Balaenoptera borealis Sei Whale [34]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Migration route known to occur within area
Balaenoptera physalus Fin Whale [37]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Conilurus penicillatus Brush-tailed Rabbit-rat, Brush-tailed Tree-rat, Pakooma [132]	Vulnerable	Species or species habitat likely to occur within area
Dasyurus hallucatus Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu] [331]	Endangered	Species or species habitat likely to occur within area
Isoodon auratus auratus Golden Bandicoot (mainland) [66665]	Vulnerable	Species or species habitat likely to occur within area
Macroderma gigas Ghost Bat [174]	Vulnerable	Species or species habitat likely to occur within area
Mesembriomys gouldii gouldii Black-footed Tree-rat (Kimberley and mainland Northern Territory), Djintamoonga, Manbul [87618]	Endangered	Species or species habitat may occur within area
Orcaella heinsohni Australian Snubfin Dolphin [81322]	Vulnerable	Breeding likely to occur within area
Petrogale concinna monastria Nabarlek (Kimberley) [87607]	Endangered	Species or species habitat likely to occur within area
Phascogale tapoatafa kimberleyensis Kimberley brush-tailed phascogale, Brush-tailed Phascogale (Kimberley) [88453]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Saccolaimus saccolaimus nudicluniatus		
Bare-rumped Sheath-tailed Bat, Bare-rumped Sheathtail Bat [66889]	Vulnerable	Species or species habitat likely to occur within area
Sousa sahulensis		
Australian Humpback Dolphin [87942]	Vulnerable	Breeding likely to occur within area
Trichosurus vulpecula arnhemensis		
Northern Brushtail Possum [83091]	Vulnerable	Species or species habitat likely to occur within area
Xeromys myoides		
Water Mouse, False Water Rat, Yirrkoo [66]	Vulnerable	Species or species habitat likely to occur within area
REPTILE		
Acanthophis hawkei		
Plains Death Adder [83821]	Vulnerable	Species or species habitat may occur within area
Aipysurus apraefrontalis		
Short-nosed Sea Snake, Short-nosed Seasnake [1115]	Critically Endangered	Species or species habitat likely to occur within area
Aipysurus foliosquama		
Leaf-scaled Sea Snake, Leaf-scaled Seasnake [1118]	Critically Endangered	Species or species habitat may occur within area
Aipysurus fuscus		
Dusky Sea Snake [1119]	Endangered	Species or species habitat likely to occur within area
Caretta caretta		
Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
Chelonia mydas		
Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
Dermochelys coriacea		
Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Eretmochelys imbricata		
Hawksbill Turtle [1766]	Vulnerable	Breeding likely to occur within area

Scientific Name	Threatened Category	Presence Text
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Breeding likely to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area
Tiliqua scincoides intermedia Northern Blue-tongued Skink [89838]	Critically Endangered	Species or species habitat likely to occur within area
Varanus mertensi Mertens' Water Monitor [1568]	Endangered	Species or species habitat likely to occur within area
Varanus mitchelli Mitchell's Water Monitor [1569]	Critically Endangered	Species or species habitat likely to occur within area
SHARK		
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat may occur within area
Glyphis garricki Northern River Shark, New Guinea River Shark [82454]	Endangered	Species or species habitat likely to occur within area
Glyphis glyphis Speartooth Shark [82453]	Critically Endangered	Species or species habitat likely to occur within area
Pristis clavata Dwarf Sawfish, Queensland Sawfish [68447]	Vulnerable	Breeding likely to occur within area
Pristis pristis Largetooth Sawfish, Freshwater Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Endangered	Species or species habitat likely to occur within area
Pristis zijsron Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Breeding likely to occur within area
Rhincodon typus Whale Shark [66680]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area

Scientific Name	Threatened Category	Presence Text
Sphyrna lewini Scalloped Hammerhead [85267]	Conservation Dependent	Species or species habitat likely to occur within area

Listed Migratory Species [Resource Information]

Scientific Name	Threatened Category	Presence Text
null		
Balaenoptera omurai Omura's Whale [87136]		Species or species habitat likely to occur within area
Migratory Marine Birds		
Anous stolidus Common Noddy [825]		Breeding likely to occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardenna pacifica Wedge-tailed Shearwater [84292]		Breeding likely to occur within area
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat likely to occur within area
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Breeding likely to occur within area
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Foraging, feeding or related behaviour likely to occur within area
Hydroprogne caspia Caspian Tern [808]		Breeding likely to occur within area
Onychoprion anaethetus Bridled Tern [82845]		Breeding likely to occur within area
Phaethon lepturus White-tailed Tropicbird [1014]		Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Phaethon rubricauda Red-tailed Tropicbird [994]		Species or species habitat likely to occur within area
Sterna dougallii Roseate Tern [817]		Breeding likely to occur within area
Sternula albifrons Little Tern [82849]	Vulnerable	Breeding likely to occur within area
Sula dactylatra Masked Booby [1021]		Breeding likely to occur within area
Sula leucogaster Brown Booby [1022]		Breeding likely to occur within area
Sula sula Red-footed Booby [1023]		Breeding likely to occur within area
Migratory Marine Species		
Anoxypristis cuspidata Narrow Sawfish, Knifetooth Sawfish [68448]		Species or species habitat likely to occur within area
Balaenoptera borealis Sei Whale [34]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat likely to occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Migration route known to occur within area
Balaenoptera physalus Fin Whale [37]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Carcharhinus longimanus Oceanic Whitetip Shark [84108]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Carcharias taurus Grey Nurse Shark [64469]		Species or species habitat may occur within area
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat may occur within area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Dugong dugon Dugong [28]		Breeding likely to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Breeding likely to occur within area
Isurus oxyrinchus Shortfin Mako, Mako Shark [79073]		Species or species habitat likely to occur within area
Isurus paucus Longfin Mako [82947]		Species or species habitat likely to occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Breeding likely to occur within area
Megaptera novaeangliae Humpback Whale [38]		Breeding known to occur within area
Mobula alfredi as Manta alfredi Reef Manta Ray, Coastal Manta Ray [90033]		Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Mobula birostris as Manta birostris Giant Manta Ray [90034]		Species or species habitat likely to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area
Orcaella heinsohni Australian Snubfin Dolphin [81322]	Vulnerable	Breeding likely to occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Physeter macrocephalus Sperm Whale [59]		Species or species habitat may occur within area
Pristis clavata Dwarf Sawfish, Queensland Sawfish [68447]	Vulnerable	Breeding likely to occur within area
Pristis pristis Largetooth Sawfish, Freshwater Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Endangered	Species or species habitat likely to occur within area
Pristis zijsron Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Breeding likely to occur within area
Rhincodon typus Whale Shark [66680]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Sousa sahulensis as Sousa chinensis Australian Humpback Dolphin [87942]	Vulnerable	Breeding likely to occur within area
Tursiops aduncus (Arafura/Timor Sea populations) Spotted Bottlenose Dolphin (Arafura/Timor Sea populations) [78900]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
Cecropis daurica Red-rumped Swallow [80610]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
[Cuculus optatus](#) Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat likely to occur within area
[Hirundo rustica](#) Barn Swallow [662]		Species or species habitat likely to occur within area
[Motacilla cinerea](#) Grey Wagtail [642]		Species or species habitat likely to occur within area
[Motacilla flava](#) Yellow Wagtail [644]		Species or species habitat likely to occur within area
Migratory Wetlands Species		
[Acrocephalus orientalis](#) Oriental Reed-Warbler [59570]		Species or species habitat likely to occur within area
[Actitis hypoleucos](#) Common Sandpiper [59309]		Species or species habitat likely to occur within area
[Calidris acuminata](#) Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area
[Calidris canutus](#) Red Knot, Knot [855]	Vulnerable	Species or species habitat likely to occur within area
[Calidris ferruginea](#) Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area
[Calidris melanotos](#) Pectoral Sandpiper [858]		Species or species habitat may occur within area
[Calidris ruficollis](#) Red-necked Stint [860]		Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area
Charadrius veredus Oriental Plover, Oriental Dotterel [882]		Species or species habitat may occur within area
Glareola maldivarum Oriental Pratincole [840]		Species or species habitat may occur within area
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat likely to occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat likely to occur within area
Limosa limosa Black-tailed Godwit [845]	Endangered	Species or species habitat likely to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area
Thalasseus bergii Greater Crested Tern [83000]		Breeding likely to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area
Tringa stagnatilis Marsh Sandpiper, Little Greenshank [833]		Species or species habitat likely to occur within area

Other Matters Protected by the EPBC Act

Commonwealth Lands [Resource Information]

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Commonwealth Land Name	State
Department of Climate Change, Energy, the Environment and Water	
Ashmore Reef National Nature Reserve [CHL_105218]	EXT

Commonwealth Heritage Places [Resource Information]

Name	State	Status
Natural		
Ashmore Reef National Nature Reserve	EXT	Listed place

Listed Marine Species [Resource Information]

Scientific Name	Threatened Category	Presence Text
Bird		
Acrocephalus orientalis		
Oriental Reed-Warbler [59570]		Species or species habitat likely to occur within area overfly marine area
Actitis hypoleucos		
Common Sandpiper [59309]		Species or species habitat likely to occur within area
Anous minutus		
Black Noddy [824]		Breeding likely to occur within area
Anous stolidus		
Common Noddy [825]		Breeding likely to occur within area
Anous tenuirostris melanops		
Australian Lesser Noddy [26000]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Anseranas semipalmata		
Magpie Goose [978]		Species or species habitat may occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area
Ardenna pacifica as Puffinus pacificus Wedge-tailed Shearwater [84292]		Breeding likely to occur within area
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat likely to occur within area overfly marine area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area overfly marine area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area
Calidris ruficollis Red-necked Stint [860]		Species or species habitat likely to occur within area overfly marine area
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat likely to occur within area
Cecropis daurica as Hirundo daurica Red-rumped Swallow [80610]		Species or species habitat may occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Chalcites osculans as Chrysococcyx osculans		
Black-eared Cuckoo [83425]		Species or species habitat likely to occur within area overfly marine area
Charadrius leschenaultii		
Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area
Charadrius ruficapillus		
Red-capped Plover [881]		Species or species habitat likely to occur within area overfly marine area
Charadrius veredus		
Oriental Plover, Oriental Dotterel [882]		Species or species habitat may occur within area overfly marine area
Chroicocephalus novaehollandiae as Larus novaehollandiae		
Silver Gull [82326]		Breeding likely to occur within area
Fregata ariel		
Lesser Frigatebird, Least Frigatebird [1012]		Breeding likely to occur within area
Fregata minor		
Great Frigatebird, Greater Frigatebird [1013]		Foraging, feeding or related behaviour likely to occur within area
Glareola maldivarum		
Oriental Pratincole [840]		Species or species habitat may occur within area overfly marine area
Haliaeetus leucogaster		
White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area
Himantopus himantopus		
Pied Stilt, Black-winged Stilt [870]		Species or species habitat likely to occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Hirundo rustica Barn Swallow [662]		Species or species habitat likely to occur within area overfly marine area
Hydroprogne caspia as Sterna caspia Caspian Tern [808]		Breeding likely to occur within area
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat likely to occur within area overfly marine area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat likely to occur within area
Limosa limosa Black-tailed Godwit [845]	Endangered	Species or species habitat likely to occur within area overfly marine area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area
Motacilla cinerea Grey Wagtail [642]		Species or species habitat likely to occur within area overfly marine area
Motacilla flava Yellow Wagtail [644]		Species or species habitat likely to occur within area overfly marine area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Onychoprion anaethetus as Sterna anaethetus Bridled Tern [82845]		Breeding likely to occur within area

Scientific Name	Threatened Category	Presence Text
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area
Papasula abbotti Abbott's Booby [59297]	Endangered	Species or species habitat may occur within area
Phaethon lepturus White-tailed Tropicbird [1014]		Species or species habitat likely to occur within area
Phaethon lepturus fulvus Christmas Island White-tailed Tropicbird, Golden Bosunbird [26021]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Phaethon rubricauda Red-tailed Tropicbird [994]		Species or species habitat likely to occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat likely to occur within area overfly marine area
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area
Sterna dougallii Roseate Tern [817]		Breeding likely to occur within area
Sternula albifrons as Sterna albifrons Little Tern [82849]	Vulnerable	Breeding likely to occur within area
Stiltia isabella Australian Pratincole [818]		Species or species habitat likely to occur within area overfly marine area
Sula dactylatra Masked Booby [1021]		Breeding likely to occur within area

Scientific Name	Threatened Category	Presence Text
Sula leucogaster Brown Booby [1022]		Breeding likely to occur within area
Sula sula Red-footed Booby [1023]		Breeding likely to occur within area
Thalasseus bengalensis as Sterna bengalensis Lesser Crested Tern [66546]		Breeding likely to occur within area
Thalasseus bergii as Sterna bergii Greater Crested Tern [83000]		Breeding likely to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area overfly marine area
Tringa stagnatilis Marsh Sandpiper, Little Greenshank [833]		Species or species habitat likely to occur within area overfly marine area
Fish		
Bhanotia fasciolata Corrugated Pipefish, Barbed Pipefish [66188]		Species or species habitat may occur within area
Campichthys tricarinatus Three-keel Pipefish [66192]		Species or species habitat may occur within area
Choeroichthys brachysoma Pacific Short-bodied Pipefish, Short-bodied Pipefish [66194]		Species or species habitat may occur within area
Choeroichthys suillus Pig-snouted Pipefish [66198]		Species or species habitat may occur within area
Corythoichthys amplexus Fijian Banded Pipefish, Brown-banded Pipefish [66199]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Corythoichthys flavofasciatus Yellow-banded Pipefish [66200]		Species or species habitat may occur within area
Corythoichthys intestinalis Australian Messmate Pipefish, Banded Pipefish [66202]		Species or species habitat may occur within area
Corythoichthys schultzi Schultz's Pipefish [66205]		Species or species habitat may occur within area
Cosmocampus banneri Roughridge Pipefish [66206]		Species or species habitat may occur within area
Doryrhamphus dactyliophorus Banded Pipefish, Ringed Pipefish [66210]		Species or species habitat may occur within area
Doryrhamphus excisus Bluestripe Pipefish, Indian Blue-stripe Pipefish, Pacific Blue-stripe Pipefish [66211]		Species or species habitat may occur within area
Doryrhamphus janssi Cleaner Pipefish, Janss' Pipefish [66212]		Species or species habitat may occur within area
Filicampus tigris Tiger Pipefish [66217]		Species or species habitat may occur within area
Halicampus brocki Brock's Pipefish [66219]		Species or species habitat may occur within area
Halicampus dunckeri Red-hair Pipefish, Duncker's Pipefish [66220]		Species or species habitat may occur within area
Halicampus grayi Mud Pipefish, Gray's Pipefish [66221]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Halicampus spinirostris Spiny-snout Pipefish [66225]		Species or species habitat may occur within area
Haliichthys taeniophora as Haliichthys taeniophorus Ribboned Pipehorse, Ribboned Pipefish, Ribboned Seadragon [94706]		Species or species habitat may occur within area
Hippichthys penicillus Beady Pipefish, Steep-nosed Pipefish [66231]		Species or species habitat may occur within area
Hippocampus angustus Western Spiny Seahorse, Narrow-bellied Seahorse [66234]		Species or species habitat may occur within area
Hippocampus histrix Spiny Seahorse, Thorny Seahorse [66236]		Species or species habitat may occur within area
Hippocampus kuda Spotted Seahorse, Yellow Seahorse [66237]		Species or species habitat may occur within area
Hippocampus planifrons Flat-face Seahorse [66238]		Species or species habitat may occur within area
Hippocampus spinosissimus Hedgehog Seahorse [66239]		Species or species habitat may occur within area
Micrognathus micronotopterus Tidepool Pipefish [66255]		Species or species habitat may occur within area
Solegnathus hardwickii Pallid Pipehorse, Hardwick's Pipehorse [66272]		Species or species habitat may occur within area
Solegnathus lettiensis Gunther's Pipehorse, Indonesian Pipefish [66273]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Solenostomus cyanopterus Robust Ghostpipefish, Blue-finned Ghost Pipefish, [66183]		Species or species habitat may occur within area
Syngnathoides biaculeatus Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279]		Species or species habitat may occur within area
Trachyrhamphus bicoarctatus Bentstick Pipefish, Bend Stick Pipefish, Short-tailed Pipefish [66280]		Species or species habitat may occur within area
Trachyrhamphus longirostris Straightstick Pipefish, Long-nosed Pipefish, Straight Stick Pipefish [66281]		Species or species habitat may occur within area
Mammal		
Dugong dugon Dugong [28]		Breeding likely to occur within area
Reptile		
Aipysurus apraefrontalis Short-nosed Sea Snake, Short-nosed Seasnake [1115]	Critically Endangered	Species or species habitat likely to occur within area
Aipysurus duboisii Dubois' Sea Snake, Dubois' Seasnake, Reef Shallows Sea Snake [1116]		Species or species habitat may occur within area
Aipysurus foliosquama Leaf-scaled Sea Snake, Leaf-scaled Seasnake [1118]	Critically Endangered	Species or species habitat may occur within area
Aipysurus fuscus Dusky Sea Snake [1119]	Endangered	Species or species habitat likely to occur within area
Aipysurus laevis Olive Sea Snake, Olive-brown Sea Snake [1120]		Species or species habitat may occur within area
Aipysurus mosaicus as Aipysurus eydouxii Mosaic Sea Snake [87261]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Caretta caretta Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
Crocodylus johnstoni Freshwater Crocodile, Johnston's Crocodile, Johnstone's Crocodile [1773]		Species or species habitat may occur within area
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Emydocephalus annulatus Eastern Turtle-headed Sea Snake [1125]		Species or species habitat may occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Breeding likely to occur within area
Hydrelaps darwiniensis Port Darwin Sea Snake, Black-ringed Mangrove Sea Snake [1100]		Species or species habitat may occur within area
Hydrophis atriceps Black-headed Sea Snake, Banded Sea Snake [1101]		Species or species habitat may occur within area
Hydrophis coggeri Cogger's Sea Snake, Black-headed Sea Snake [25925]		Species or species habitat may occur within area
Hydrophis elegans Elegant Sea Snake, Bar-bellied Sea Snake [1104]		Species or species habitat may occur within area
Hydrophis hardwickii as Lapemis hardwickii Spine-bellied Sea Snake [93516]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Hydrophis inornatus Plain Sea Snake [1107]		Species or species habitat may occur within area
Hydrophis kingii as Disteira kingii Spectacled Sea Snake [93511]		Species or species habitat may occur within area
Hydrophis macdowelli as Hydrophis mcdowelli MacDowell's Sea Snake, Small-headed Sea Snake, [75601]		Species or species habitat may occur within area
Hydrophis major as Disteira major Olive-headed Sea Snake [93512]		Species or species habitat may occur within area
Hydrophis ornatus Spotted Sea Snake, Ornate Reef Sea Snake [1111]		Species or species habitat may occur within area
Hydrophis pacificus Pacific Sea Snake, Large-headed Sea Snake [1112]		Species or species habitat may occur within area
Hydrophis peronii as Acalyptophis peronii Horned Sea Snake [93509]		Species or species habitat may occur within area
Hydrophis platura as Pelamis platurus Yellow-bellied Sea Snake [93746]		Species or species habitat may occur within area
Hydrophis stokesii as Astrotia stokesii Stokes' Sea Snake [93510]		Species or species habitat may occur within area
Hydrophis zweifeli as Enhydrina schistosa Australian Beaked Sea Snake [93514]		Species or species habitat may occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Breeding likely to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area

Whales and Other Cetaceans		[Resource Information]
Current Scientific Name	Status	Type of Presence
Mammal		
[Balaenoptera borealis](#) Sei Whale [34]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
[Balaenoptera edeni](#) Bryde's Whale [35]		Species or species habitat likely to occur within area
[Balaenoptera musculus](#) Blue Whale [36]	Endangered	Migration route known to occur within area
[Balaenoptera omurai](#) Omura's Whale [87136]		Species or species habitat likely to occur within area
[Balaenoptera physalus](#) Fin Whale [37]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
[Delphinus delphis](#) Common Dolphin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area
[Feresa attenuata](#) Pygmy Killer Whale [61]		Species or species habitat may occur within area
[Globicephala macrorhynchus](#) Short-finned Pilot Whale [62]		Species or species habitat may occur within area
[Grampus griseus](#) Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area
[Kogia breviceps](#) Pygmy Sperm Whale [57]		Species or species habitat may occur within area

Current Scientific Name	Status	Type of Presence
[Kogia sima](#) Dwarf Sperm Whale [85043]		Species or species habitat may occur within area
[Lagenodelphis hosei](#) Fraser's Dolphin, Sarawak Dolphin [41]		Species or species habitat may occur within area
[Megaptera novaeangliae](#) Humpback Whale [38]		Breeding known to occur within area
[Mesoplodon densirostris](#) Blainville's Beaked Whale, Dense-beaked Whale [74]		Species or species habitat may occur within area
[Orcaella heinsohni](#) Australian Snubfin Dolphin [81322]	Vulnerable	Breeding likely to occur within area
[Orcinus orca](#) Killer Whale, Orca [46]		Species or species habitat may occur within area
[Peponocephala electra](#) Melon-headed Whale [47]		Species or species habitat may occur within area
[Physeter macrocephalus](#) Sperm Whale [59]		Species or species habitat may occur within area
[Pseudorca crassidens](#) False Killer Whale [48]		Species or species habitat likely to occur within area
[Sousa sahulensis](#) Australian Humpback Dolphin [87942]	Vulnerable	Breeding likely to occur within area
[Stenella attenuata](#) Spotted Dolphin, Pantropical Spotted Dolphin [51]		Species or species habitat may occur within area
[Stenella coeruleoalba](#) Striped Dolphin, Euphrosyne Dolphin [52]		Species or species habitat may occur within area

Current Scientific Name	Status	Type of Presence
Stenella longirostris Long-snouted Spinner Dolphin [29]		Species or species habitat may occur within area
Steno bredanensis Rough-toothed Dolphin [30]		Species or species habitat may occur within area
Tursiops aduncus Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat likely to occur within area
Tursiops aduncus (Arafura/Timor Sea populations) Spotted Bottlenose Dolphin (Arafura/Timor Sea populations) [78900]		Species or species habitat likely to occur within area
Tursiops truncatus s. str. Bottlenose Dolphin [68417]		Species or species habitat may occur within area
Ziphius cavirostris Cuvier's Beaked Whale, Goose-beaked Whale [56]		Species or species habitat may occur within area

Australian Marine Parks	[Resource Information]
Park Name	Zone & IUCN Categories
Joseph Bonaparte Gulf	Multiple Use Zone (IUCN VI)
Kimberley	Multiple Use Zone (IUCN VI)
Oceanic Shoals	Multiple Use Zone (IUCN VI)
Ashmore Reef	Recreational Use Zone (IUCN IV)
Ashmore Reef	Sanctuary Zone (IUCN Ia)
Cartier Island	Sanctuary Zone (IUCN Ia)
Joseph Bonaparte Gulf	Special Purpose Zone (IUCN VI)
Oceanic Shoals	Special Purpose Zone (Trawl) (IUCN VI)

Habitat Critical to the Survival of Marine Turtles		[Resource Information]
Scientific Name	Behaviour	Presence

Scientific Name	Behaviour	Presence
All year (Jun - Aug)		
Natator depressus		
Flatback Turtle [59257]	Nesting	Known to occur
May - Jul		
Lepidochelys olivacea		
Olive Ridley Turtle [1767]	Nesting	Known to occur
Oct - Mar		
Chelonia mydas		
Green Turtle [1765]	Nesting	Known to occur

Extra Information

State and Territory Reserves [Resource Information]

Protected Area Name	Reserve Type	State
Browse Island	Nature Reserve	WA
Lalang-gaddam	Marine Park	WA
Lawley River	National Park	WA
Lesueur Island	Nature Reserve	WA
Low Rocks	Nature Reserve	WA
Mijing	5(1)(h) Reserve	WA
Mitchell River	National Park	WA
Niiwalarra Islands	National Park	WA
North Kimberley	Marine Park	WA
Ord River	Nature Reserve	WA
Parry Lagoons	Nature Reserve	WA
Pelican Island	Nature Reserve	WA
Prince Regent	National Park	WA
Unnamed WA41775	5(1)(h) Reserve	WA
Unnamed WA44677	5(1)(h) Reserve	WA

EPBC Act Referrals [Resource Information]

Title of referral	Reference	Referral Outcome	Assessment Status
Boskalis Cambridge Gulf Marine Sand Sourcing Project	2025/10106		Referral Decision
Deep Water Northwest Shelf 2D Seismic Survey	2007/3260		Completed
Marine Route Survey for Subsea Fibre Optic Data Cable System - Australia West	2024/09826		Completed
Project Crux Cable Lay and Operation	2022/09441		Completed
Project Fitzroy Expansion Offshore Cable Lay	2023/09674		Referral Decision
Puffin Oil wells 7, 8 & 9 development	2005/2336		Completed
Controlled action			
2-D seismic survey Scott Reef	2000/125	Controlled Action	Post-Approval
Bonaparte Liquified Natural Gas Project	2011/6141	Controlled Action	Post-Approval
Conduct an exploration drilling campaign	2010/5718	Controlled Action	Completed
Decommissioning of Challis Oilfield	2003/942	Controlled Action	Post-Approval
Develop Ichthys gas-condensate field permit area W	2006/2767	Controlled Action	Completed
Development of Blacktip Gas Field	2003/1180	Controlled Action	Post-Approval
Development of Browse Basin Gas Fields (Upstream)	2008/4111	Controlled Action	Completed
Ichthys Gas Field, Offshore and onshore processing facilities and subsea pipeline	2008/4208	Controlled Action	Post-Approval
Montara 4, 5, and 6 Oil Production Wells, and Montara 3 Gas Re-Injection Well	2002/755	Controlled Action	Post-Approval
Prelude Floating Liquefied Natural Gas Facility and Gas Field Development	2008/4146	Controlled Action	Post-Approval
PTTEP AA Floating LNG Facility	2011/6025	Controlled Action	Completed

Title of referral	Reference	Referral Outcome	Assessment Status
Controlled action			
Wuudagu Bauxite Project	2019/8606	Controlled Action	Assessment Approach
Not controlled action			
2D seismic survey, exploration permit NT/P67	2004/1587	Not Controlled Action	Completed
2D Seismic Survey in Permit Areas WA-318-P & WA-319-P, near Cape Londonderry	2004/1687	Not Controlled Action	Completed
3D marine seismic survey in WA 314P and WA 315P	2004/1927	Not Controlled Action	Completed
Adele Trend TQ3D Seismic Survey	2001/252	Not Controlled Action	Completed
AEC International Hydrocarbon Well Puffin 6	2000/36	Not Controlled Action	Completed
Audacious-3 oil drilling well	2003/1042	Not Controlled Action	Completed
Backpacker-1 Offshore Hydrocarbon Exploration Well	2001/300	Not Controlled Action	Completed
Coot-1 hydrocarbon exploration well, Permit Area AC/L2 or AC/L3	2001/296	Not Controlled Action	Completed
Crux-A and Crux-B appraisal wells, Petroleum Permit Area AC/P23	2006/2748	Not Controlled Action	Completed
Crux gas-liquids development in permit AC/P23	2006/3154	Not Controlled Action	Completed
Drilling of 12 Hydrocarbon Exploration Wells, Permit Area WA-371-P	2006/3005	Not Controlled Action	Completed
Drilling of exploration wells, Permit areas WA-301-P to WA-305-P	2002/769	Not Controlled Action	Completed
Drilling of Marina-1 Exploration Well	2007/3586	Not Controlled Action	Completed
Echuca Shoals-2 Exploration of Appraisal Well	2006/3020	Not Controlled Action	Completed
Exploration Drilling in AC/P17, AC/P18 and AC/P24	2001/359	Not Controlled Action	Completed
Exploration Well AC/P23	2001/234	Not Controlled Action	Completed

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action			
Kaleidoscope exploration well	2001/182	Not Controlled Action	Completed
Marine Seismic Survey in WA-239-P	2000/24	Not Controlled Action	Completed
Marine Survey for the Australia-ASEAN Power Link AAPL	2020/8714	Not Controlled Action	Completed
Montara-3 Offshore Hydrocarbon Exploration Well Permit Area AC/RL3	2001/489	Not Controlled Action	Completed
Nexus Drilling Program NT-P66	2007/3745	Not Controlled Action	Completed
P30 Hydrocarbon Exploration Well	2001/293	Not Controlled Action	Completed
Project Highclere Geophysical Survey	2021/9023	Not Controlled Action	Completed
Ridges Iron Ore Project	2010/5494	Not Controlled Action	Completed
Saucepan 1 Exploration Well ACP23	2000/2	Not Controlled Action	Completed
Skua and Swift Oilfields	2006/3195	Not Controlled Action	Completed
Strumbo-1 Gas Exploration Well Permit Area WA-288-P	2002/884	Not Controlled Action	Completed
Thresher-1 Well	2000/84	Not Controlled Action	Completed
Not controlled action (particular manner)			
2 (3D) Marine Seismic Surveys	2009/4994	Not Controlled Action (Particular Manner)	Completed
2D and 3D Seismic Survey	2011/6197	Not Controlled Action (Particular Manner)	Post-Approval
2D and 3D Seismic Survey WA-405-P	2009/5104	Not Controlled Action (Particular Manner)	Post-Approval
2D and 3D Seismic Survey WA-405-P	2008/4133	Not Controlled Action (Particular Manner)	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
2D Marine Seismic Survey	2009/4728	Not Controlled Action (Particular Manner)	Post-Approval
2D marine seismic survey of Braveheart,Kurrajong,Sunshine and Crocodile	2006/2917	Not Controlled Action (Particular Manner)	Post-Approval
2D marine seismic survey within permit area WA-318-P	2007/3879	Not Controlled Action (Particular Manner)	Post-Approval
2D Seismic Marine Survey	2001/363	Not Controlled Action (Particular Manner)	Post-Approval
2D Seismic survey	2009/5076	Not Controlled Action (Particular Manner)	Post-Approval
2D seismic survey in permit areas WA-274P and WA-281P	2004/1521	Not Controlled Action (Particular Manner)	Post-Approval
2D Seismic Survey in WA Permit Area TP/22 and Commonwealth Permit Area WA-280-P	2005/2100	Not Controlled Action (Particular Manner)	Post-Approval
3D Marine Seismic Survey	2008/4437	Not Controlled Action (Particular Manner)	Post-Approval
3D Marine Seismic Survey, Permit AC/P 23	2005/2364	Not Controlled Action (Particular Manner)	Post-Approval
3D Seismic Survey, Browse Basin, WA	2009/5048	Not Controlled Action (Particular Manner)	Post-Approval
3D Seismic Survey, near Scott Reef, Browse Basin	2005/2126	Not Controlled Action (Particular Manner)	Post-Approval
3D Seismic Survey, petroleum exploration permit AC/P33	2006/2918	Not Controlled Action (Particular	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
		Manner)	
3D seismic survey of AC/P4, AC/P17 and AC/P24	2006/2857	Not Controlled Action (Particular Manner)	Post-Approval
3D Seismic Survey WA-406-P Bonaparte Basin	2007/3904	Not Controlled Action (Particular Manner)	Post-Approval
AC/P37 3D Seismic Survey Ashmore Cartier	2007/3774	Not Controlled Action (Particular Manner)	Post-Approval
Aurora MC3D Marine Seismic Survey	2010/5510	Not Controlled Action (Particular Manner)	Post-Approval
Bassett 3D Marine Seismic Survey	2010/5538	Not Controlled Action (Particular Manner)	Post-Approval
Bonaparte 2D & 3D marine seismic survey	2011/5962	Not Controlled Action (Particular Manner)	Post-Approval
Bonaparte Seismic and Bathymetric Survey	2012/6295	Not Controlled Action (Particular Manner)	Post-Approval
Braveheart 2D Infill Marine Seismic Survey 100km offshore	2008/4442	Not Controlled Action (Particular Manner)	Post-Approval
Braveheart 2D Marine Seismic Survey	2005/2322	Not Controlled Action (Particular Manner)	Post-Approval
Canis 3D Marine Seismic Survey	2008/4492	Not Controlled Action (Particular Manner)	Post-Approval
Cartier East and Cartier West 3D Marine Seismic Surveys	2009/5230	Not Controlled Action (Particular Manner)	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
Caswell MC3D Marine Seismic Survey	2012/6594	Not Controlled Action (Particular Manner)	Post-Approval
Conduct an exploration drilling campaign	2011/5964	Not Controlled Action (Particular Manner)	Post-Approval
Drilling of Audacious-5 appraisal well	2008/4327	Not Controlled Action (Particular Manner)	Post-Approval
Drilling of Exploration & Appraisal Wells Braveheart-1 & Cornea-3	2009/5160	Not Controlled Action (Particular Manner)	Post-Approval
Drilling of two appraisal wells	2011/5840	Not Controlled Action (Particular Manner)	Post-Approval
Exploration Drilling Campaign	2011/6047	Not Controlled Action (Particular Manner)	Post-Approval
Exploration Drilling Campaign, Browse Basin, WA-341-P, AC-P36 and WA-343-P	2013/6898	Not Controlled Action (Particular Manner)	Post-Approval
Exploration Drilling in Permit Areas WA-402-P & WA-403-P	2010/5297	Not Controlled Action (Particular Manner)	Post-Approval
Exploration Drilling Program - Permit areas - WA-314-P, WA-315-P, WA-398-P.	2008/4064	Not Controlled Action (Particular Manner)	Post-Approval
Fishburn2D Marine Seismic Survey	2012/6659	Not Controlled Action (Particular Manner)	Post-Approval
Floyd 3D and Chisel 3D Seismic Surveys	2011/6220	Not Controlled Action (Particular Manner)	Post-Approval
Gicea 3D Marine Seismic Survey	2008/4389	Not Controlled Action (Particular	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
		Manner)	
Gold 2D Marine Seismic Survey Permit Areas WA375P and WA376P	2009/4698	Not Controlled Action (Particular Manner)	Post-Approval
Ichthys 3D Marine Seismic Survey	2010/5550	Not Controlled Action (Particular Manner)	Post-Approval
Kingtree & Ironstone-1 Exploration Wells	2011/5935	Not Controlled Action (Particular Manner)	Post-Approval
Kraken, Lusca & Asperus 3D Marine Seismic Survey	2013/6730	Not Controlled Action (Particular Manner)	Post-Approval
Malita West 3D Seismic Survey WA-402-P and WA-403-P	2007/3936	Not Controlled Action (Particular Manner)	Post-Approval
Marine Environmental Survey 2012	2012/6310	Not Controlled Action (Particular Manner)	Post-Approval
Nova 3D Seismic Survey	2013/6825	Not Controlled Action (Particular Manner)	Post-Approval
NT/P80 2010 2D Marine Seismic Survey	2010/5487	Not Controlled Action (Particular Manner)	Post-Approval
Octantis 3D Marine Seismic Survey, Permit Area AC/P41 off northern Western Australia	2007/3369	Not Controlled Action (Particular Manner)	Post-Approval
Offshore Exploration Drilling Campaign	2011/6222	Not Controlled Action (Particular Manner)	Post-Approval
Offshore Fibre Optic Cable Network Construction & Operation, Port Hedland WA to Darwin NT	2014/7223	Not Controlled Action (Particular Manner)	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
Offshore Gas Exploration Drilling Campaign	2012/6384	Not Controlled Action (Particular Manner)	Post-Approval
Petrel MC2D Marine Seismic Survey	2010/5368	Not Controlled Action (Particular Manner)	Post-Approval
Sandalford 3D Seismic Survey	2012/6261	Not Controlled Action (Particular Manner)	Post-Approval
Santos Petrel-7 Offshore Appraisal Drilling Programme (Bonaparte Basin)	2011/5934	Not Controlled Action (Particular Manner)	Post-Approval
Schild MC3D Marine Seismic Survey	2012/6373	Not Controlled Action (Particular Manner)	Post-Approval
Schild Phase 11 MC3D Marine Seismic Survey, Browse Basin	2013/6894	Not Controlled Action (Particular Manner)	Post-Approval
Searcher bathymetry & geochemical seismic survey, Brawse Basin,Timor Sea,WA	2013/6980	Not Controlled Action (Particular Manner)	Post-Approval
Sonar and Acoustic Trials	2001/345	Not Controlled Action (Particular Manner)	Post-Approval
Thoar 3D Marine Seismic Survey	2010/5668	Not Controlled Action (Particular Manner)	Post-Approval
Tiffany 3D Seismic Survey	2010/5339	Not Controlled Action (Particular Manner)	Post-Approval
Tow West Atlas wreck from present location to boundary of EEZ	2010/5652	Not Controlled Action (Particular Manner)	Post-Approval
Vampire 2D Non Exclusive Seismic Survey, WA	2010/5543	Not Controlled Action (Particular	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
		Manner)	
Westralia SPAN Marine Seismic Survey, WA & NT	2012/6463	Not Controlled Action (Particular Manner)	Post-Approval
Zeppelin 3D Seismic Survey	2011/6148	Not Controlled Action (Particular Manner)	Post-Approval
Referral decision			
2D Marine Seismic Survey	2008/4623	Referral Decision	Completed
BRSN08 3D Marine Seismic Survey	2008/4582	Referral Decision	Completed
Nova 3D Seismic Survey, WA 442-NT/P81, Joseph Bonaparte Gulf	2013/6820	Referral Decision	Completed
Puffin South-West Development of Oil Reserves	2007/3834	Referral Decision	Completed
Ridges Iron Ore Project	2010/5351	Referral Decision	Completed
Seismic Data Acquisition, Browse Basin	2010/5475	Referral Decision	Completed

Key Ecological Features [Resource Information]

Key Ecological Features are the parts of the marine ecosystem that are considered to be important for the biodiversity or ecosystem functioning and integrity of the Commonwealth Marine Area.

Name	Region
Ancient coastline at 125 m depth contour	North-west
Ashmore Reef and Cartier Island and surrounding Commonwealth waters	North-west
Carbonate bank and terrace system of the Sahul Shelf	North-west
Continental Slope Demersal Fish Communities	North-west
Pinnacles of the Bonaparte Basin	North-west
Pinnacles of the Bonaparte Basin	North
Seringapatam Reef and Commonwealth waters in the Scott Reef Complex	North-west

Biologically Important Areas		[Resource Information]
Scientific Name	Behaviour	Presence
Dolphins		
Orcaella heinsohni Australian Snubfin Dolphin [81322]	Foraging	Known to occur
Orcaella heinsohni Australian Snubfin Dolphin [81322]	Reproduction	Known to occur
Orcaella heinsohni Australian Snubfin Dolphin [81322]	Resting	Known to occur
Sousa sahulensis Australian Humpback Dolphin [87942]	Foraging	Likely to occur
Sousa sahulensis Australian Humpback Dolphin [87942]	Reproduction	Likely to occur
Tursiops aduncus Indo-Pacific/Spotted Bottlenose Dolphin [68418]	Foraging	Known to occur
Tursiops aduncus Indo-Pacific/Spotted Bottlenose Dolphin [68418]	Reproduction	Known to occur
Dugong		
Dugong dugon Dugong [28]	Foraging	Known to occur
Dugong dugon Dugong [28]	Reproduction	Known to occur
Marine Turtles		
Caretta caretta Loggerhead Turtle [1763]	Foraging	Known to occur
Chelonia mydas Green Turtle [1765]	Foraging	Known to occur
Chelonia mydas Green Turtle [1765]	Reproduction	Likely to occur
Eretmochelys imbricata Hawksbill Turtle [1766]	Foraging	Likely to occur
Eretmochelys imbricata Hawksbill Turtle [1766]	Reproduction	Known to occur

Scientific Name	Behaviour	Presence
Lepidochelys olivacea Olive Ridley Turtle [1767]	Foraging	Known to occur
Natator depressus Flatback Turtle [59257]	Foraging	Known to occur
Natator depressus Flatback Turtle [59257]	Reproduction	Known to occur
Seabirds		
Ardenna pacifica Wedge-tailed Shearwater [84292]	Reproduction	Known to occur
Fregata ariel Lesser Frigatebird [1012]	Reproduction	Known to occur
Fregata minor Greater Frigatebird [1013]	Reproduction	Known to occur
Phaethon lepturus White-tailed Tropicbird [1014]	Reproduction	Known to occur
Sterna dougallii Roseate Tern [817]	Reproduction	Known to occur
Sternula albifrons sinensis Little Tern [82850]	Reproduction	Known to occur
Sternula albifrons sinensis Little Tern [82850]	Resting	Known to occur
Sula leucogaster Brown Booby [1022]	Reproduction	Known to occur
Sula sula Red-footed Booby [1023]	Reproduction	Known to occur
Thalasseus bengalensis Lesser Crested Tern [66546]	Reproduction	Known to occur
Sharks		
Rhincodon typus Whale Shark [66680]	Foraging	Known to occur

Scientific Name	Behaviour	Presence
Whales		
Balaenoptera musculus brevicauda Pygmy Blue Whale [81317]	Foraging	Likely to be present
Balaenoptera musculus brevicauda Pygmy Blue Whale [81317]	Migration	Known to occur
Megaptera novaeangliae Humpback Whale [38]	Migration	Known to occur
Megaptera novaeangliae Humpback Whale [38]	Reproduction	Known to occur
Megaptera novaeangliae Humpback Whale [38]	Resting	Known to occur

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data is available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance on the contents of this report.

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions when time permits.

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded breeding sites; and
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management, Northern Territory
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
Forestry Corporation, NSW
-Geoscience Australia
-CSIRO
-Australian Tropical Herbarium, Cairns
-eBird Australia
-Australian Government – Australian Antarctic Data Centre
-Museum and Art Gallery of the Northern Territory
-Australian Government National Environmental Science Program
-Australian Institute of Marine Science
-Reef Life Survey Australia
-American Museum of Natural History
-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
-Tasmanian Museum and Art Gallery, Hobart, Tasmania
-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact us page.

© Commonwealth of Australia
Department of Climate Change, Energy, the Environment and Water
GPO Box 3090
Canberra ACT 2601 Australia
+61 2 6274 1111

Australian Government

Department of Climate Change, Energy, the Environment and Water

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 25-Jun-2026

Summary

Details

- Matters of NES
- Other Matters Protected by the EPBC Act
- Extra Information

Caveat

Acknowledgements

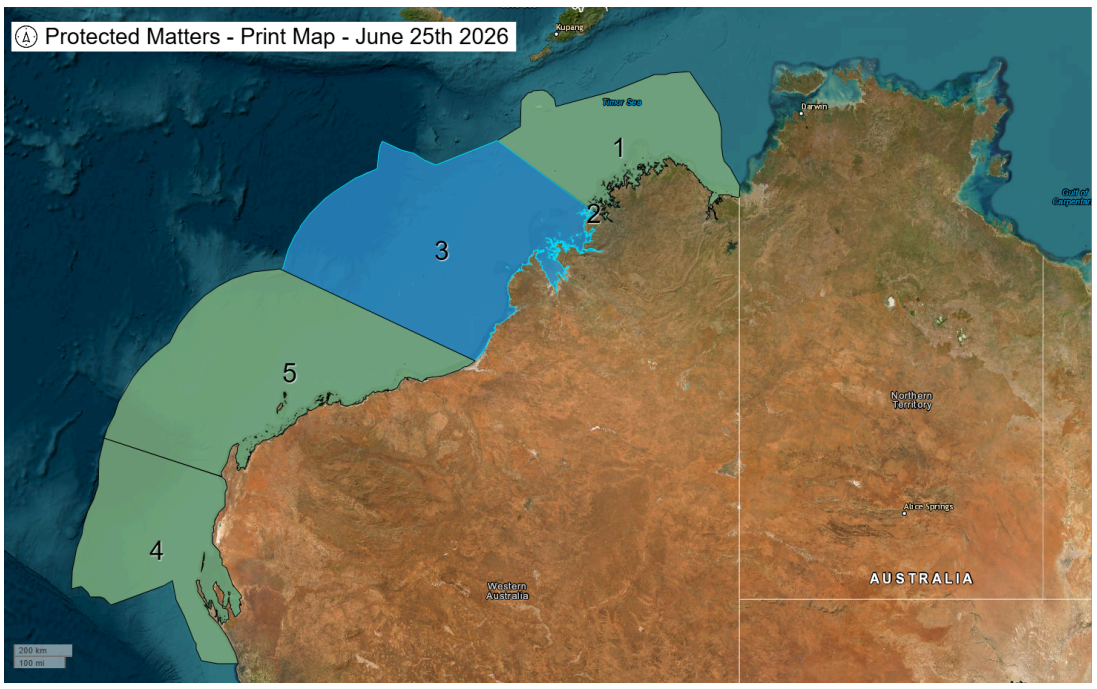


Figure 1: North West Marine Region - North Central (Part 2)

Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	None
National Heritage Places:	1
Wetlands of International Importance (Ramsar	2
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	9
Listed Threatened Ecological Communities:	1
Listed Threatened Species:	63
Listed Migratory Species:	85

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at https://www.dcceew.gov.au/parks-heritage/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	47
Commonwealth Heritage Places:	3
Listed Marine Species:	134
Whales and Other Cetaceans:	30
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	11
Habitat Critical to the Survival of Marine Turtles:	3

Extra Information

This part of the report provides information that may also be relevant to the area you have

State and Territory Reserves:	29
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	90
Key Ecological Features (Marine):	5
Biologically Important Areas:	38
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

National Heritage Places		[Resource Information]
Name	State	Legal Status
Natural		
The West Kimberley	WA	Listed place

Wetlands of International Importance (Ramsar Wetlands)	[Resource Information]
Ramsar Site Name	Proximity
Eighty-mile beach	Within Ramsar site
Roebuck bay	Within Ramsar site

Commonwealth Marine Area	[Resource Information]

Approval is required for a proposed activity that is located within the Commonwealth Marine Area which has, will have, or is likely to have a significant impact on the environment. Approval may be required for a proposed action taken outside a Commonwealth Marine Area but which has, may have or is likely to have a significant impact on the environment in the Commonwealth Marine Area.

Feature Name
Commonwealth Marine Areas (EPBC Act)
Commonwealth Marine Areas (EPBC Act)
Commonwealth Marine Areas (EPBC Act)
Commonwealth Marine Areas (EPBC Act)
Commonwealth Marine Areas (EPBC Act)
Commonwealth Marine Areas (EPBC Act)
Commonwealth Marine Areas (EPBC Act)
Commonwealth Marine Areas (EPBC Act)
Commonwealth Marine Areas (EPBC Act)

Listed Threatened Ecological Communities	[Resource Information]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.
Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.

Community Name	Threatened Category	Presence Text
Monsoon vine thickets on the coastal sand dunes of Dampier Peninsula	Endangered	Community likely to occur within area

Listed Threatened Species [Resource Information]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.
Number is the current name ID.

Scientific Name	Threatened Category	Presence Text
BIRD		
Anous tenuirostris melanops Australian Lesser Noddy [26000]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Arenaria interpres Ruddy Turnstone [872]	Vulnerable	Roosting likely to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat likely to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area
Calidris tenuirostris Great Knot [862]	Vulnerable	Roosting likely to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting likely to occur within area
Chloebia gouldiae listed as Erythrura gouldiae Gouldian Finch [90091]	Endangered	Species or species habitat likely to occur within area
Erythrotriorchis radiatus Red Goshawk [942]	Endangered	Species or species habitat likely to occur within area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Falcunculus frontatus whitei Crested Shrike-tit (northern), Northern Shrike-tit [26013]	Vulnerable	Species or species habitat likely to occur within area
Geophaps smithii blaauwi Partridge Pigeon (western) [66501]	Vulnerable	Species or species habitat likely to occur within area
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat likely to occur within area
Limosa lapponica menzbieri Northern Siberian Bar-tailed Godwit, Russkoye Bar-tailed Godwit [86432]	Endangered	Species or species habitat likely to occur within area
Limosa limosa Black-tailed Godwit [845]	Endangered	Roosting likely to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Papasula abbotti Abbott's Booby [59297]	Endangered	Species or species habitat may occur within area
Pezoporus occidentalis Night Parrot [59350]	Critically Endangered	Species or species habitat may occur within area
Phaethon lepturus fulvus Christmas Island White-tailed Tropicbird, Golden Bosunbird [26021]	Endangered	Species or species habitat may occur within area
Phaethon rubricauda westralis Red-tailed Tropicbird (Indian Ocean), Indian Ocean Red-tailed Tropicbird [91824]	Endangered	Breeding likely to occur within area
Pluvialis squatarola Grey Plover [865]	Vulnerable	Roosting likely to occur within area
Polytelis alexandrae Princess Parrot, Alexandra's Parrot [758]	Vulnerable	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
Sternula albifrons Little Tern [82849]	Vulnerable	Breeding likely to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area
Tyto novaehollandiae kimberli Masked Owl (northern) [26048]	Vulnerable	Species or species habitat likely to occur within area
Xenus cinereus Terek Sandpiper [59300]	Vulnerable	Roosting likely to occur within area
MAMMAL		
Balaenoptera borealis Sei Whale [34]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Migration route known to occur within area
Balaenoptera physalus Fin Whale [37]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Dasyurus hallucatus Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu] [331]	Endangered	Species or species habitat likely to occur within area
Isoodon auratus auratus Golden Bandicoot (mainland) [66665]	Vulnerable	Species or species habitat likely to occur within area
Macroderma gigas Ghost Bat [174]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Macrotis lagotis Greater Bilby [282]	Vulnerable	Species or species habitat likely to occur within area
Orcaella heinsohni Australian Snubfin Dolphin [81322]	Vulnerable	Breeding likely to occur within area
Petrogale concinna monastria Nabarlek (Kimberley) [87607]	Endangered	Species or species habitat likely to occur within area
Phascogale tapoatafa kimberleyensis Kimberley brush-tailed phascogale, Brush-tailed Phascogale (Kimberley) [88453]	Vulnerable	Species or species habitat likely to occur within area
Saccolaimus saccolaimus nudicluniatus Bare-rumped Sheath-tailed Bat, Bare-rumped Sheathtail Bat [66889]	Vulnerable	Species or species habitat likely to occur within area
Sousa sahulensis Australian Humpback Dolphin [87942]	Vulnerable	Breeding likely to occur within area
Trichosurus vulpecula arnhemensis Northern Brushtail Possum [83091]	Vulnerable	Species or species habitat likely to occur within area
Xeromys myoides Water Mouse, False Water Rat, Yirrkoo [66]	Vulnerable	Species or species habitat may occur within area
PLANT		
Seringia exastia Fringed Fire-bush [88920]	Critically Endangered	Species or species habitat may occur within area
REPTILE		
Aipysurus apraefrontalis Short-nosed Sea Snake, Short-nosed Seasnake [1115]	Critically Endangered	Species or species habitat likely to occur within area
Aipysurus foliosquama Leaf-scaled Sea Snake, Leaf-scaled Seasnake [1118]	Critically Endangered	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Aipysurus fuscus Dusky Sea Snake [1119]	Endangered	Species or species habitat likely to occur within area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Breeding likely to occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Breeding likely to occur within area
Liopholis kintorei Great Desert Skink, Tjakura, Warrarna, Mulyamiji, Tjalapa, Nampu [83160]	Vulnerable	Species or species habitat may occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area
Tiliqua scincoides intermedia Northern Blue-tongued Skink [89838]	Critically Endangered	Species or species habitat likely to occur within area
Varanus mertensi Mertens' Water Monitor [1568]	Endangered	Species or species habitat likely to occur within area
Varanus mitchelli Mitchell's Water Monitor [1569]	Critically Endangered	Species or species habitat likely to occur within area
SHARK		
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Glyphis garricki Northern River Shark, New Guinea River Shark [82454]	Endangered	Species or species habitat likely to occur within area
Pristis clavata Dwarf Sawfish, Queensland Sawfish [68447]	Vulnerable	Breeding likely to occur within area
Pristis pristis Largetooth Sawfish, Freshwater Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Endangered	Species or species habitat likely to occur within area
Pristis zijsron Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Breeding likely to occur within area
Rhincodon typus Whale Shark [66680]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Sphyrna lewini Scalloped Hammerhead [85267]	Conservation Dependent	Species or species habitat likely to occur within area

Listed Migratory Species		[Resource Information]
Scientific Name	Threatened Category	Presence Text
null		
Balaenoptera omurai Omura's Whale [87136]		Species or species habitat likely to occur within area
Migratory Marine Birds		
Anous stolidus Common Noddy [825]		Species or species habitat likely to occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat likely to occur within area
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Breeding likely to occur within area

Scientific Name	Threatened Category	Presence Text
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Foraging, feeding or related behaviour likely to occur within area
Hydroprogne caspia Caspian Tern [808]		Breeding likely to occur within area
Onychoprion anaethetus Bridled Tern [82845]		Breeding likely to occur within area
Phaethon lepturus White-tailed Tropicbird [1014]		Species or species habitat likely to occur within area
Phaethon rubricauda Red-tailed Tropicbird [994]		Species or species habitat likely to occur within area
Sterna dougallii Roseate Tern [817]		Breeding likely to occur within area
Sternula albifrons Little Tern [82849]	Vulnerable	Breeding likely to occur within area
Sula dactylatra Masked Booby [1021]		Breeding likely to occur within area
Sula leucogaster Brown Booby [1022]		Breeding likely to occur within area
Sula sula Red-footed Booby [1023]		Breeding likely to occur within area
Migratory Marine Species		
Anoxypristis cuspidata Narrow Sawfish, Knifetooth Sawfish [68448]		Species or species habitat likely to occur within area
Balaenoptera borealis Sei Whale [34]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area

Scientific Name	Threatened Category	Presence Text
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat likely to occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Migration route known to occur within area
Balaenoptera physalus Fin Whale [37]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Carcharhinus longimanus Oceanic Whitetip Shark [84108]		Species or species habitat may occur within area
Carcharias taurus Grey Nurse Shark [64469]		Species or species habitat may occur within area
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat may occur within area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Dugong dugon Dugong [28]		Foraging, feeding or related behaviour likely to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Breeding likely to occur within area

Scientific Name	Threatened Category	Presence Text
Isurus oxyrinchus Shortfin Mako, Mako Shark [79073]		Species or species habitat likely to occur within area
Isurus paucus Longfin Mako [82947]		Species or species habitat likely to occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Breeding likely to occur within area
Megaptera novaeangliae Humpback Whale [38]		Breeding known to occur within area
Mobula alfredi as Manta alfredi Reef Manta Ray, Coastal Manta Ray [90033]		Species or species habitat likely to occur within area
Mobula birostris as Manta birostris Giant Manta Ray [90034]		Species or species habitat likely to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area
Orcaella heinsohni Australian Snubfin Dolphin [81322]	Vulnerable	Breeding likely to occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Physeter macrocephalus Sperm Whale [59]		Species or species habitat may occur within area
Pristis clavata Dwarf Sawfish, Queensland Sawfish [68447]	Vulnerable	Breeding likely to occur within area
Pristis pristis Largetooth Sawfish, Freshwater Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Endangered	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Pristis zijsron		
Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Breeding likely to occur within area
Rhincodon typus		
Whale Shark [66680]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Sousa sahulensis as Sousa chinensis		
Australian Humpback Dolphin [87942]	Vulnerable	Breeding likely to occur within area
Tursiops aduncus (Arafura/Timor Sea populations)		
Spotted Bottlenose Dolphin (Arafura/Timor Sea populations) [78900]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
Cecropis daurica		
Red-rumped Swallow [80610]		Species or species habitat may occur within area
Cuculus optatus		
Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat may occur within area
Hirundo rustica		
Barn Swallow [662]		Species or species habitat likely to occur within area
Motacilla cinerea		
Grey Wagtail [642]		Species or species habitat likely to occur within area
Motacilla flava		
Yellow Wagtail [644]		Species or species habitat likely to occur within area
Migratory Wetlands Species		
Acrocephalus orientalis		
Oriental Reed-Warbler [59570]		Species or species habitat may occur within area
Actitis hypoleucos		
Common Sandpiper [59309]		Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Arenaria interpres Ruddy Turnstone [872]	Vulnerable	Roosting likely to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area
Calidris alba Sanderling [875]		Roosting likely to occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat likely to occur within area
Calidris falcinellus as Limicola falcinellus Broad-billed Sandpiper [91731]		Roosting likely to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat likely to occur within area
Calidris pugnax as Philomachus pugnax Ruff [91256]		Roosting likely to occur within area
Calidris ruficollis Red-necked Stint [860]		Roosting likely to occur within area
Calidris tenuirostris Great Knot [862]	Vulnerable	Roosting likely to occur within area
Charadrius bicinctus Double-banded Plover [895]		Roosting likely to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting likely to occur within area

Scientific Name	Threatened Category	Presence Text
Charadrius veredus Oriental Plover, Oriental Dotterel [882]		Roosting likely to occur within area
Gallinago megala Swinhoe's Snipe [864]		Roosting likely to occur within area
Gallinago stenura Pin-tailed Snipe [841]		Roosting likely to occur within area
Glareola maldivarum Oriental Pratincole [840]		Roosting likely to occur within area
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat likely to occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat likely to occur within area
Limosa limosa Black-tailed Godwit [845]	Endangered	Roosting likely to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Numenius minutus Little Curlew, Little Whimbrel [848]		Roosting likely to occur within area
Numenius phaeopus Whimbrel [849]		Roosting likely to occur within area
Pandion haliaetus Osprey [952]		Breeding likely to occur within area
Pluvialis fulva Pacific Golden Plover [25545]		Roosting likely to occur within area
Pluvialis squatarola Grey Plover [865]	Vulnerable	Roosting likely to occur within area

Scientific Name	Threatened Category	Presence Text
Thalasseus bergii Greater Crested Tern [83000]		Breeding likely to occur within area
Tringa brevipes Grey-tailed Tattler [851]		Roosting likely to occur within area
Tringa glareola Wood Sandpiper [829]		Roosting likely to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area
Tringa stagnatilis Marsh Sandpiper, Little Greenshank [833]		Roosting likely to occur within area
Tringa totanus Common Redshank, Redshank [835]		Roosting likely to occur within area
Xenus cinereus Terek Sandpiper [59300]	Vulnerable	Roosting likely to occur within area

Other Matters Protected by the EPBC Act

Commonwealth Lands [Resource Information]

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Commonwealth Land Name	State
Airservices Australia	
Lot 43 P170055 [AGPR141]	WA
Australian Broadcasting Corporation	
Lot 32 D100296 [AGPR209]	WA
Bureau of Meteorology	
Lot 146 P023266 [AGPR5860]	WA
Lot 2163 P216952 [AGPR5858]	WA
Department of Agriculture, Fisheries and Forestry	
Lot 2275 P217326 [AGPR5881]	WA
Lot 2279 P217326 [AGPR5880]	WA
Department of Climate Change, Energy, the Environment and Water	

Commonwealth Land Name	State
Mermaid Reef - Rowley Shoals [CHL_105255]	WA
Scott Reef and Surrounds - Commonwealth Area [CHL_105480]	EXT
Yampi Defence Area [CHL_105418]	WA
Department of Defence	
ANC TS BROOME - Broome [DD_0130]	WA
Broome Training Depot [AGPR4286]	WA
Broome Training Depot [AGPR4285]	WA
Broome Training Depot [DD_1528]	WA
Derby Training Depot [DD_0696]	WA
Lot 655 P174895 [AGPR4397]	WA
Yampi Sound Training Area [DD_0697]	WA
Yampi Training Ground [AGPR4459]	WA
Department of Home Affairs	
Lot 202 P023724 [AGPR6110]	WA
Lot 257 P069434 [AGPR6092]	WA
Lot 532 DP 72758 [AGPR6095]	WA
Lot637 DP37858 [AGPR6096]	WA
Lot 812 P047361 [AGPR6111]	WA
Lot 823 P044086 [AGPR6108]	WA
Lot 824 P044086 [AGPR6109]	WA
National Indigenous Australians Agency	
Lot 1151 P215280 [AGPR6204]	WA
Lot 1239 P216847 [AGPR6203]	WA
Lot 129 P060227 [AGPR6206]	WA
Lot 132 P060227 [AGPR6208]	WA
Lot 1 S066584 [AGPR6207]	WA
Lot 200 P062535 [AGPR6192]	WA
Lot 2191 P217084 [AGPR6195]	WA

Commonwealth Land Name	State
Lot 223 P071424 [AGPR6202]	WA
Lot 2304 P217326 [AGPR6194]	WA
Lot 2540 P217611 [AGPR6198]	WA
Lot 2542 P217611 [AGPR6197]	WA
Lot 2554 P217611 [AGPR6199]	WA
Lot 2580 P217611 [AGPR6196]	WA
Lot 2873 P218501 [AGPR6193]	WA
Lot 2879 P218503 [AGPR6201]	WA
Lot 325 P024195 [AGPR6210]	WA
Lot 3 S057609 [AGPR6191]	WA
Lot 67 P222187 [AGPR6241]	WA
Lot 7 S061844 [AGPR6200]	WA
Lot 864 P059296 [AGPR6211]	WA
Services Australia	
Lot 1247 P216847 [AGPR6042]	WA
Lot 256 P024193 [AGPR6043]	WA
Lot 69 P015330 [AGPR6041]	WA

Commonwealth Heritage Places [Resource Information]

Name	State	Status
Natural		
Mermaid Reef - Rowley Shoals	WA	Listed place
Scott Reef and Surrounds - Commonwealth Area	EXT	Listed place
Yampi Defence Area	WA	Listed place

Listed Marine Species [Resource Information]

Scientific Name	Threatened Category	Presence Text
Bird		
Acrocephalus orientalis Oriental Reed-Warbler [59570]		Species or species habitat may occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat likely to occur within area
Anous stolidus Common Noddy [825]		Species or species habitat likely to occur within area
Anous tenuirostris melanops Australian Lesser Noddy [26000]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Anseranas semipalmata Magpie Goose [978]		Species or species habitat may occur within area overfly marine area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area
Arenaria interpres Ruddy Turnstone [872]	Vulnerable	Roosting likely to occur within area
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area
Calidris alba Sanderling [875]		Roosting likely to occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat likely to occur within area overfly marine area
Calidris falcinellus as Limicola falcinellus Broad-billed Sandpiper [91731]		Roosting likely to occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area overfly marine area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat likely to occur within area overfly marine area
Calidris pugnax as Philomachus pugnax Ruff [91256]		Roosting likely to occur within area overfly marine area
Calidris ruficollis Red-necked Stint [860]		Roosting likely to occur within area overfly marine area
Calidris tenuirostris Great Knot [862]	Vulnerable	Roosting likely to occur within area overfly marine area
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat likely to occur within area
Cecropis daurica as Hirundo daurica Red-rumped Swallow [80610]		Species or species habitat may occur within area overfly marine area
Chalcites osculans as Chrysococcyx osculans Black-eared Cuckoo [83425]		Species or species habitat likely to occur within area overfly marine area
Charadrius bicinctus Double-banded Plover [895]		Roosting likely to occur within area overfly marine area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting likely to occur within area

Scientific Name	Threatened Category	Presence Text
Charadrius ruficapillus Red-capped Plover [881]		Roosting likely to occur within area overfly marine area
Charadrius veredus Oriental Plover, Oriental Dotterel [882]		Roosting likely to occur within area overfly marine area
Chroicocephalus novaehollandiae as Larus novaehollandiae Silver Gull [82326]		Breeding likely to occur within area
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Breeding likely to occur within area
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Foraging, feeding or related behaviour likely to occur within area
Gallinago megala Swinhoe's Snipe [864]		Roosting likely to occur within area overfly marine area
Gallinago stenura Pin-tailed Snipe [841]		Roosting likely to occur within area overfly marine area
Glareola maldivarum Oriental Pratincole [840]		Roosting likely to occur within area overfly marine area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area
Himantopus himantopus Pied Stilt, Black-winged Stilt [870]		Roosting likely to occur within area overfly marine area
Hirundo rustica Barn Swallow [662]		Species or species habitat likely to occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Hydroprogne caspia as Sterna caspia Caspian Tern [808]		Breeding likely to occur within area
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat likely to occur within area overfly marine area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat likely to occur within area
Limosa limosa Black-tailed Godwit [845]	Endangered	Roosting likely to occur within area overfly marine area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area
Motacilla cinerea Grey Wagtail [642]		Species or species habitat likely to occur within area overfly marine area
Motacilla flava Yellow Wagtail [644]		Species or species habitat likely to occur within area overfly marine area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Numenius minutus Little Curlew, Little Whimbrel [848]		Roosting likely to occur within area overfly marine area
Numenius phaeopus Whimbrel [849]		Roosting likely to occur within area
Onychoprion anaethetus as Sterna anaethetus Bridled Tern [82845]		Breeding likely to occur within area

Scientific Name	Threatened Category	Presence Text
Onychoprion fuscatus as Sterna fuscata Sooty Tern [90682]		Breeding likely to occur within area
Pandion haliaetus Osprey [952]		Breeding likely to occur within area
Papasula abbotti Abbott's Booby [59297]	Endangered	Species or species habitat may occur within area
Phaethon lepturus White-tailed Tropicbird [1014]		Species or species habitat likely to occur within area
Phaethon lepturus fulvus Christmas Island White-tailed Tropicbird, Golden Bosunbird [26021]	Endangered	Species or species habitat may occur within area
Phaethon rubricauda Red-tailed Tropicbird [994]		Species or species habitat likely to occur within area
Pluvialis fulva Pacific Golden Plover [25545]		Roosting likely to occur within area
Pluvialis squatarola Grey Plover [865]	Vulnerable	Roosting likely to occur within area overfly marine area
Recurvirostra novaehollandiae Red-necked Avocet [871]		Roosting likely to occur within area overfly marine area
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area
Sterna dougallii Roseate Tern [817]		Breeding likely to occur within area
Sternula albifrons as Sterna albifrons Little Tern [82849]	Vulnerable	Breeding likely to occur within area

Scientific Name	Threatened Category	Presence Text
Sternula nereis as Sterna nereis Fairy Tern [82949]		Breeding likely to occur within area
Stiltia isabella Australian Pratincole [818]		Roosting likely to occur within area overfly marine area
Sula dactylatra Masked Booby [1021]		Breeding likely to occur within area
Sula leucogaster Brown Booby [1022]		Breeding likely to occur within area
Sula sula Red-footed Booby [1023]		Breeding likely to occur within area
Thalasseus bengalensis as Sterna bengalensis Lesser Crested Tern [66546]		Breeding likely to occur within area
Thalasseus bergii as Sterna bergii Greater Crested Tern [83000]		Breeding likely to occur within area
Tringa brevipes as Heteroscelus brevipes Grey-tailed Tattler [851]		Roosting likely to occur within area
Tringa glareola Wood Sandpiper [829]		Roosting likely to occur within area overfly marine area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area overfly marine area
Tringa stagnatilis Marsh Sandpiper, Little Greenshank [833]		Roosting likely to occur within area overfly marine area
Tringa totanus Common Redshank, Redshank [835]		Roosting likely to occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
[Xenus cinereus](#) Terek Sandpiper [59300]	Vulnerable	Roosting likely to occur within area overfly marine area
Fish		
[Bhanotia fasciolata](#) Corrugated Pipefish, Barbed Pipefish [66188]		Species or species habitat may occur within area
[Campichthys tricarinatus](#) Three-keel Pipefish [66192]		Species or species habitat may occur within area
[Choeroichthys brachysoma](#) Pacific Short-bodied Pipefish, Short-bodied Pipefish [66194]		Species or species habitat may occur within area
[Choeroichthys suillus](#) Pig-snouted Pipefish [66198]		Species or species habitat may occur within area
[Corythoichthys amplexus](#) Fijian Banded Pipefish, Brown-banded Pipefish [66199]		Species or species habitat may occur within area
[Corythoichthys flavofasciatus](#) Yellow-banded Pipefish [66200]		Species or species habitat may occur within area
[Corythoichthys intestinalis](#) Australian Messmate Pipefish, Banded Pipefish [66202]		Species or species habitat may occur within area
[Corythoichthys schultzi](#) Schultz's Pipefish [66205]		Species or species habitat may occur within area
[Cosmocampus banneri](#) Roughridge Pipefish [66206]		Species or species habitat may occur within area
[Doryrhamphus dactyliophorus](#) Banded Pipefish, Ringed Pipefish [66210]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Doryrhamphus excisus Bluestripe Pipefish, Indian Blue-stripe Pipefish, Pacific Blue-stripe Pipefish [66211]		Species or species habitat may occur within area
Doryrhamphus janssi Cleaner Pipefish, Janss' Pipefish [66212]		Species or species habitat may occur within area
Filicampus tigris Tiger Pipefish [66217]		Species or species habitat may occur within area
Halicampus brocki Brock's Pipefish [66219]		Species or species habitat may occur within area
Halicampus dunckeri Red-hair Pipefish, Duncker's Pipefish [66220]		Species or species habitat may occur within area
Halicampus grayi Mud Pipefish, Gray's Pipefish [66221]		Species or species habitat may occur within area
Halicampus nitidus Glittering Pipefish [66224]		Species or species habitat may occur within area
Halicampus spinirostris Spiny-snout Pipefish [66225]		Species or species habitat may occur within area
Haliichthys taeniophora as Haliichthys taeniophorus Ribboned Pipehorse, Ribboned Pipefish, Ribboned Seadragon [94706]		Species or species habitat may occur within area
Hippichthys penicillus Beady Pipefish, Steep-nosed Pipefish [66231]		Species or species habitat may occur within area
Hippocampus angustus Western Spiny Seahorse, Narrow-bellied Seahorse [66234]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Hippocampus histrix Spiny Seahorse, Thorny Seahorse [66236]		Species or species habitat may occur within area
Hippocampus kuda Spotted Seahorse, Yellow Seahorse [66237]		Species or species habitat may occur within area
Hippocampus planifrons Flat-face Seahorse [66238]		Species or species habitat may occur within area
Hippocampus spinosissimus Hedgehog Seahorse [66239]		Species or species habitat may occur within area
Hippocampus trimaculatus Three-spot Seahorse, Low-crowned Seahorse, Flat-faced Seahorse [66720]		Species or species habitat may occur within area
Micrognathus micronotopterus Tidepool Pipefish [66255]		Species or species habitat may occur within area
Solegnathus hardwickii Pallid Pipehorse, Hardwick's Pipehorse [66272]		Species or species habitat may occur within area
Solegnathus lettiensis Gunther's Pipehorse, Indonesian Pipefish [66273]		Species or species habitat may occur within area
Solenostomus cyanopterus Robust Ghostpipefish, Blue-finned Ghost Pipefish, [66183]		Species or species habitat may occur within area
Syngnathoides biaculeatus Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279]		Species or species habitat may occur within area
Trachyrhamphus bicoarctatus Bentstick Pipefish, Bend Stick Pipefish, Short-tailed Pipefish [66280]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Trachyrhamphus longirostris Straightstick Pipefish, Long-nosed Pipefish, Straight Stick Pipefish [66281]		Species or species habitat may occur within area
Mammal		
Dugong dugon Dugong [28]		Foraging, feeding or related behaviour likely to occur within area
Reptile		
Aipysurus apraefrontalis Short-nosed Sea Snake, Short-nosed Seasnake [1115]	Critically Endangered	Species or species habitat likely to occur within area
Aipysurus duboisii Dubois' Sea Snake, Dubois' Seasnake, Reef Shallows Sea Snake [1116]		Species or species habitat may occur within area
Aipysurus foliosquama Leaf-scaled Sea Snake, Leaf-scaled Seasnake [1118]	Critically Endangered	Species or species habitat may occur within area
Aipysurus fuscus Dusky Sea Snake [1119]	Endangered	Species or species habitat likely to occur within area
Aipysurus laevis Olive Sea Snake, Olive-brown Sea Snake [1120]		Species or species habitat may occur within area
Aipysurus mosaicus as Aipysurus eydouxii Mosaic Sea Snake [87261]		Species or species habitat may occur within area
Aipysurus tenuis Brown-lined Sea Snake, Mjoberg's Sea Snake [1121]		Species or species habitat may occur within area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Breeding likely to occur within area

Scientific Name	Threatened Category	Presence Text
Crocodylus johnstoni Freshwater Crocodile, Johnston's Crocodile, Johnstone's Crocodile [1773]		Species or species habitat may occur within area
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Emydocephalus annulatus Eastern Turtle-headed Sea Snake [1125]		Species or species habitat may occur within area
Ephalophis greyae as Ephalophis greyi Mangrove Sea Snake [93738]		Species or species habitat may occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Breeding likely to occur within area
Hydrelaps darwiniensis Port Darwin Sea Snake, Black-ringed Mangrove Sea Snake [1100]		Species or species habitat may occur within area
Hydrophis coggeri Cogger's Sea Snake, Black-headed Sea Snake [25925]		Species or species habitat may occur within area
Hydrophis czeblukovi Fine-spined Sea Snake [59233]		Species or species habitat may occur within area
Hydrophis elegans Elegant Sea Snake, Bar-bellied Sea Snake [1104]		Species or species habitat may occur within area
Hydrophis hardwickii as Lapemis hardwickii Spine-bellied Sea Snake [93516]		Species or species habitat may occur within area
Hydrophis kingii as Disteira kingii Spectacled Sea Snake [93511]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Hydrophis macdowelli as Hydrophis mcdowelli		
MacDowell's Sea Snake, Small-headed Sea Snake, [75601]		Species or species habitat may occur within area
Hydrophis major as Disteira major		
Olive-headed Sea Snake [93512]		Species or species habitat may occur within area
Hydrophis ornatus		
Spotted Sea Snake, Ornate Reef Sea Snake [1111]		Species or species habitat may occur within area
Hydrophis peronii as Acalyptophis peronii		
Horned Sea Snake [93509]		Species or species habitat may occur within area
Hydrophis platura as Pelamis platurus		
Yellow-bellied Sea Snake [93746]		Species or species habitat may occur within area
Hydrophis stokesii as Astrotia stokesii		
Stokes' Sea Snake [93510]		Species or species habitat may occur within area
Hydrophis zweifeli as Enhydrina schistosa		
Australian Beaked Sea Snake [93514]		Species or species habitat may occur within area
Lepidochelys olivacea		
Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Breeding likely to occur within area
Natator depressus		
Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area

Whales and Other Cetaceans		[Resource Information]
Current Scientific Name	Status	Type of Presence
Mammal		
Balaenoptera borealis		
Sei Whale [34]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Balaenoptera edeni		
Bryde's Whale [35]		Species or species habitat likely to occur within area

Current Scientific Name	Status	Type of Presence
[Balaenoptera musculus](#) Blue Whale [36]	Endangered	Migration route known to occur within area
[Balaenoptera omurai](#) Omura's Whale [87136]		Species or species habitat likely to occur within area
[Balaenoptera physalus](#) Fin Whale [37]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
[Delphinus delphis](#) Common Dolphin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area
[Feresa attenuata](#) Pygmy Killer Whale [61]		Species or species habitat may occur within area
[Globicephala macrorhynchus](#) Short-finned Pilot Whale [62]		Species or species habitat may occur within area
[Grampus griseus](#) Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area
[Indopacetus pacificus](#) Longman's Beaked Whale [72]		Species or species habitat may occur within area
[Kogia breviceps](#) Pygmy Sperm Whale [57]		Species or species habitat may occur within area
[Kogia sima](#) Dwarf Sperm Whale [85043]		Species or species habitat may occur within area
[Lagenodelphis hosei](#) Fraser's Dolphin, Sarawak Dolphin [41]		Species or species habitat may occur within area

Current Scientific Name	Status	Type of Presence
Megaptera novaeangliae Humpback Whale [38]		Breeding known to occur within area
Mesoplodon densirostris Blainville's Beaked Whale, Dense-beaked Whale [74]		Species or species habitat may occur within area
Mesoplodon ginkgodens Gingko-toothed Beaked Whale, Gingko-toothed Whale, Gingko Beaked Whale [59564]		Species or species habitat may occur within area
Orcaella heinsohni Australian Snubfin Dolphin [81322]	Vulnerable	Breeding likely to occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Peponocephala electra Melon-headed Whale [47]		Species or species habitat may occur within area
Physeter macrocephalus Sperm Whale [59]		Species or species habitat may occur within area
Pseudorca crassidens False Killer Whale [48]		Species or species habitat likely to occur within area
Sousa sahulensis Australian Humpback Dolphin [87942]	Vulnerable	Breeding likely to occur within area
Stenella attenuata Spotted Dolphin, Pantropical Spotted Dolphin [51]		Species or species habitat may occur within area
Stenella coeruleoalba Striped Dolphin, Euphrosyne Dolphin [52]		Species or species habitat may occur within area
Stenella longirostris Long-snouted Spinner Dolphin [29]		Species or species habitat may occur within area

Current Scientific Name	Status	Type of Presence
Steno bredanensis Rough-toothed Dolphin [30]		Species or species habitat may occur within area
Tursiops aduncus Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat likely to occur within area
Tursiops aduncus (Arafura/Timor Sea populations) Spotted Bottlenose Dolphin (Arafura/Timor Sea populations) [78900]		Species or species habitat likely to occur within area
Tursiops truncatus s. str. Bottlenose Dolphin [68417]		Species or species habitat may occur within area
Ziphius cavirostris Cuvier's Beaked Whale, Goose-beaked Whale [56]		Species or species habitat may occur within area

Australian Marine Parks [Resource Information]

Park Name	Zone & IUCN Categories
Kimberley	Habitat Protection Zone (IUCN IV)
Kimberley	Habitat Protection Zone (IUCN IV)
Argo-Rowley Terrace	Multiple Use Zone (IUCN VI)
Argo-Rowley Terrace	Multiple Use Zone (IUCN VI)
Eighty Mile Beach	Multiple Use Zone (IUCN VI)
Kimberley	Multiple Use Zone (IUCN VI)
Roebuck	Multiple Use Zone (IUCN VI)
Argo-Rowley Terrace	National Park Zone (IUCN II)
Kimberley	National Park Zone (IUCN II)
Mermaid Reef	National Park Zone (IUCN II)
Argo-Rowley Terrace	Special Purpose Zone (Trawl) (IUCN VI)

Habitat Critical to the Survival of Marine Turtles [Resource Information]

Scientific Name	Behaviour	Presence
All year (Jun - Aug)		
Natator depressus		
Flatback Turtle [59257]	Nesting	Known to occur
May - Jul		
Lepidochelys olivacea		
Olive Ridley Turtle [1767]	Nesting	Known to occur
Oct - Mar		
Chelonia mydas		
Green Turtle [1765]	Nesting	Known to occur

Extra Information

State and Territory Reserves		[Resource Information]
Protected Area Name	Reserve Type	State
Adele Island	Nature Reserve	WA
Bardi Jawi Gaarra	Marine Park	WA
Broome Bird Observatory	5(1)(h) Reserve	WA
Broome Wildlife Centre	5(1)(h) Reserve	WA
Coulomb Point	Nature Reserve	WA
Eighty Mile Beach	Marine Park	WA
Jinmarnkur	Conservation Park	WA
Jinmarnkur Kulja	Nature Reserve	WA
Lacepede Islands	Nature Reserve	WA
Lalang-gaddam	Marine Park	WA
Mayala	Marine Park	WA
North Kimberley	Marine Park	WA
Rowley Shoals	Marine Park	WA
Scott Reef	Nature Reserve	WA
Swan Island	Nature Reserve	WA
Tanner Island	Nature Reserve	WA
Unnamed WA28968	5(1)(h) Reserve	WA

Protected Area Name	Reserve Type	State
Unnamed WA37168	5(1)(h) Reserve	WA
Unnamed WA44669	5(1)(h) Reserve	WA
Unnamed WA44673	5(1)(h) Reserve	WA
Unnamed WA51105	5(1)(h) Reserve	WA
Unnamed WA51162	5(1)(h) Reserve	WA
Unnamed WA51497	5(1)(h) Reserve	WA
Unnamed WA51583	5(1)(h) Reserve	WA
Unnamed WA51617	5(1)(h) Reserve	WA
Unnamed WA51932	5(1)(h) Reserve	WA
Unnamed WA52354	5(1)(h) Reserve	WA
Unnamed WA53015	Nature Reserve	WA
Yawuru Nagulagun / Roebuck Bay	Marine Park	WA

EPBC Act Referrals			[Resource Information]
Title of referral	Reference	Referral Outcome	Assessment Status
2 geotechnical surveys - preliminary and final	2006/2886		Completed
Boskalis Cambridge Gulf Marine Sand Sourcing Project	2025/10106		Referral Decision
Broome Wharf Extension Project	2024/09823		Completed
Browse Carbon Capture and Storage Project	2024/10028		Referral Decision
Browse to North West Shelf Development, Indian Ocean, WA	2018/8319		Approval
Cockatoo Island Multi-User Supply Base, WA	2017/7986		Assessment
Deep Water Northwest Shelf 2D Seismic Survey	2007/3260		Completed
Derby Tidal Power Project	2010/5544		Assessment
Koolan Island Operations	2022/09392		Assessment

Title of referral	Reference	Referral Outcome	Assessment Status
Marine Route Survey for Subsea Fibre Optic Data Cable System - Australia West	2024/09826		Completed
Ocean Barramundi Expansion Project	2022/09272		Assessment
Controlled action			
2-D seismic survey Scott Reef	2000/125	Controlled Action	Post-Approval
Broome Boating Facility	2021/9098	Controlled Action	Referral Decision
Browse FLNG Development, Commonwealth Waters	2013/7079	Controlled Action	Post-Approval
Conduct an exploration drilling campaign	2010/5718	Controlled Action	Completed
Derby Tidal Power Proposal	2001/398	Controlled Action	Completed
Develop Ichthys gas-condensate field permit area W	2006/2767	Controlled Action	Completed
Development of Browse Basin Gas Fields (Upstream)	2008/4111	Controlled Action	Completed
Duchess Paradise Project	2011/6033	Controlled Action	Completed
Great Northern Pipeline - 630 km buried gas pipeline	2009/5257	Controlled Action	Completed
Ichthys Gas Field, Offshore and onshore processing facilities and subsea pipeline	2008/4208	Controlled Action	Post-Approval
Iron ore mine	2006/2522	Controlled Action	Post-Approval
Pluton Irvine Island Iron Ore Project	2011/6064	Controlled Action	Proposed Decision
Shamrock Station Irrigation Project, west Kimberley region, WA	2017/8004	Controlled Action	Post-Approval
Torosa South Initial Appraisal Drilling	2007/3500	Controlled Action	Completed
Not controlled action			
3D marine seismic survey in WA 314P and WA 315P	2004/1927	Not Controlled Action	Completed

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action			
Adele Trend TQ3D Seismic Survey	2001/252	Not Controlled Action	Completed
Aquaculture - Barramundi grow out, Yampi Sound	2005/2476	Not Controlled Action	Completed
Drilling of exploration wells, Permit areas WA-301-P to WA-305-P	2002/769	Not Controlled Action	Completed
Establish a 4m wide trace line along the road allignment for James Price Point	2010/5682	Not Controlled Action	Completed
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed
Kimberley Marine Offloading Facility	2020/8736	Not Controlled Action	Completed
Kimberley Multi-commodity Exploration Programme, WA	2013/6839	Not Controlled Action	Completed
Koolan Island Mine - Reconstruction of seawall and capital dewatering of mine pit,130km northwest of	2016/7848	Not Controlled Action	Completed
Marine Seismic Survey in WA-239-P	2000/24	Not Controlled Action	Completed
Port of Broome Channel Optimisation Project, West Roebuck Bay, WA	2018/8162	Not Controlled Action	Completed
Power Station Upgrade	2001/357	Not Controlled Action	Completed
Power Station Upgrade (South Port Site)	2001/414	Not Controlled Action	Completed
WA-295-P Kerr-McGee Exploration Wells	2001/152	Not Controlled Action	Completed
Wastewater Treatment Plant	2008/4545	Not Controlled Action	Completed
Not controlled action (particular manner)			
2D seismic survey in permit areas WA-274P and WA-281P	2004/1521	Not Controlled Action (Particular Manner)	Post-Approval
3D Marine Seismic Survey (WA-482-P, WA-363-P), WA	2013/6761	Not Controlled Action (Particular Manner)	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
3D marine seismic Survey - Maxima 3D MSS	2006/2945	Not Controlled Action (Particular Manner)	Post-Approval
3D Seismic Survey, Browse Basin, WA	2009/5048	Not Controlled Action (Particular Manner)	Post-Approval
3D Seismic Survey, near Scott Reef, Browse Basin	2005/2126	Not Controlled Action (Particular Manner)	Post-Approval
Acacia East Pit Cutback Mining Project,northern Kimberley, WA	2013/6752	Not Controlled Action (Particular Manner)	Post-Approval
Aurora MC3D Marine Seismic Survey	2010/5510	Not Controlled Action (Particular Manner)	Post-Approval
Braveheart 2D Infill Marine Seismic Survey 100km offshore	2008/4442	Not Controlled Action (Particular Manner)	Post-Approval
Braveheart 2D Marine Seismic Survey	2005/2322	Not Controlled Action (Particular Manner)	Post-Approval
Caswell MC3D Marine Seismic Survey	2012/6594	Not Controlled Action (Particular Manner)	Post-Approval
Conduct an exploration drilling campaign	2011/5964	Not Controlled Action (Particular Manner)	Post-Approval
Construction of a 43km long sealed access road to the Browse LNG precinct	2011/5852	Not Controlled Action (Particular Manner)	Post-Approval
Effect of marine seismic sounds to demersal fish and pearl oysters, north-west WA	2018/8169	Not Controlled Action (Particular Manner)	Post-Approval
Endurance 3D Marine Seismic Data Acquisition Survey	2007/3667	Not Controlled Action (Particular	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
		Manner)	
Establishment of AQIS washdown facility, logistics support base and ancillary businesses	2012/6364	Not Controlled Action (Particular Manner)	Post-Approval
Exploration Drilling Program - Permit areas - WA-314-P, WA-315-P, WA-398-P.	2008/4064	Not Controlled Action (Particular Manner)	Post-Approval
Geoscience Australia - Marine survey in Browse Basin to acquire data to assist assessment of CO2 sto	2013/6747	Not Controlled Action (Particular Manner)	Post-Approval
Gigas 2D Pilot Ocean Bottom Cable Marine Seismic Survey	2007/3839	Not Controlled Action (Particular Manner)	Post-Approval
Ichthys 3D Marine Seismic Survey	2010/5550	Not Controlled Action (Particular Manner)	Post-Approval
Kingtree & Ironstone-1 Exploration Wells	2011/5935	Not Controlled Action (Particular Manner)	Post-Approval
Klimt 2D Marine Seismic Survey	2007/3856	Not Controlled Action (Particular Manner)	Post-Approval
Koolama 2D Seismic Survey Dampier Basin	2010/5420	Not Controlled Action (Particular Manner)	Post-Approval
Kraken, Lusca & Asperus 3D Marine Seismic Survey	2013/6730	Not Controlled Action (Particular Manner)	Post-Approval
Mariner Non-Exclusive 2D Seismic Survey	2011/6172	Not Controlled Action (Particular Manner)	Post-Approval
Offshore Canning Multi Client 2D Marine Seismic Survey	2010/5393	Not Controlled Action (Particular Manner)	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
Offshore Exploration Drilling Campaign	2011/6222	Not Controlled Action (Particular Manner)	Post-Approval
Offshore Fibre Optic Cable Network Construction & Operation, Port Hedland WA to Darwin NT	2014/7223	Not Controlled Action (Particular Manner)	Post-Approval
Offshore Gas Exploration Drilling Campaign	2012/6384	Not Controlled Action (Particular Manner)	Post-Approval
Outer Canning exploration drilling program off NW coast of WA	2012/6618	Not Controlled Action (Particular Manner)	Post-Approval
Pilot Appraisal Well - Torosa South 1	2008/3991	Not Controlled Action (Particular Manner)	Post-Approval
Repsol 3d & 2D Marine Seismic Survey	2012/6658	Not Controlled Action (Particular Manner)	Post-Approval
Rosebud 3D Marine Seismic Survey in WA-30-R and TR/5	2012/6493	Not Controlled Action (Particular Manner)	Post-Approval
Schild MC3D Marine Seismic Survey	2012/6373	Not Controlled Action (Particular Manner)	Post-Approval
Schild Phase 11 MC3D Marine Seismic Survey, Browse Basin	2013/6894	Not Controlled Action (Particular Manner)	Post-Approval
Scott Reef Seismic Research	2006/2647	Not Controlled Action (Particular Manner)	Post-Approval
Torosa-5 Apraisal Well, WA-30-R	2008/4430	Not Controlled Action (Particular Manner)	Post-Approval
Tridacna 3D Ocean Bottom Cable Marine Seismic Survey	2011/5959	Not Controlled Action (Particular	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
		Manner)	
Vampire 2D Non Exclusive Seismic Survey, WA	2010/5543	Not Controlled Action (Particular Manner)	Post-Approval
Veritas Voyager 2D Marine Seismic Survey	2009/5151	Not Controlled Action (Particular Manner)	Post-Approval
Westralia SPAN Marine Seismic Survey, WA & NT	2012/6463	Not Controlled Action (Particular Manner)	Post-Approval
Woodside Southern Browse 3D Seismic Survey, WA	2007/3534	Not Controlled Action (Particular Manner)	Post-Approval
Zeemeermin MC3D seismic survey, Browse Basin, Offshore WA	2009/5023	Not Controlled Action (Particular Manner)	Post-Approval
Referral decision			
Aurora extension MC3D Marine Seismic Survey	2011/5887	Referral Decision	Completed
BRSN08 3D Marine Seismic Survey	2008/4582	Referral Decision	Completed
Experimental Study of Behavioural and Physiological Impact on Fish of Seismic Ex	2006/2625	Referral Decision	Completed
Field efficacy trial of the Hisstory bait for feral cats, at Yampi Sound Defence Training Area, Kimb	2017/7977	Referral Decision	Completed
Kimberley Multi-commodity Exploration Program	2013/6780	Referral Decision	Completed
Pilot Appraisal Well - Torosa South-1	2008/3985	Referral Decision	Completed
Seismic Data Acquisition, Browse Basin	2010/5475	Referral Decision	Completed
Tidal Power Generation Turbine	2009/5235	Referral Decision	Completed

Key Ecological Features [Resource Information]

Key Ecological Features are the parts of the marine ecosystem that are considered to be important for the biodiversity or ecosystem functioning and integrity of the Commonwealth Marine Area.

Name	Region
Ancient coastline at 125 m depth contour	North-west
Canyons linking the Argo Abyssal Plain with the Scott Plateau	North-west
Continental Slope Demersal Fish Communities	North-west
Mermaid Reef and Commonwealth waters surrounding Rowley Shoals	North-west
Seringapatam Reef and Commonwealth waters in the Scott Reef Complex	North-west

Biologically Important Areas [Resource Information]

Scientific Name	Behaviour	Presence
Dolphins		
Orcaella heinsohni Australian Snubfin Dolphin [81322]	Foraging	Known to occur
Orcaella heinsohni Australian Snubfin Dolphin [81322]	Reproduction	Known to occur
Orcaella heinsohni Australian Snubfin Dolphin [81322]	Resting	Known to occur
Sousa sahulensis Australian Humpback Dolphin [87942]	Foraging	Likely to occur
Sousa sahulensis Australian Humpback Dolphin [87942]	Reproduction	Likely to occur
Tursiops aduncus Indo-Pacific/Spotted Bottlenose Dolphin [68418]	Foraging	Known to occur
Tursiops aduncus Indo-Pacific/Spotted Bottlenose Dolphin [68418]	Migration	Known to occur
Tursiops aduncus Indo-Pacific/Spotted Bottlenose Dolphin [68418]	Reproduction	Known to occur
Dugong		
Dugong dugon Dugong [28]	Foraging	Known to occur

Scientific Name	Behaviour	Presence
Dugong dugon Dugong [28]	Migration	Known to occur
Marine Turtles		
Caretta caretta Loggerhead Turtle [1763]	Foraging	Known to occur
Chelonia mydas Green Turtle [1765]	Foraging	Known to occur
Chelonia mydas Green Turtle [1765]	Reproduction	Likely to occur
Eretmochelys imbricata Hawksbill Turtle [1766]	Reproduction	Known to occur
Natator depressus Flatback Turtle [59257]	Foraging	Known to occur
Natator depressus Flatback Turtle [59257]	Reproduction	Known to occur
River shark		
Pristis clavata Dwarf Sawfish [68447]	Foraging	Known to occur
Pristis clavata Dwarf Sawfish [68447]	Reproduction	Known to occur
Pristis pristis Largetooth Sawfish [60756]	Foraging	Known to occur
Pristis pristis Largetooth Sawfish [60756]	Reproduction	Known to occur
Pristis zijsron Green Sawfish [68442]	Foraging	Known to occur
Pristis zijsron Green Sawfish [68442]	Reproduction	Known to occur
Seabirds		
Fregata ariel Lesser Frigatebird [1012]	Reproduction	Known to occur

Scientific Name	Behaviour	Presence
Fregata minor Greater Frigatebird [1013]	Reproduction	Known to occur
Phaethon lepturus White-tailed Tropicbird [1014]	Reproduction	Known to occur
Sterna dougallii Roseate Tern [817]	Reproduction	Known to occur
Sterna dougallii Roseate Tern [817]	Resting	Known to occur
Sternula albifrons sinensis Little Tern [82850]	Reproduction	Known to occur
Sternula albifrons sinensis Little Tern [82850]	Resting	Known to occur
Sula leucogaster Brown Booby [1022]	Reproduction	Known to occur
Sula sula Red-footed Booby [1023]	Reproduction	Known to occur
Thalasseus bengalensis Lesser Crested Tern [66546]	Reproduction	Known to occur
Sharks		
Rhincodon typus Whale Shark [66680]	Foraging	Known to occur
Whales		
Balaenoptera musculus brevicauda Pygmy Blue Whale [81317]	Foraging	Likely to be present
Balaenoptera musculus brevicauda Pygmy Blue Whale [81317]	Migration	Known to occur
Megaptera novaeangliae Humpback Whale [38]	Migration	Known to occur
Megaptera novaeangliae Humpback Whale [38]	Reproduction	Known to occur

Scientific Name	Behaviour	Presence
Megaptera novaeangliae		
Humpback Whale [38]	Resting	Known to occur

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data is available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance on the contents of this report.

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions when time permits.

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded breeding sites; and
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management, Northern Territory
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
Forestry Corporation, NSW
-Geoscience Australia
-CSIRO
-Australian Tropical Herbarium, Cairns
-eBird Australia
-Australian Government – Australian Antarctic Data Centre
-Museum and Art Gallery of the Northern Territory
-Australian Government National Environmental Science Program
-Australian Institute of Marine Science
-Reef Life Survey Australia
-American Museum of Natural History
-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
-Tasmanian Museum and Art Gallery, Hobart, Tasmania
-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact us page.

© Commonwealth of Australia
Department of Climate Change, Energy, the Environment and Water
GPO Box 3090
Canberra ACT 2601 Australia
+61 2 6274 1111

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 25-Jun-2026

[Summary](#)
[Details](#)
- [Matters of NES](#)
- [Other Matters Protected by the EPBC Act](#)
- [Extra Information](#)

[Caveat](#)
[Acknowledgements](#)

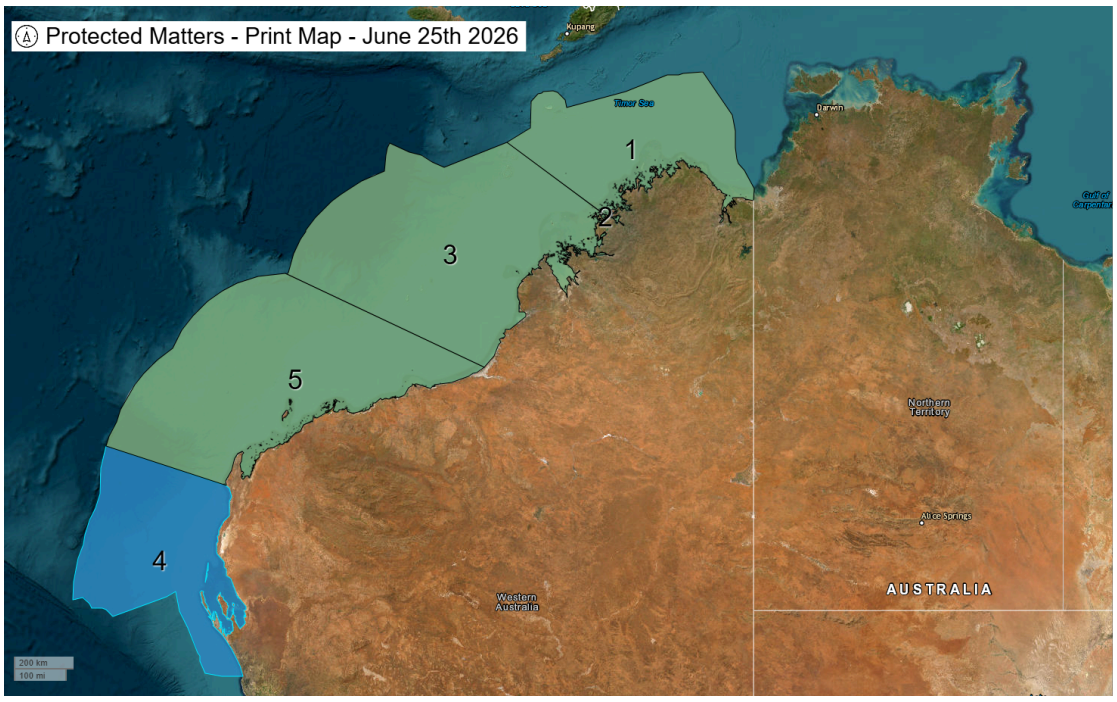


Figure 1: North West Marine Region - South (Part 4)

Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	2
National Heritage Places:	4
Wetlands of International Importance (Ramsar	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	3
Listed Threatened Ecological Communities:	1
Listed Threatened Species:	84
Listed Migratory Species:	80

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at https://www.dcceew.gov.au/parks-heritage/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	7
Commonwealth Heritage Places:	2
Listed Marine Species:	121
Whales and Other Cetaceans:	34
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	14
Habitat Critical to the Survival of Marine Turtles:	2

Extra Information

This part of the report provides information that may also be relevant to the area you have

State and Territory Reserves:	29
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	43
Key Ecological Features (Marine):	6
Biologically Important Areas:	23
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

World Heritage Properties		[Resource Information]
Name	State	Legal Status
Ningaloo Coast	WA	Declared property
Shark Bay, Western Australia	WA	Declared property

National Heritage Places		[Resource Information]
Name	State	Legal Status
Historic		
HMAS Sydney II and HSK Kormoran Shipwreck Sites	EXT	Listed place
Dirk Hartog Landing Site 1616 - Cape Inscription Area	WA	Listed place
Natural		
Shark Bay, Western Australia	WA	Listed place
The Ningaloo Coast	WA	Listed place

Commonwealth Marine Area [Resource Information]

Approval is required for a proposed activity that is located within the Commonwealth Marine Area which has, will have, or is likely to have a significant impact on the environment. Approval may be required for a proposed action taken outside a Commonwealth Marine Area but which has, may have or is likely to have a significant impact on the environment in the Commonwealth Marine Area.

Feature Name
Commonwealth Marine Areas (EPBC Act)
Commonwealth Marine Areas (EPBC Act)
Commonwealth Marine Areas (EPBC Act)

Listed Threatened Ecological Communities [Resource Information]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.
Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.

Community Name	Threatened Category	Presence Text
Subtropical and Temperate Coastal Saltmarsh	Vulnerable	Community likely to occur within area

Listed Threatened Species [Resource Information]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.
Number is the current name ID.

Scientific Name	Threatened Category	Presence Text
BIRD		
Anous tenuirostris melanops Australian Lesser Noddy [26000]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Aphelocephala leucopsis Southern Whiteface [529]	Vulnerable	Species or species habitat likely to occur within area
Arenaria interpres Ruddy Turnstone [872]	Vulnerable	Roosting likely to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat likely to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area
Calidris tenuirostris Great Knot [862]	Vulnerable	Roosting likely to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area
Diomedea amsterdamensis Amsterdam Albatross [64405]	Endangered	Species or species habitat likely to occur within area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Erythrotriorchis radiatus Red Goshawk [942]	Endangered	Species or species habitat may occur within area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area
Leipoa ocellata Malleefowl [934]	Vulnerable	Species or species habitat likely to occur within area
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat likely to occur within area
Limosa lapponica menzbieri Northern Siberian Bar-tailed Godwit, Russkoye Bar-tailed Godwit [86432]	Endangered	Species or species habitat likely to occur within area
Limosa limosa Black-tailed Godwit [845]	Endangered	Roosting likely to occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Malurus leucopterus leucopterus White-winged Fairy-wren (Dirk Hartog Island), Dirk Hartog Black-and-White Fairy-wren [26004]	Vulnerable	Species or species habitat likely to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Pezoporus occidentalis Night Parrot [59350]	Critically Endangered	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Phaethon lepturus fulvus Christmas Island White-tailed Tropicbird, Golden Bosunbird [26021]	Endangered	Species or species habitat may occur within area
Phaethon rubricauda westralis Red-tailed Tropicbird (Indian Ocean), Indian Ocean Red-tailed Tropicbird [91824]	Endangered	Species or species habitat likely to occur within area
Pluvialis squatarola Grey Plover [865]	Vulnerable	Roosting likely to occur within area
Pterodroma mollis Soft-plumaged Petrel [1036]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
Sternula albifrons Little Tern [82849]	Vulnerable	Species or species habitat may occur within area
Sternula nereis nereis Australian Fairy Tern [82950]	Vulnerable	Breeding likely to occur within area
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat may occur within area
Thalassarche cauta Shy Albatross [89224]	Endangered	Species or species habitat may occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
[Thalassarche steadi](#) White-capped Albatross [64462]	Vulnerable	Species or species habitat may occur within area
[Tringa nebularia](#) Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area
[Xenus cinereus](#) Terek Sandpiper [59300]	Vulnerable	Roosting likely to occur within area
[Zanda latirostris listed as Calyptorhynchus latirostris](#) Carnaby's Black Cockatoo, Short-billed Black-cockatoo [87737]	Endangered	Breeding likely to occur within area
FISH		
[Milyeringa veritas](#) Cape Range Cave Gudgeon, Blind Gudgeon [66676]	Vulnerable	Species or species habitat may occur within area
MAMMAL		
[Balaenoptera borealis](#) Sei Whale [34]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
[Balaenoptera musculus](#) Blue Whale [36]	Endangered	Migration route known to occur within area
[Balaenoptera physalus](#) Fin Whale [37]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
[Bettongia lesueur lesueur](#) Burrowing Bettong (Shark Bay), Boodie [66659]	Vulnerable	Translocated population known to occur within area
[Bettongia penicillata ogilbyi](#) Woylie [66844]	Endangered	Species or species habitat likely to occur within area
[Dasyurus geoffroii](#) Chuditch, Western Quoll [330]	Vulnerable	Translocated population known to occur within area

Scientific Name	Threatened Category	Presence Text
Eubalaena australis Southern Right Whale [40]	Endangered	Species or species habitat likely to occur within area
Lagorchestes hirsutus bernieri Rufous Hare-wallaby (Bernier Island) [66662]	Vulnerable	Translocated population known to occur within area
Lagorchestes hirsutus dorreae Rufous Hare-wallaby (Dorre Island) [66663]	Vulnerable	Translocated population known to occur within area
Lagostrophus fasciatus fasciatus Banded Hare-wallaby, Merrnine, Marnine, Munning [66664]	Vulnerable	Translocated population known to occur within area
Leporillus conditor Wopilkara, Greater Stick-nest Rat [137]	Vulnerable	Translocated population known to occur within area
Macrotis lagotis Greater Bilby [282]	Vulnerable	Translocated population known to occur within area
Neophoca cinerea Australian Sea-lion, Australian Sea Lion [22]	Endangered	Species or species habitat may occur within area
Orcaella heinsohni Australian Snubfin Dolphin [81322]	Vulnerable	Species or species habitat may occur within area
Perameles bougainville Shark Bay Bandicoot [278]	Endangered	Translocated population known to occur within area
Petrogale lateralis lateralis Black-flanked Rock-wallaby, Mororong, Black-footed Rock Wallaby [66647]	Endangered	Species or species habitat likely to occur within area
Pseudomys fieldi Shark Bay Mouse, Djoongari, Alice Springs Mouse [113]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Rhinonicteris aurantia (Pilbara form)		
Pilbara Leaf-nosed Bat [82790]	Vulnerable	Species or species habitat may occur within area
Sousa sahulensis		
Australian Humpback Dolphin [87942]	Vulnerable	Species or species habitat likely to occur within area
PLANT		
Androcalva bivillosa		
Straggling Androcalva [87807]	Critically Endangered	Species or species habitat may occur within area
Beyeria lepidopetala		
Small-petalled Beyeria, Short-petalled Beyeria [18362]	Endangered	Species or species habitat likely to occur within area
Caladenia barbarella		
Small Dragon Orchid, Common Dragon Orchid [68686]	Endangered	Species or species habitat may occur within area
Caladenia bryceana subsp. cracens		
Northern Dwarf Spider-orchid [64556]	Vulnerable	Species or species habitat may occur within area
Caladenia elegans		
Elegant Spider-orchid [56775]	Endangered	Species or species habitat may occur within area
Caladenia hoffmanii		
Hoffman's Spider-orchid [56719]	Endangered	Species or species habitat likely to occur within area
Drakaea concolor		
Kneeling Hammer-orchid [56777]	Vulnerable	Species or species habitat likely to occur within area
Eucalyptus beardiana		
Beard's Mallee [18933]	Vulnerable	Species or species habitat likely to occur within area
Lechenaultia chlorantha		
Kalbarri Leschenaultia [16763]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
[Stachystemon nematophorus](#) Three-flowered Stachystemon [81447]	Vulnerable	Species or species habitat likely to occur within area
[Wurmbea tubulosa](#) Long-flowered Nancy [12739]	Endangered	Species or species habitat may occur within area
REPTILE		
[Aipysurus apraefrontalis](#) Short-nosed Sea Snake, Short-nosed Seasnake [1115]	Critically Endangered	Species or species habitat likely to occur within area
[Aipysurus foliosquama](#) Leaf-scaled Sea Snake, Leaf-scaled Seasnake [1118]	Critically Endangered	Species or species habitat likely to occur within area
[Caretta caretta](#) Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
[Chelonia mydas](#) Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
[Ctenotus zastictus](#) Hamelin Ctenotus [25570]	Vulnerable	Species or species habitat likely to occur within area
[Dermochelys coriacea](#) Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
[Egernia stokesii badia](#) Western Spiny-tailed Skink, Baudin Island Spiny-tailed Skink [64483]	Endangered	Species or species habitat likely to occur within area
[Eretmochelys imbricata](#) Hawksbill Turtle [1766]	Vulnerable	Breeding likely to occur within area
[Natator depressus](#) Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area
SHARK		
[Carcharias taurus (west coast population)](#) Grey Nurse Shark (west coast population) [68752]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat likely to occur within area
Centrophorus uyato Little Gulper Shark [68446]	Conservation Dependent	Species or species habitat likely to occur within area
Pristis pristis Largetooth Sawfish, Freshwater Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Endangered	Species or species habitat may occur within area
Pristis zijsron Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Breeding likely to occur within area
Rhincodon typus Whale Shark [66680]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Sphyrna lewini Scalloped Hammerhead [85267]	Conservation Dependent	Species or species habitat likely to occur within area
SPIDER		
Idiosoma nigrum Shield-backed Trapdoor Spider, Black Rugose Trapdoor Spider [66798]	Vulnerable	Species or species habitat likely to occur within area

Listed Migratory Species [Resource Information]

Scientific Name	Threatened Category	Presence Text
null		
Balaenoptera omurai Omura's Whale [87136]		Species or species habitat likely to occur within area
Migratory Marine Birds		
Anous stolidus Common Noddy [825]		Species or species habitat likely to occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Ardenna carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [82404]		Foraging, feeding or related behaviour likely to occur within area
Ardenna pacifica Wedge-tailed Shearwater [84292]		Breeding likely to occur within area
Diomedea amsterdamensis Amsterdam Albatross [64405]	Endangered	Species or species habitat likely to occur within area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Species or species habitat may occur within area
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area
Hydroprogne caspia Caspian Tern [808]		Breeding likely to occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Onychoprion anaethetus Bridled Tern [82845]		Breeding likely to occur within area
Phaethon lepturus White-tailed Tropicbird [1014]		Species or species habitat may occur within area
Phaethon rubricauda Red-tailed Tropicbird [994]		Species or species habitat may occur within area
Sterna dougallii Roseate Tern [817]		Breeding likely to occur within area

Scientific Name	Threatened Category	Presence Text
Sternula albifrons Little Tern [82849]	Vulnerable	Species or species habitat may occur within area
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat may occur within area
Thalassarche cauta Shy Albatross [89224]	Endangered	Species or species habitat may occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable	Species or species habitat may occur within area
Migratory Marine Species		
Balaenoptera bonaerensis Antarctic Minke Whale, Dark-shoulder Minke Whale [67812]		Species or species habitat likely to occur within area
Balaenoptera borealis Sei Whale [34]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat likely to occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Migration route known to occur within area
Balaenoptera physalus Fin Whale [37]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area

Scientific Name	Threatened Category	Presence Text
Carcharhinus longimanus Oceanic Whitetip Shark [84108]		Species or species habitat likely to occur within area
Carcharias taurus Grey Nurse Shark [64469]		Species or species habitat likely to occur within area
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat likely to occur within area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat may occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Dugong dugon Dugong [28]		Species or species habitat likely to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Breeding likely to occur within area
Eubalaena australis as Balaena glacialis australis Southern Right Whale [40]	Endangered	Species or species habitat likely to occur within area
Isurus oxyrinchus Shortfin Mako, Mako Shark [79073]		Species or species habitat likely to occur within area
Isurus paucus Longfin Mako [82947]		Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Lamna nasus Porbeagle, Mackerel Shark [83288]		Species or species habitat may occur within area
Megaptera novaeangliae Humpback Whale [38]		Breeding known to occur within area
Mobula alfredi as Manta alfredi Reef Manta Ray, Coastal Manta Ray [90033]		Species or species habitat likely to occur within area
Mobula birostris as Manta birostris Giant Manta Ray [90034]		Species or species habitat likely to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area
Orcaella heinsohni Australian Snubfin Dolphin [81322]	Vulnerable	Species or species habitat may occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Physeter macrocephalus Sperm Whale [59]		Species or species habitat may occur within area
Pristis pristis Largetooth Sawfish, Freshwater Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Endangered	Species or species habitat may occur within area
Pristis zijsron Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Breeding likely to occur within area
Rhincodon typus Whale Shark [66680]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Sousa sahulensis as Sousa chinensis Australian Humpback Dolphin [87942]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Migratory Terrestrial Species		
Hirundo rustica Barn Swallow [662]		Species or species habitat likely to occur within area
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area
Motacilla flava Yellow Wagtail [644]		Species or species habitat likely to occur within area
Migratory Wetlands Species		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat likely to occur within area
Arenaria interpres Ruddy Turnstone [872]	Vulnerable	Roosting likely to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area
Calidris alba Sanderling [875]		Roosting likely to occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat likely to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat likely to occur within area
Calidris ruficollis Red-necked Stint [860]		Roosting likely to occur within area
Calidris tenuirostris Great Knot [862]	Vulnerable	Roosting likely to occur within area

Scientific Name	Threatened Category	Presence Text
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area
Charadrius veredus Oriental Plover, Oriental Dotterel [882]		Species or species habitat may occur within area
Gallinago megala Swinhoe's Snipe [864]		Roosting likely to occur within area
Gallinago stenura Pin-tailed Snipe [841]		Roosting likely to occur within area
Glareola maldivarum Oriental Pratincole [840]		Species or species habitat may occur within area
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat likely to occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat likely to occur within area
Limosa limosa Black-tailed Godwit [845]	Endangered	Roosting likely to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Numenius minutus Little Curlew, Little Whimbrel [848]		Roosting likely to occur within area
Numenius phaeopus Whimbrel [849]		Roosting likely to occur within area
Pandion haliaetus Osprey [952]		Breeding likely to occur within area
Pluvialis squatarola Grey Plover [865]	Vulnerable	Roosting likely to occur within area

Scientific Name	Threatened Category	Presence Text
Thalasseus bergii		
Greater Crested Tern [83000]		Breeding likely to occur within area
Tringa brevipes		
Grey-tailed Tattler [851]		Roosting likely to occur within area
Tringa glareola		
Wood Sandpiper [829]		Roosting likely to occur within area
Tringa nebularia		
Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area
Xenus cinereus		
Terek Sandpiper [59300]	Vulnerable	Roosting likely to occur within area

Other Matters Protected by the EPBC Act

Commonwealth Lands [Resource Information]

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Commonwealth Land Name	State
Australian Postal Corporation	
Lot 1 S018861 [AGPR7043]	WA
Department of Climate Change, Energy, the Environment and Water	
HMAS Sydney II and HSK Kormoran Shipwreck Sites [CHL_106062]	EXT
Ningaloo Marine Area - Commonwealth Waters [CHL_105548]	WA
Department of Defence	
JORN Radar Site - Carnarvon [DD_3382]	WA
Department of Home Affairs	
Lot 615 P023695 [AGPR6093]	WA
Lot827 DP55249 [AGPR6100]	WA
Services Australia	
Lot 345 D054621 [AGPR4717]	WA

Commonwealth Heritage Places [Resource Information]

Name	State	Status
Historic		

Name	State	Status
HMAS Sydney II and HSK Kormoran Shipwreck Sites	EXT	Listed place
Natural		
Ningaloo Marine Area - Commonwealth Waters	WA	Listed place

Listed Marine Species

[Resource Information]

Scientific Name	Threatened Category	Presence Text
Bird		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat likely to occur within area
Anous stolidus Common Noddy [825]		Species or species habitat likely to occur within area
Anous tenuirostris melanops Australian Lesser Noddy [26000]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area
Ardenna carneipes as Puffinus carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [82404]		Foraging, feeding or related behaviour likely to occur within area
Ardenna pacifica as Puffinus pacificus Wedge-tailed Shearwater [84292]		Breeding likely to occur within area
Arenaria interpres Ruddy Turnstone [872]	Vulnerable	Roosting likely to occur within area
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Calidris alba Sanderling [875]		Roosting likely to occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat likely to occur within area overfly marine area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area overfly marine area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat likely to occur within area overfly marine area
Calidris ruficollis Red-necked Stint [860]		Roosting likely to occur within area overfly marine area
Calidris tenuirostris Great Knot [862]	Vulnerable	Roosting likely to occur within area overfly marine area
Chalcites osculans as Chrysococcyx osculans Black-eared Cuckoo [83425]		Species or species habitat likely to occur within area overfly marine area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area
Charadrius ruficapillus Red-capped Plover [881]		Roosting likely to occur within area overfly marine area
Charadrius veredus Oriental Plover, Oriental Dotterel [882]		Species or species habitat may occur within area overfly marine area
Chroicocephalus novaehollandiae as Larus novaehollandiae Silver Gull [82326]		Breeding likely to occur within area

Scientific Name	Threatened Category	Presence Text
Diomedea amsterdamensis Amsterdam Albatross [64405]	Endangered	Species or species habitat likely to occur within area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Species or species habitat may occur within area
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area
Gallinago megala Swinhoe's Snipe [864]		Roosting likely to occur within area overfly marine area
Gallinago stenura Pin-tailed Snipe [841]		Roosting likely to occur within area overfly marine area
Glareola maldivarum Oriental Pratincole [840]		Species or species habitat may occur within area overfly marine area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Breeding likely to occur within area
Himantopus himantopus Pied Stilt, Black-winged Stilt [870]		Roosting likely to occur within area overfly marine area
Hirundo rustica Barn Swallow [662]		Species or species habitat likely to occur within area overfly marine area
Hydroprogne caspia as Sterna caspia Caspian Tern [808]		Breeding likely to occur within area
Larus pacificus Pacific Gull [811]		Breeding likely to occur within area

Scientific Name	Threatened Category	Presence Text
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat likely to occur within area overfly marine area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat likely to occur within area
Limosa limosa Black-tailed Godwit [845]	Endangered	Roosting likely to occur within area overfly marine area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area overfly marine area
Motacilla flava Yellow Wagtail [644]		Species or species habitat likely to occur within area overfly marine area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Numenius minutus Little Curlew, Little Whimbrel [848]		Roosting likely to occur within area overfly marine area
Numenius phaeopus Whimbrel [849]		Roosting likely to occur within area

Scientific Name	Threatened Category	Presence Text
Onychoprion anaethetus as Sterna anaethetus Bridled Tern [82845]		Breeding likely to occur within area
Onychoprion fuscatus as Sterna fuscata Sooty Tern [90682]		Breeding likely to occur within area
Pandion haliaetus Osprey [952]		Breeding likely to occur within area
Phaethon lepturus White-tailed Tropicbird [1014]		Species or species habitat may occur within area
Phaethon lepturus fulvus Christmas Island White-tailed Tropicbird, Golden Bosunbird [26021]	Endangered	Species or species habitat may occur within area
Phaethon rubricauda Red-tailed Tropicbird [994]		Species or species habitat may occur within area
Pluvialis squatarola Grey Plover [865]	Vulnerable	Roosting likely to occur within area overfly marine area
Pterodroma macroptera Great-winged Petrel [1035]		Foraging, feeding or related behaviour known to occur within area
Pterodroma mollis Soft-plumaged Petrel [1036]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Puffinus assimilis Little Shearwater [59363]		Foraging, feeding or related behaviour known to occur within area
Recurvirostra novaehollandiae Red-necked Avocet [871]		Roosting likely to occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Rostratula australis as Rostratula benghalensis (sensu lato)		
Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area
Stercorarius antarcticus as Catharacta skua		
Brown Skua [85039]		Species or species habitat may occur within area
Sterna dougallii		
Roseate Tern [817]		Breeding likely to occur within area
Sternula albifrons as Sterna albifrons		
Little Tern [82849]	Vulnerable	Species or species habitat may occur within area
Sternula nereis as Sterna nereis		
Fairy Tern [82949]		Breeding likely to occur within area
Thalassarche carteri		
Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat may occur within area
Thalassarche cauta		
Shy Albatross [89224]	Endangered	Species or species habitat may occur within area
Thalassarche impavida		
Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
Thalassarche melanophris		
Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
Thalassarche steadi		
White-capped Albatross [64462]	Vulnerable	Species or species habitat may occur within area
Thalasseus bengalensis as Sterna bengalensis		
Lesser Crested Tern [66546]		Breeding likely to occur within area
Thalasseus bergii as Sterna bergii		
Greater Crested Tern [83000]		Breeding likely to occur within area

Scientific Name	Threatened Category	Presence Text
Tringa brevipes as Heteroscelus brevipes		
Grey-tailed Tattler [851]		Roosting likely to occur within area
Tringa glareola		
Wood Sandpiper [829]		Roosting likely to occur within area overfly marine area
Tringa nebularia		
Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area overfly marine area
Xenus cinereus		
Terek Sandpiper [59300]	Vulnerable	Roosting likely to occur within area overfly marine area
Fish		
Bulbonaricus brauni		
Braun's Pughead Pipefish, Pug-headed Pipefish [66189]		Species or species habitat may occur within area
Campichthys galei		
Gale's Pipefish [66191]		Species or species habitat may occur within area
Choeroichthys brachysoma		
Pacific Short-bodied Pipefish, Short-bodied Pipefish [66194]		Species or species habitat may occur within area
Choeroichthys suillus		
Pig-snouted Pipefish [66198]		Species or species habitat may occur within area
Doryrhamphus negrosensis		
Flagtail Pipefish, Masthead Island Pipefish [66213]		Species or species habitat may occur within area
Festucalex scalaris		
Ladder Pipefish [66216]		Species or species habitat may occur within area
Filicampus tigris		
Tiger Pipefish [66217]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Halicampus brocki Brock's Pipefish [66219]		Species or species habitat may occur within area
Halicampus spinirostris Spiny-snout Pipefish [66225]		Species or species habitat may occur within area
Haliichthys taeniophora as Haliichthys taeniophorus Ribboned Pipehorse, Ribboned Pipefish, Ribboned Seadragon [94706]		Species or species habitat may occur within area
Hippocampus angustus Western Spiny Seahorse, Narrow-bellied Seahorse [66234]		Species or species habitat may occur within area
Hippocampus breviceps Short-head Seahorse, Short-snouted Seahorse [66235]		Species or species habitat may occur within area
Hippocampus histrix Spiny Seahorse, Thorny Seahorse [66236]		Species or species habitat may occur within area
Hippocampus planifrons Flat-face Seahorse [66238]		Species or species habitat may occur within area
Hippocampus subelongatus West Australian Seahorse [66722]		Species or species habitat may occur within area
Hippocampus trimaculatus Three-spot Seahorse, Low-crowned Seahorse, Flat-faced Seahorse [66720]		Species or species habitat may occur within area
Idiotropiscis australe as Acentronura australe Southern Pygmy Pipehorse [74958]		Species or species habitat may occur within area
Lissocampus fatiloquus Prophet's Pipefish [66250]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Maroubra perserrata Sawtooth Pipefish [66252]		Species or species habitat may occur within area
Micrognathus micronotopterus Tidepool Pipefish [66255]		Species or species habitat may occur within area
Mitotichthys meraculus Western Crested Pipefish [66259]		Species or species habitat may occur within area
Nannocampus subosseus Bonyhead Pipefish, Bony-headed Pipefish [66264]		Species or species habitat may occur within area
Phycodurus eques Leafy Seadragon [66267]		Species or species habitat may occur within area
Phyllopteryx taeniolatus Common Seadragon, Weedy Seadragon [66268]		Species or species habitat may occur within area
Pugnaso curtirostris Pugnose Pipefish, Pug-nosed Pipefish [66269]		Species or species habitat may occur within area
Solegnathus lettiensis Gunther's Pipehorse, Indonesian Pipefish [66273]		Species or species habitat may occur within area
Solenostomus cyanopterus Robust Ghostpipefish, Blue-finned Ghost Pipefish, [66183]		Species or species habitat may occur within area
Stigmatopora argus Spotted Pipefish, Gulf Pipefish, Peacock Pipefish [66276]		Species or species habitat may occur within area
Stigmatopora nigra Widebody Pipefish, Wide-bodied Pipefish, Black Pipefish [66277]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
[Syngnathoides biaculeatus](#) Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279]		Species or species habitat may occur within area
[Trachyrhamphus bicoarctatus](#) Bentstick Pipefish, Bend Stick Pipefish, Short-tailed Pipefish [66280]		Species or species habitat may occur within area
[Trachyrhamphus longirostris](#) Straightstick Pipefish, Long-nosed Pipefish, Straight Stick Pipefish [66281]		Species or species habitat may occur within area
[Urocampus carinirostris](#) Hairy Pipefish [66282]		Species or species habitat may occur within area
[Vanacampus margaritifer](#) Mother-of-pearl Pipefish [66283]		Species or species habitat may occur within area
Mammal		
[Dugong dugon](#) Dugong [28]		Species or species habitat likely to occur within area
[Neophoca cinerea](#) Australian Sea-lion, Australian Sea Lion [22]	Endangered	Species or species habitat may occur within area
Reptile		
[Aipysurus apraefrontalis](#) Short-nosed Sea Snake, Short-nosed Seasnake [1115]	Critically Endangered	Species or species habitat likely to occur within area
[Aipysurus foliosquama](#) Leaf-scaled Sea Snake, Leaf-scaled Seasnake [1118]	Critically Endangered	Species or species habitat likely to occur within area
[Aipysurus laevis](#) Olive Sea Snake, Olive-brown Sea Snake [1120]		Species or species habitat may occur within area
[Aipysurus pooleorum](#) Shark Bay Sea Snake [66061]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Caretta caretta Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat may occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Emydocephalus annulatus Eastern Turtle-headed Sea Snake [1125]		Species or species habitat may occur within area
Ephalophis greyae as Ephalophis greyi Mangrove Sea Snake [93738]		Species or species habitat may occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Breeding likely to occur within area
Hydrophis elegans Elegant Sea Snake, Bar-bellied Sea Snake [1104]		Species or species habitat may occur within area
Hydrophis kingii as Disteira kingii Spectacled Sea Snake [93511]		Species or species habitat may occur within area
Hydrophis major as Disteira major Olive-headed Sea Snake [93512]		Species or species habitat may occur within area
Hydrophis platura as Pelamis platurus Yellow-bellied Sea Snake [93746]		Species or species habitat may occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area

Whales and Other Cetaceans		[Resource Information]
Current Scientific Name	Status	Type of Presence

Current Scientific Name	Status	Type of Presence
Mammal		
Balaenoptera acutorostrata Minke Whale [33]		Species or species habitat may occur within area
Balaenoptera bonaerensis Antarctic Minke Whale, Dark-shoulder Minke Whale [67812]		Species or species habitat likely to occur within area
Balaenoptera borealis Sei Whale [34]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat likely to occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Migration route known to occur within area
Balaenoptera omurai Omura's Whale [87136]		Species or species habitat likely to occur within area
Balaenoptera physalus Fin Whale [37]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Delphinus delphis Common Dolphin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area
Eubalaena australis Southern Right Whale [40]	Endangered	Species or species habitat likely to occur within area
Feresa attenuata Pygmy Killer Whale [61]		Species or species habitat may occur within area
Globicephala macrorhynchus Short-finned Pilot Whale [62]		Species or species habitat may occur within area

Current Scientific Name	Status	Type of Presence
Globicephala melas Long-finned Pilot Whale [59282]		Species or species habitat may occur within area
Grampus griseus Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area
Indopacetus pacificus Longman's Beaked Whale [72]		Species or species habitat may occur within area
Kogia breviceps Pygmy Sperm Whale [57]		Species or species habitat may occur within area
Kogia sima Dwarf Sperm Whale [85043]		Species or species habitat may occur within area
Lagenodelphis hosei Fraser's Dolphin, Sarawak Dolphin [41]		Species or species habitat may occur within area
Megaptera novaeangliae Humpback Whale [38]		Breeding known to occur within area
Mesoplodon densirostris Blainville's Beaked Whale, Dense-beaked Whale [74]		Species or species habitat may occur within area
Mesoplodon ginkgodens Gingko-toothed Beaked Whale, Gingko-toothed Whale, Gingko Beaked Whale [59564]		Species or species habitat may occur within area
Mesoplodon grayi Gray's Beaked Whale, Scamperdown Whale [75]		Species or species habitat may occur within area
Orcaella heinsohni Australian Snubfin Dolphin [81322]	Vulnerable	Species or species habitat may occur within area

Current Scientific Name	Status	Type of Presence
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Peponocephala electra Melon-headed Whale [47]		Species or species habitat may occur within area
Physeter macrocephalus Sperm Whale [59]		Species or species habitat may occur within area
Pseudorca crassidens False Killer Whale [48]		Species or species habitat likely to occur within area
Sousa sahulensis Australian Humpback Dolphin [87942]	Vulnerable	Species or species habitat likely to occur within area
Stenella attenuata Spotted Dolphin, Pantropical Spotted Dolphin [51]		Species or species habitat may occur within area
Stenella coeruleoalba Striped Dolphin, Euphrosyne Dolphin [52]		Species or species habitat may occur within area
Stenella longirostris Long-snouted Spinner Dolphin [29]		Species or species habitat may occur within area
Steno bredanensis Rough-toothed Dolphin [30]		Species or species habitat may occur within area
Tursiops aduncus Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat likely to occur within area
Tursiops truncatus s. str. Bottlenose Dolphin [68417]		Species or species habitat may occur within area

Current Scientific Name	Status	Type of Presence
Ziphius cavirostris Cuvier's Beaked Whale, Goose-beaked Whale [56]		Species or species habitat may occur within area

Australian Marine Parks [Resource Information]

Park Name	Zone & IUCN Categories
Abrolhos	Habitat Protection Zone (IUCN IV)
Carnarvon Canyon	Habitat Protection Zone (IUCN IV)
Gascoyne	Habitat Protection Zone (IUCN IV)
Gascoyne	Habitat Protection Zone (IUCN IV)
Abrolhos	Multiple Use Zone (IUCN VI)
Abrolhos	Multiple Use Zone (IUCN VI)
Gascoyne	Multiple Use Zone (IUCN VI)
Shark Bay	Multiple Use Zone (IUCN VI)
Abrolhos	National Park Zone (IUCN II)
Gascoyne	National Park Zone (IUCN II)
Ningaloo	National Park Zone (IUCN II)
Ningaloo	Recreational Use Zone (IUCN IV)
Ningaloo	Recreational Use Zone (IUCN IV)
Abrolhos	Special Purpose Zone (IUCN VI)

Habitat Critical to the Survival of Marine Turtles [Resource Information]

Scientific Name	Behaviour	Presence
Nov-Feb		
Caretta caretta Loggerhead Turtle [1763]	Nesting	Known to occur
Oct - Mar		

Scientific Name	Behaviour	Presence
Chelonia mydas Green Turtle [1765]	Nesting	Known to occur

Extra Information

State and Territory Reserves		[Resource Information]
Protected Area Name	Reserve Type	State
Bernier And Dorre Islands	Nature Reserve	WA
Cape Range (South)	National Park	WA
Chinamans Pool	Nature Reserve	WA
Dirk Hartog Island	National Park	WA
Faure Island	Private Nature Reserve	WA
Francois Peron	National Park	WA
Freycinet, Double Islands etc	Nature Reserve	WA
Hamelin Pool	Marine Nature Reserve	WA
Hamelin Station	Conservation Reserve	WA
Kalbarri	National Park	WA
Koks Island	Nature Reserve	WA
Monkey Mia Reserve	5(1)(h) Reserve	WA
Nanga Station	NRS Addition - Gazettal in Progress	WA
Ningaloo	Marine Park	WA
Nyingguulu (Ningaloo) Coastal Reserve	5(1)(h) Reserve	WA
One Tree Point	Nature Reserve	WA
Part Murchison house	NRS Addition - Gazettal in Progress	WA
Sedimentary Deposits Reserve	5(1)(g) Reserve	WA

Protected Area Name	Reserve Type	State
Shark Bay	Marine Park	WA
Shell Beach	Conservation Park	WA
Tamala Pastoral Lease (Part)	NRS Addition - Gazettal in Progress	WA
Unnamed WA26400	5(1)(h) Reserve	WA
Unnamed WA37338	5(1)(h) Reserve	WA
Unnamed WA37383	5(1)(h) Reserve	WA
Unnamed WA37500	5(1)(g) Reserve	WA
Unnamed WA44688	5(1)(h) Reserve	WA
Unnamed WA49144	Conservation Park	WA
Yaringga	NRS Addition - Gazettal in Progress	WA
Zuytdorp	Nature Reserve	WA

EPBC Act Referrals			[Resource Information]
Title of referral	Reference	Referral Outcome	Assessment Status
Marine Route Survey for Subsea Fibre Optic Data Cable System - Australia West	2024/09826		Completed
Midwest Offshore Wind Farm	2022/09264		Assessment
Monkey Mia Dolphin Resort Solar Farm	2023/09700		Referral Decision
Murchison Hydrogen Renewables Project	2022/09217		Assessment
Controlled action			
Boating Facility	2002/830	Controlled Action	Completed
Coburn Mineral Sand Project	2003/1221	Controlled Action	Post-Approval
Mauds Landing Marina	2000/98	Controlled Action	Completed
Nava-1 Cable System	2001/510	Controlled Action	Completed

Title of referral	Reference	Referral Outcome	Assessment Status
Controlled action			
Shark Bay Resources Dredging	2020/8717	Controlled Action	Post-Approval
Shark Bay Salt Facilities upgrade for direct ocean disposal of bitterns discharge	2011/5984	Controlled Action	Completed
Not controlled action			
Accommodation Units Sunday Island Bay, Dirk Hartog Island, WA	2015/7540	Not Controlled Action	Completed
APX-West Fibre-optic telecommunications cable system, WA to Singapore	2013/7102	Not Controlled Action	Completed
archaeological surveys & excavation at historic sites, Cape Inscription	2006/3027	Not Controlled Action	Completed
Boating Facility	2002/832	Not Controlled Action	Completed
Carnarvon Power Station Development Project	2010/5669	Not Controlled Action	Completed
Clearing of vegetation for borrow pit and infrastructure areas	2017/7947	Not Controlled Action	Completed
Drilling between Kalbarri and Cliff Head	2005/2185	Not Controlled Action	Completed
Expansion of Monkey Mia Resort	2003/1146	Not Controlled Action	Completed
Extention to the existing Blind Strait Black Lip Pearl Oyster Farm	2004/1342	Not Controlled Action	Completed
Flood Management works	2006/3127	Not Controlled Action	Completed
Hadda 1,Flying Foam 1,Magnat 1 exploration drill	2004/1697	Not Controlled Action	Completed
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed
INDIGO West Submarine Telecommunications Cable, WA	2017/8126	Not Controlled Action	Completed
Realignment of Access track, Bottle Bay, Shark Bay	2004/1780	Not Controlled Action	Completed
Useless Loop Road Upgrade	2000/83	Not Controlled Action	Completed
Not controlled action (particular manner)			

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
2D seismic survey	2008/4493	Not Controlled Action (Particular Manner)	Post-Approval
Acheron Non-Exclusive 2D Seismic Survey	2009/4968	Not Controlled Action (Particular Manner)	Post-Approval
Acheron Non-Exclusive 2D Seismic Survey	2008/4565	Not Controlled Action (Particular Manner)	Post-Approval
Australia to Singapore Fibre Optic Submarine Cable System	2011/6127	Not Controlled Action (Particular Manner)	Post-Approval
Coverack Marine Seismic Survey	2001/399	Not Controlled Action (Particular Manner)	Post-Approval
Guacamole 2D Marine Seismic Survey	2008/4381	Not Controlled Action (Particular Manner)	Post-Approval
INDIGO Marine Cable Route Survey (INDIGO)	2017/7996	Not Controlled Action (Particular Manner)	Post-Approval
Laying a submarine optical fibre telecommunications cable, Perth to Singapore and Jakarta	2014/7332	Not Controlled Action (Particular Manner)	Post-Approval
Marine reconnaissance survey	2008/4466	Not Controlled Action (Particular Manner)	Post-Approval
Quiberon 2D Seismic Survey, permit area WA-385P, offshore of Carnarvon	2009/5077	Not Controlled Action (Particular Manner)	Post-Approval
Sampling of Stromatolites, additional sites, Mamelin Pool,WA	2013/7071	Not Controlled Action (Particular Manner)	Post-Approval
Sampling of Stromatolites and Sediments	2012/6307	Not Controlled Action (Particular	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
		Manner)	
Supply of road building material areas Shark Bay Region WA	2012/6280	Not Controlled Action (Particular Manner)	Post-Approval
Tortilla 2D Seismic Survey, WA	2011/6110	Not Controlled Action (Particular Manner)	Post-Approval
Useless Loop Port Maintenance Works and Infrastructure Upgrade	2009/4791	Not Controlled Action (Particular Manner)	Post-Approval
Westralia SPAN Marine Seismic Survey, WA & NT	2012/6463	Not Controlled Action (Particular Manner)	Post-Approval
Referral decision			
Geoscientific field-trip to Shark Bay	2012/6380	Referral Decision	Completed
Power Station Development	2009/4957	Referral Decision	Completed

Key Ecological Features [Resource Information]

Key Ecological Features are the parts of the marine ecosystem that are considered to be important for the biodiversity or ecosystem functioning and integrity of the Commonwealth Marine Area.

Name	Region
Ancient coastline at 90-120m depth	South-west
Canyons linking the Cuvier Abyssal Plain and the Cape Range Peninsula	North-west
Commonwealth waters adjacent to Ningaloo Reef	North-west
Wallaby Saddle	North-west
Western demersal slope and associated fish communities	South-west
Western rock lobster	South-west

Biologically Important Areas [Resource Information]

Scientific Name	Behaviour	Presence
Dugong		

Scientific Name	Behaviour	Presence
Dugong dugon Dugong [28]	Foraging	Known to occur
Dugong dugon Dugong [28]	Migration	Known to occur
Dugong dugon Dugong [28]	Reproduction	Known to occur
Marine Turtles		
Caretta caretta Loggerhead Turtle [1763]	Reproduction	Low density
Eretmochelys imbricata Hawksbill Turtle [1766]	Reproduction	Known to occur
Seabirds		
Ardenna pacifica Wedge-tailed Shearwater [84292]	Foraging	Known to occur
Ardenna pacifica Wedge-tailed Shearwater [84292]	Reproduction	Known to occur
Hydroprogne caspia Caspian Tern [808]	Foraging	Known to occur
Larus pacificus Pacific Gull [811]	Foraging	Known to occur
Onychoprion anaethetus Bridled Tern [82845]	Foraging	Likely to occur
Onychoprion fuscatus Sooty Tern [90682]	Foraging	Known to occur
Pelagodroma marina White-faced Storm-petrel [1016]	Foraging	Known to occur
Puffinus assimilis Little Shearwater [59363]	Foraging	Likely to occur
Sterna dougallii Roseate Tern [817]	Reproduction	Known to occur

Scientific Name	Behaviour	Presence
Sternula nereis Fairy Tern [82949]	Reproduction	Known to occur
Thalasseus bengalensis Lesser Crested Tern [66546]	Reproduction	Known to occur
Sharks		
Rhincodon typus Whale Shark [66680]	Foraging	Known to occur
Whales		
Balaenoptera musculus brevicauda Pygmy Blue Whale [81317]	Foraging	Likely to be present
Balaenoptera musculus brevicauda Pygmy Blue Whale [81317]	Migration	Known to occur
Eubalaena australis Southern Right Whale [40]	Migration	
Eubalaena australis Southern Right Whale [40]	Reproduction	
Megaptera novaeangliae Humpback Whale [38]	Migration	Known to occur
Megaptera novaeangliae Humpback Whale [38]	Resting	Known to occur

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data is available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance on the contents of this report.

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions when time permits.

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded breeding sites; and
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management, Northern Territory
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
Forestry Corporation, NSW
-Geoscience Australia
-CSIRO
-Australian Tropical Herbarium, Cairns
-eBird Australia
-Australian Government – Australian Antarctic Data Centre
-Museum and Art Gallery of the Northern Territory
-Australian Government National Environmental Science Program
-Australian Institute of Marine Science
-Reef Life Survey Australia
-American Museum of Natural History
-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
-Tasmanian Museum and Art Gallery, Hobart, Tasmania
-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact us page.

© Commonwealth of Australia
Department of Climate Change, Energy, the Environment and Water
GPO Box 3090
Canberra ACT 2601 Australia
+61 2 6274 1111

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 25-Jun-2026

[Summary](#)
[Details](#)
- [Matters of NES](#)
- [Other Matters Protected by the EPBC Act](#)
- [Extra Information](#)

[Caveat](#)
[Acknowledgements](#)

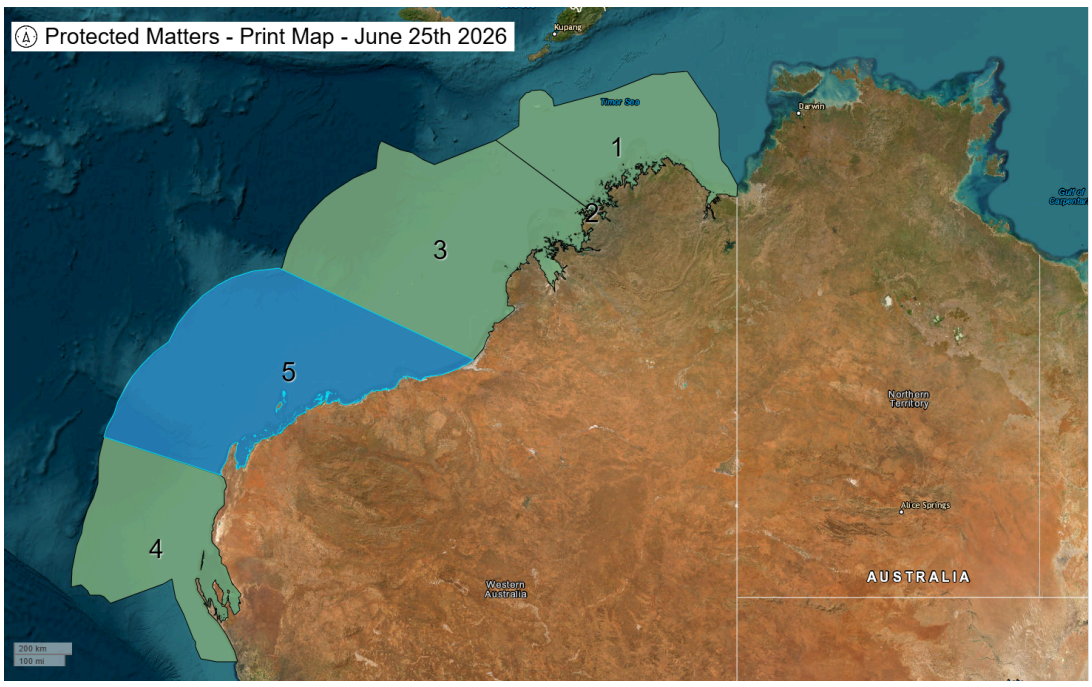


Figure 1: North West Marine Region - South Central (Part 3)

Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	2
National Heritage Places:	2
Wetlands of International Importance (Ramsar	1
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	3
Listed Threatened Ecological Communities:	None
Listed Threatened Species:	69
Listed Migratory Species:	90

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at https://www.dcceew.gov.au/parks-heritage/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	93
Commonwealth Heritage Places:	2
Listed Marine Species:	133
Whales and Other Cetaceans:	33
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	11
Habitat Critical to the Survival of Marine Turtles:	4

Extra Information

This part of the report provides information that may also be relevant to the area you have

State and Territory Reserves:	57
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	301
Key Ecological Features (Marine):	6
Biologically Important Areas:	35
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

World Heritage Properties		[Resource Information]
Name	State	Legal Status
Murujuga Cultural Landscape	WA	Declared property
Ningaloo Coast	WA	Declared property

National Heritage Places		[Resource Information]
Name	State	Legal Status
Indigenous		
Dampier Archipelago (including Burrup Peninsula)	WA	Listed place
Natural		
The Ningaloo Coast	WA	Listed place

Wetlands of International Importance (Ramsar Wetlands)	[Resource Information]
Ramsar Site Name	Proximity
Eighty-mile beach	Within Ramsar site

Commonwealth Marine Area	[Resource Information]

Approval is required for a proposed activity that is located within the Commonwealth Marine Area which has, will have, or is likely to have a significant impact on the environment. Approval may be required for a proposed action taken outside a Commonwealth Marine Area but which has, may have or is likely to have a significant impact on the environment in the Commonwealth Marine Area.

Feature Name
Commonwealth Marine Areas (EPBC Act)
Commonwealth Marine Areas (EPBC Act)
Commonwealth Marine Areas (EPBC Act)

Listed Threatened Species		[Resource Information]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.
Number is the current name ID.

Scientific Name	Threatened Category	Presence Text
BIRD		
Arenaria interpres		
Ruddy Turnstone [872]	Vulnerable	Roosting likely to occur within area
Calidris acuminata		
Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat likely to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area
Calidris tenuirostris Great Knot [862]	Vulnerable	Roosting likely to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting likely to occur within area
Erythrotriorchis radiatus Red Goshawk [942]	Endangered	Species or species habitat may occur within area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat likely to occur within area
Limosa lapponica menzbieri Northern Siberian Bar-tailed Godwit, Russkoye Bar-tailed Godwit [86432]	Endangered	Species or species habitat likely to occur within area
Limosa limosa Black-tailed Godwit [845]	Endangered	Roosting likely to occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Malurus leucopterus edouardi White-winged Fairy-wren (Barrow Island), Barrow Island Black-and-white Fairy-wren [26194]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Papasula abbotti Abbott's Booby [59297]	Endangered	Species or species habitat may occur within area
Pezoporus occidentalis Night Parrot [59350]	Critically Endangered	Species or species habitat may occur within area
Phaethon lepturus fulvus Christmas Island White-tailed Tropicbird, Golden Bosunbird [26021]	Endangered	Species or species habitat may occur within area
Phaethon rubricauda westralis Red-tailed Tropicbird (Indian Ocean), Indian Ocean Red-tailed Tropicbird [91824]	Endangered	Species or species habitat likely to occur within area
Pluvialis squatarola Grey Plover [865]	Vulnerable	Roosting likely to occur within area
Polytelis alexandrae Princess Parrot, Alexandra's Parrot [758]	Vulnerable	Species or species habitat may occur within area
Pterodroma mollis Soft-plumaged Petrel [1036]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
Sternula albifrons Little Tern [82849]	Vulnerable	Breeding likely to occur within area
Sternula nereis nereis Australian Fairy Tern [82950]	Vulnerable	Breeding likely to occur within area
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Thalassarche impavida		
Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
Tringa nebularia		
Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area
Xenus cinereus		
Terek Sandpiper [59300]	Vulnerable	Roosting likely to occur within area
CRUSTACEAN		
Kumonga exleyi		
Cape Range Remipede [86875]	Vulnerable	Species or species habitat likely to occur within area
FISH		
Milyeringa justitia		
Barrow Cave Gudgeon [86867]	Endangered	Species or species habitat likely to occur within area
Milyeringa veritas		
Cape Range Cave Gudgeon, Blind Gudgeon [66676]	Vulnerable	Species or species habitat likely to occur within area
Ophisternon candidum		
Blind Cave Eel [66678]	Vulnerable	Species or species habitat likely to occur within area
MAMMAL		
Balaenoptera borealis		
Sei Whale [34]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Balaenoptera musculus		
Blue Whale [36]	Endangered	Migration route known to occur within area
Balaenoptera physalus		
Fin Whale [37]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area

Scientific Name	Threatened Category	Presence Text
Bettongia lesueur Barrow and Boodie Islands subspecies		
Boodie, Burrowing Bettong (Barrow and Boodie Islands) [88021]	Vulnerable	Translocated population known to occur within area
Dasyurus hallucatus		
Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu] [331]	Endangered	Species or species habitat likely to occur within area
Eubalaena australis		
Southern Right Whale [40]	Endangered	Species or species habitat likely to occur within area
Isoodon auratus barrowensis		
Golden Bandicoot (Barrow Island) [66666]	Vulnerable	Translocated population known to occur within area
Lagorchestes conspicillatus conspicillatus		
Spectacled Hare-wallaby (Barrow Island) [66661]	Vulnerable	Translocated population known to occur within area
Lagorchestes hirsutus Central Australian subspecies		
Mala, Rufous Hare-Wallaby (Central Australia) [88019]	Endangered	Translocated population known to occur within area
Macroderma gigas		
Ghost Bat [174]	Vulnerable	Species or species habitat likely to occur within area
Macrotis lagotis		
Greater Bilby [282]	Vulnerable	Species or species habitat likely to occur within area
Orcaella heinsohni		
Australian Snubfin Dolphin [81322]	Vulnerable	Species or species habitat likely to occur within area
Osphranter robustus isabellinus		
Barrow Island Wallaroo, Barrow Island Euro [89262]	Vulnerable	Species or species habitat likely to occur within area
Petrogale lateralis lateralis		
Black-flanked Rock-wallaby, Moororong, Black-footed Rock Wallaby [66647]	Endangered	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
[Pseudomys fieldi](#) Shark Bay Mouse, Djoongari, Alice Springs Mouse [113]	Vulnerable	Species or species habitat likely to occur within area
[Rhinonicteris aurantia (Pilbara form)](#) Pilbara Leaf-nosed Bat [82790]	Vulnerable	Species or species habitat likely to occur within area
[Sousa sahulensis](#) Australian Humpback Dolphin [87942]	Vulnerable	Species or species habitat likely to occur within area
PLANT		
[Minuria tridens](#) Minnie Daisy [13753]	Vulnerable	Species or species habitat likely to occur within area
REPTILE		
[Aipysurus apraefrontalis](#) Short-nosed Sea Snake, Short-nosed Seasnake [1115]	Critically Endangered	Species or species habitat likely to occur within area
[Aipysurus foliosquama](#) Leaf-scaled Sea Snake, Leaf-scaled Seasnake [1118]	Critically Endangered	Species or species habitat likely to occur within area
[Caretta caretta](#) Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
[Chelonia mydas](#) Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
[Ctenotus zastictus](#) Hamelin Ctenotus [25570]	Vulnerable	Species or species habitat likely to occur within area
[Dermochelys coriacea](#) Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
[Eretmochelys imbricata](#) Hawksbill Turtle [1766]	Vulnerable	Breeding likely to occur within area
[Lerista nevinae](#) Nevin's Slider [85296]	Endangered	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Liasis olivaceus barroni		
Pilbara Olive Python [66699]	Vulnerable	Species or species habitat likely to occur within area
Liopholis kintorei		
Great Desert Skink, Tjakura, Warrarna, Mulyamiji, Tjalapa, Nampu [83160]	Vulnerable	Species or species habitat may occur within area
Natator depressus		
Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area
SHARK		
Carcharias taurus (west coast population)		
Grey Nurse Shark (west coast population) [68752]	Vulnerable	Congregation or aggregation likely to occur within area
Carcharodon carcharias		
White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat likely to occur within area
Pristis clavata		
Dwarf Sawfish, Queensland Sawfish [68447]	Vulnerable	Breeding likely to occur within area
Pristis pristis		
Largetooth Sawfish, Freshwater Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Endangered	Species or species habitat likely to occur within area
Pristis zijsron		
Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Breeding likely to occur within area
Rhincodon typus		
Whale Shark [66680]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Sphyrna lewini		
Scalloped Hammerhead [85267]	Conservation Dependent	Species or species habitat likely to occur within area

Listed Migratory Species		[Resource Information]
Scientific Name	Threatened Category	Presence Text
null		
Balaenoptera omurai		
Omura's Whale [87136]		Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Migratory Marine Birds		
Anous stolidus Common Noddy [825]		Species or species habitat likely to occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardenna carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [82404]		Species or species habitat likely to occur within area
Ardenna pacifica Wedge-tailed Shearwater [84292]		Breeding likely to occur within area
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat likely to occur within area
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Breeding likely to occur within area
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat may occur within area
Hydroprogne caspia Caspian Tern [808]		Breeding likely to occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Onychoprion anaethetus Bridled Tern [82845]		Breeding likely to occur within area
Phaethon lepturus White-tailed Tropicbird [1014]		Species or species habitat likely to occur within area
Phaethon rubricauda Red-tailed Tropicbird [994]		Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Sterna dougallii Roseate Tern [817]		Breeding likely to occur within area
Sternula albifrons Little Tern [82849]	Vulnerable	Breeding likely to occur within area
Sula dactylatra Masked Booby [1021]		Breeding likely to occur within area
Sula leucogaster Brown Booby [1022]		Breeding likely to occur within area
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat may occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
Migratory Marine Species		
Anoxypristis cuspidata Narrow Sawfish, Knifetooth Sawfish [68448]		Species or species habitat likely to occur within area
Balaenoptera bonaerensis Antarctic Minke Whale, Dark-shoulder Minke Whale [67812]		Species or species habitat likely to occur within area
Balaenoptera borealis Sei Whale [34]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat likely to occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Migration route known to occur within area

Scientific Name	Threatened Category	Presence Text
Balaenoptera physalus Fin Whale [37]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Carcharhinus longimanus Oceanic Whitetip Shark [84108]		Species or species habitat likely to occur within area
Carcharias taurus Grey Nurse Shark [64469]		Species or species habitat likely to occur within area
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat likely to occur within area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat may occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Dugong dugon Dugong [28]		Species or species habitat likely to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Breeding likely to occur within area
Eubalaena australis as Balaena glacialis australis Southern Right Whale [40]	Endangered	Species or species habitat likely to occur within area
Isurus oxyrinchus Shortfin Mako, Mako Shark [79073]		Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Isurus paucus Longfin Mako [82947]		Species or species habitat likely to occur within area
Lamna nasus Porbeagle, Mackerel Shark [83288]		Species or species habitat may occur within area
Megaptera novaeangliae Humpback Whale [38]		Breeding known to occur within area
Mobula alfredi as Manta alfredi Reef Manta Ray, Coastal Manta Ray [90033]		Species or species habitat likely to occur within area
Mobula birostris as Manta birostris Giant Manta Ray [90034]		Species or species habitat likely to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area
Orcaella heinsohni Australian Snubfin Dolphin [81322]	Vulnerable	Species or species habitat likely to occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Physeter macrocephalus Sperm Whale [59]		Species or species habitat may occur within area
Pristis clavata Dwarf Sawfish, Queensland Sawfish [68447]	Vulnerable	Breeding likely to occur within area
Pristis pristis Largetooth Sawfish, Freshwater Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Endangered	Species or species habitat likely to occur within area
Pristis zijsron Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Breeding likely to occur within area

Scientific Name	Threatened Category	Presence Text
Rhincodon typus		
Whale Shark [66680]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Sousa sahulensis as Sousa chinensis		
Australian Humpback Dolphin [87942]	Vulnerable	Species or species habitat likely to occur within area
Tursiops aduncus (Arafura/Timor Sea populations)		
Spotted Bottlenose Dolphin (Arafura/Timor Sea populations) [78900]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
Cuculus optatus		
Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat may occur within area
Hirundo rustica		
Barn Swallow [662]		Species or species habitat likely to occur within area
Motacilla cinerea		
Grey Wagtail [642]		Species or species habitat may occur within area
Motacilla flava		
Yellow Wagtail [644]		Species or species habitat likely to occur within area
Migratory Wetlands Species		
Actitis hypoleucos		
Common Sandpiper [59309]		Species or species habitat likely to occur within area
Arenaria interpres		
Ruddy Turnstone [872]	Vulnerable	Roosting likely to occur within area
Calidris acuminata		
Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area
Calidris alba		
Sanderling [875]		Roosting likely to occur within area

Scientific Name	Threatened Category	Presence Text
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat likely to occur within area
Calidris falcinellus as Limicola falcinellus Broad-billed Sandpiper [91731]		Roosting likely to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat likely to occur within area
Calidris pugnax as Philomachus pugnax Ruff [91256]		Roosting likely to occur within area
Calidris ruficollis Red-necked Stint [860]		Roosting likely to occur within area
Calidris subminuta Long-toed Stint [861]		Species or species habitat likely to occur within area
Calidris tenuirostris Great Knot [862]	Vulnerable	Roosting likely to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting likely to occur within area
Charadrius veredus Oriental Plover, Oriental Dotterel [882]		Roosting likely to occur within area
Gallinago megala Swinhoe's Snipe [864]		Roosting likely to occur within area
Gallinago stenura Pin-tailed Snipe [841]		Roosting likely to occur within area

Scientific Name	Threatened Category	Presence Text
Glareola maldivarum Oriental Pratincole [840]		Roosting likely to occur within area
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat likely to occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat likely to occur within area
Limosa limosa Black-tailed Godwit [845]	Endangered	Roosting likely to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Numenius minutus Little Curlew, Little Whimbrel [848]		Roosting likely to occur within area
Numenius phaeopus Whimbrel [849]		Roosting likely to occur within area
Pandion haliaetus Osprey [952]		Breeding likely to occur within area
Phalaropus lobatus Red-necked Phalarope [838]		Species or species habitat likely to occur within area
Pluvialis fulva Pacific Golden Plover [25545]		Roosting likely to occur within area
Pluvialis squatarola Grey Plover [865]	Vulnerable	Roosting likely to occur within area
Thalasseus bergii Greater Crested Tern [83000]		Breeding likely to occur within area
Tringa brevipes Grey-tailed Tattler [851]		Roosting likely to occur within area

Scientific Name	Threatened Category	Presence Text
Tringa glareola Wood Sandpiper [829]		Species or species habitat likely to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area
Tringa stagnatilis Marsh Sandpiper, Little Greenshank [833]		Roosting likely to occur within area
Tringa totanus Common Redshank, Redshank [835]		Roosting likely to occur within area
Xenus cinereus Terek Sandpiper [59300]	Vulnerable	Roosting likely to occur within area

Other Matters Protected by the EPBC Act

Commonwealth Lands [Resource Information]

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Commonwealth Land Name	State
Australian Maritime Safety Authority	
Lot 267 P066689 [AGPR5847]	WA
Lot 3248 P216031 [AGPR5848]	WA
Lot 375 P208153 [AGPR262]	WA
Lot 3959 P216877 [AGPR5846]	WA
Lot 3976 P216877 [AGPR5845]	WA
Lot 5478 P185135 [AGPR5849]	WA
Lot 591 P056139 [AGPR5851]	WA
Lot 682 P061231 [AGPR5850]	WA
Australian Postal Corporation	
Lot 1549 P213670 [AGPR7196]	WA
Lot 3908 P216465 [AGPR7132]	WA
Bureau of Meteorology	

Commonwealth Land Name	State
Lot 1102 P217148 [AGPR5866]	WA
Lot 819 P211578 [AGPR5865]	WA
Lot 973 P216414 [AGPR5863]	WA
Department of Agriculture, Fisheries and Forestry	
Lot 1260 P213923 [AGPR5883]	WA
Lot 1386 P213671 [AGPR5882]	WA
Lot 5639 P216779 [AGPR5884]	WA
Department of Climate Change, Energy, the Environment and Water	
Learmonth Air Weapons Range Facility [CHL_105551]	WA
Ningaloo Marine Area - Commonwealth Waters [CHL_105548]	WA
Department of Defence	
Exmouth Area A VLF Transmitter Station [DD_0083]	WA
Exmouth Area B Admin and HF Transmitter [DD_0082]	WA
Exmouth RAAF Radar Site Twin Tanks [DD_0973]	WA
Exmouth RAAF Radar Site - Vlaming Head [DD_0974]	WA
Karratha / Dampier Rifle Range [DD_3218]	WA
Learmonth Air Weapons Range [DD_0961]	WA
Learmonth RAAF base [AGPR4436]	WA
Learmonth RAAF base [AGPR4430]	WA
Learmonth RAAF base [AGPR4432]	WA
Learmonth RAAF base [AGPR4433]	WA
Learmonth RAAF base [AGPR4434]	WA
Learmonth RAAF base [AGPR4437]	WA
Learmonth RAAF base [AGPR4428]	WA
Learmonth RAAF base [AGPR4429]	WA
Learmonth RAAF base [AGPR4425]	WA
Learmonth RAAF base [AGPR4462]	WA
Learmonth RAAF base [AGPR4423]	WA

Commonwealth Land Name	State
Learmonth RAAF base [AGPR4418]	WA
Learmonth RAAF base [AGPR4419]	WA
Learmonth RAAF base [AGPR4414]	WA
Learmonth RAAF base [AGPR4435]	WA
Learmonth RAAF base [AGPR4431]	WA
Learmonth RAAF base [AGPR4466]	WA
Learmonth RAAF base [AGPR4413]	WA
Learmonth RAAF base [AGPR4463]	WA
Learmonth RAAF base [AGPR4417]	WA
Learmonth RAAF base [AGPR4416]	WA
Learmonth RAAF base [AGPR4415]	WA
Learmonth RAAF base [AGPR4467]	WA
Learmonth RAAF base [AGPR4464]	WA
Learmonth WW2 Transmitter Site [DD_1355]	WA
Lot 148 Plan P215203 [AGPR4394]	WA
Lot 525 P168696 [AGPR4471]	WA
Patrol Boat Berth Dampier [DD_3256]	WA
Port Hedland Training Depot [DD_0773]	WA
RAAF Learmonth [DD_0960]	WA
Taylor Barracks [AGPR4457]	WA
Taylor Barracks [AGPR4455]	WA
Taylor Barracks [AGPR4456]	WA
Taylor Barracks - Karratha [DD_1348]	WA
Department of Home Affairs	
120 P017820 [AGPR007602]	WA
Lot 1172 P214561 [AGPR6128]	WA
Lot 1316 P214560 [AGPR4734]	WA

Commonwealth Land Name	State
Lot 1 D093901 [AGPR6123]	WA
Lot 22 P013834 [AGPR6124]	WA
Lot 307 P051763 [AGPR6118]	WA
Lot 311 P051763 [AGPR6115]	WA
Lot 328 P051763 [AGPR6117]	WA
Lot 329 P051763 [AGPR6116]	WA
Lot 371 P047355 [AGPR6084]	WA
Lot 374 P047355 [AGPR6086]	WA
Lot 381 P047355 [AGPR6088]	WA
Lot 385 P047355 [AGPR6087]	WA
Lot 388 P047355 [AGPR6089]	WA
Lot 420 P045431 [AGPR6081]	WA
Lot 421 P045431 [AGPR6079]	WA
Lot 43 P048174 [AGPR6113]	WA
Lot 447 P049116 [AGPR6080]	WA
Lot 448 P049116 [AGPR6078]	WA
Lot 473 P049116 [AGPR6083]	WA
Lot 479 P051753 [AGPR6090]	WA
Lot 565 P055507 [AGPR6121]	WA
Lot 5702 P216778 [AGPR6127]	WA
Lot 5704 P216778 [AGPR6122]	WA
Lot 5706 P216778 [AGPR6119]	WA
Lot 5719 P216778 [AGPR6129]	WA
Lot 5724 P216778 [AGPR6120]	WA
Lot 5728 P216778 [AGPR6125]	WA
Lot 5746 P216779 [AGPR6126]	WA
Lot 60 P048174 [AGPR6112]	WA

Commonwealth Land Name	State
Lot 683 P061231 [AGPR6131]	WA
Lot 691 P061231 [AGPR6130]	WA
Department of Infrastructure, Transport, Regional Development, Communications and the Arts	
Port Hedland Airport [AGPR5578]	WA
Services Australia	
Lot 3013 P215197 [AGPR6049]	WA
Lot 5734 P216778 [AGPR6050]	WA

Commonwealth Heritage Places [Resource Information]

Name	State	Status
Natural		
Learmonth Air Weapons Range Facility	WA	Listed place
Ningaloo Marine Area - Commonwealth Waters	WA	Listed place

Listed Marine Species [Resource Information]

Scientific Name	Threatened Category	Presence Text
Bird		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat likely to occur within area
Anous stolidus Common Noddy [825]		Species or species habitat likely to occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area
Ardenna carneipes as Puffinus carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [82404]		Species or species habitat likely to occur within area
Ardenna pacifica as Puffinus pacificus Wedge-tailed Shearwater [84292]		Breeding likely to occur within area
Arenaria interpres Ruddy Turnstone [872]	Vulnerable	Roosting likely to occur within area

Scientific Name	Threatened Category	Presence Text
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area
Calidris alba Sanderling [875]		Roosting likely to occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat likely to occur within area overfly marine area
Calidris falcinellus as Limicola falcinellus Broad-billed Sandpiper [91731]		Roosting likely to occur within area overfly marine area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area overfly marine area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat likely to occur within area overfly marine area
Calidris pugnax as Philomachus pugnax Ruff [91256]		Roosting likely to occur within area overfly marine area
Calidris ruficollis Red-necked Stint [860]		Roosting likely to occur within area overfly marine area
Calidris subminuta Long-toed Stint [861]		Species or species habitat likely to occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Calidris tenuirostris Great Knot [862]	Vulnerable	Roosting likely to occur within area overfly marine area
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat likely to occur within area
Chalcites osculans as Chrysococcyx osculans Black-eared Cuckoo [83425]		Species or species habitat likely to occur within area overfly marine area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting likely to occur within area
Charadrius ruficapillus Red-capped Plover [881]		Roosting likely to occur within area overfly marine area
Charadrius veredus Oriental Plover, Oriental Dotterel [882]		Roosting likely to occur within area overfly marine area
Chroicocephalus novaehollandiae as Larus novaehollandiae Silver Gull [82326]		Breeding likely to occur within area
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Breeding likely to occur within area
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat may occur within area
Gallinago megala Swinhoe's Snipe [864]		Roosting likely to occur within area overfly marine area
Gallinago stenura Pin-tailed Snipe [841]		Roosting likely to occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Glareola maldivarum Oriental Pratincole [840]		Roosting likely to occur within area overfly marine area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area
Himantopus himantopus Pied Stilt, Black-winged Stilt [870]		Roosting likely to occur within area overfly marine area
Hirundo rustica Barn Swallow [662]		Species or species habitat likely to occur within area overfly marine area
Hydroprogne caspia as Sterna caspia Caspian Tern [808]		Breeding likely to occur within area
Larus pacificus Pacific Gull [811]		Breeding likely to occur within area
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat likely to occur within area overfly marine area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat likely to occur within area
Limosa limosa Black-tailed Godwit [845]	Endangered	Roosting likely to occur within area overfly marine area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area overfly marine area
Motacilla flava Yellow Wagtail [644]		Species or species habitat likely to occur within area overfly marine area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Numenius minutus Little Curlew, Little Whimbrel [848]		Roosting likely to occur within area overfly marine area
Numenius phaeopus Whimbrel [849]		Roosting likely to occur within area
Onychoprion anaethetus as Sterna anaethetus Bridled Tern [82845]		Breeding likely to occur within area
Onychoprion fuscatus as Sterna fuscata Sooty Tern [90682]		Breeding likely to occur within area
Pandion haliaetus Osprey [952]		Breeding likely to occur within area
Papasula abbotti Abbott's Booby [59297]	Endangered	Species or species habitat may occur within area
Phaethon lepturus White-tailed Tropicbird [1014]		Species or species habitat likely to occur within area
Phaethon lepturus fulvus Christmas Island White-tailed Tropicbird, Golden Bosunbird [26021]	Endangered	Species or species habitat may occur within area
Phaethon rubricauda Red-tailed Tropicbird [994]		Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Phalaropus lobatus Red-necked Phalarope [838]		Species or species habitat likely to occur within area
Pluvialis fulva Pacific Golden Plover [25545]		Roosting likely to occur within area
Pluvialis squatarola Grey Plover [865]	Vulnerable	Roosting likely to occur within area overfly marine area
Pterodroma mollis Soft-plumaged Petrel [1036]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Recurvirostra novaehollandiae Red-necked Avocet [871]		Roosting likely to occur within area overfly marine area
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area
Sterna dougallii Roseate Tern [817]		Breeding likely to occur within area
Sternula albifrons as Sterna albifrons Little Tern [82849]	Vulnerable	Breeding likely to occur within area
Sternula nereis as Sterna nereis Fairy Tern [82949]		Breeding likely to occur within area
Stiltia isabella Australian Pratincole [818]		Roosting likely to occur within area overfly marine area
Sula dactylatra Masked Booby [1021]		Breeding likely to occur within area
Sula leucogaster Brown Booby [1022]		Breeding likely to occur within area

Scientific Name	Threatened Category	Presence Text
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat may occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
Thalasseus bengalensis as Sterna bengalensis Lesser Crested Tern [66546]		Breeding likely to occur within area
Thalasseus bergii as Sterna bergii Greater Crested Tern [83000]		Breeding likely to occur within area
Tringa brevipes as Heteroscelus brevipes Grey-tailed Tattler [851]		Roosting likely to occur within area
Tringa glareola Wood Sandpiper [829]		Species or species habitat likely to occur within area overfly marine area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area overfly marine area
Tringa stagnatilis Marsh Sandpiper, Little Greenshank [833]		Roosting likely to occur within area overfly marine area
Tringa totanus Common Redshank, Redshank [835]		Roosting likely to occur within area overfly marine area
Xenus cinereus Terek Sandpiper [59300]	Vulnerable	Roosting likely to occur within area overfly marine area
Fish		
Bulbonaricus brauni Braun's Pughead Pipefish, Pug-headed Pipefish [66189]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Campichthys tricarinatus Three-keel Pipefish [66192]		Species or species habitat may occur within area
Choeroichthys brachysoma Pacific Short-bodied Pipefish, Short-bodied Pipefish [66194]		Species or species habitat may occur within area
Choeroichthys latispinosus Muiron Island Pipefish [66196]		Species or species habitat may occur within area
Choeroichthys suillus Pig-snouted Pipefish [66198]		Species or species habitat may occur within area
Corythoichthys flavofasciatus Yellow-banded Pipefish [66200]		Species or species habitat may occur within area
Cosmocampus banneri Roughridge Pipefish [66206]		Species or species habitat may occur within area
Doryrhamphus dactyliophorus Banded Pipefish, Ringed Pipefish [66210]		Species or species habitat may occur within area
Doryrhamphus excisus Bluestripe Pipefish, Indian Blue-stripe Pipefish, Pacific Blue-stripe Pipefish [66211]		Species or species habitat may occur within area
Doryrhamphus janssi Cleaner Pipefish, Janss' Pipefish [66212]		Species or species habitat may occur within area
Doryrhamphus multiannulatus Many-banded Pipefish [66717]		Species or species habitat may occur within area
Doryrhamphus negrosensis Flagtail Pipefish, Masthead Island Pipefish [66213]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Festucalex scalaris Ladder Pipefish [66216]		Species or species habitat may occur within area
Filicampus tigris Tiger Pipefish [66217]		Species or species habitat may occur within area
Halicampus brocki Brock's Pipefish [66219]		Species or species habitat may occur within area
Halicampus grayi Mud Pipefish, Gray's Pipefish [66221]		Species or species habitat may occur within area
Halicampus nitidus Glittering Pipefish [66224]		Species or species habitat may occur within area
Halicampus spinirostris Spiny-snout Pipefish [66225]		Species or species habitat may occur within area
Haliichthys taeniophora as Haliichthys taeniophorus Ribboned Pipehorse, Ribboned Pipefish, Ribboned Seadragon [94706]		Species or species habitat may occur within area
Hippichthys penicillus Beady Pipefish, Steep-nosed Pipefish [66231]		Species or species habitat may occur within area
Hippocampus angustus Western Spiny Seahorse, Narrow-bellied Seahorse [66234]		Species or species habitat may occur within area
Hippocampus histrix Spiny Seahorse, Thorny Seahorse [66236]		Species or species habitat may occur within area
Hippocampus kuda Spotted Seahorse, Yellow Seahorse [66237]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Hippocampus planifrons Flat-face Seahorse [66238]		Species or species habitat may occur within area
Hippocampus spinosissimus Hedgehog Seahorse [66239]		Species or species habitat may occur within area
Hippocampus trimaculatus Three-spot Seahorse, Low-crowned Seahorse, Flat-faced Seahorse [66720]		Species or species habitat may occur within area
Idiotropiscis larsonae as Acentronura larsonae Helen's Pygmy Pipehorse [74959]		Species or species habitat may occur within area
Micrognathus micronotopterus Tidepool Pipefish [66255]		Species or species habitat may occur within area
Phoxocampus belcheri Black Rock Pipefish [66719]		Species or species habitat may occur within area
Solegnathus hardwickii Pallid Pipehorse, Hardwick's Pipehorse [66272]		Species or species habitat may occur within area
Solegnathus lettiensis Gunther's Pipehorse, Indonesian Pipefish [66273]		Species or species habitat may occur within area
Solenostomus cyanopterus Robust Ghostpipefish, Blue-finned Ghost Pipefish, [66183]		Species or species habitat may occur within area
Syngnathoides biaculeatus Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279]		Species or species habitat may occur within area
Trachyrhamphus bicoarctatus Bentstick Pipefish, Bend Stick Pipefish, Short-tailed Pipefish [66280]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
[Trachyrhamphus longirostris](#) Straightstick Pipefish, Long-nosed Pipefish, Straight Stick Pipefish [66281]		Species or species habitat may occur within area
Mammal		
[Dugong dugon](#) Dugong [28]		Species or species habitat likely to occur within area
Reptile		
[Aipysurus apraefrontalis](#) Short-nosed Sea Snake, Short-nosed Seasnake [1115]	Critically Endangered	Species or species habitat likely to occur within area
[Aipysurus duboisii](#) Dubois' Sea Snake, Dubois' Seasnake, Reef Shallows Sea Snake [1116]		Species or species habitat may occur within area
[Aipysurus foliosquama](#) Leaf-scaled Sea Snake, Leaf-scaled Seasnake [1118]	Critically Endangered	Species or species habitat likely to occur within area
[Aipysurus laevis](#) Olive Sea Snake, Olive-brown Sea Snake [1120]		Species or species habitat may occur within area
[Aipysurus mosaicus as Aipysurus eydouxii](#) Mosaic Sea Snake [87261]		Species or species habitat may occur within area
[Aipysurus tenuis](#) Brown-lined Sea Snake, Mjoberg's Sea Snake [1121]		Species or species habitat may occur within area
[Caretta caretta](#) Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
[Chelonia mydas](#) Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
[Crocodylus porosus](#) Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Emydocephalus annulatus Eastern Turtle-headed Sea Snake [1125]		Species or species habitat may occur within area
Ephalophis greyae as Ephalophis greyi Mangrove Sea Snake [93738]		Species or species habitat may occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Breeding likely to occur within area
Hydrelaps darwiniensis Port Darwin Sea Snake, Black-ringed Mangrove Sea Snake [1100]		Species or species habitat may occur within area
Hydrophis czeblukovi Fine-spined Sea Snake [59233]		Species or species habitat may occur within area
Hydrophis elegans Elegant Sea Snake, Bar-bellied Sea Snake [1104]		Species or species habitat may occur within area
Hydrophis kingii as Disteira kingii Spectacled Sea Snake [93511]		Species or species habitat may occur within area
Hydrophis macdowelli as Hydrophis mcdowelli MacDowell's Sea Snake, Small-headed Sea Snake, [75601]		Species or species habitat may occur within area
Hydrophis major as Disteira major Olive-headed Sea Snake [93512]		Species or species habitat may occur within area
Hydrophis ornatus Spotted Sea Snake, Ornate Reef Sea Snake [1111]		Species or species habitat may occur within area
Hydrophis peronii as Acalyptophis peronii Horned Sea Snake [93509]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Hydrophis platura as Pelamis platurus Yellow-bellied Sea Snake [93746]		Species or species habitat may occur within area
Hydrophis stokesii as Astrotia stokesii Stokes' Sea Snake [93510]		Species or species habitat may occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area

Whales and Other Cetaceans		[Resource Information]
Current Scientific Name	Status	Type of Presence
Mammal		
Balaenoptera acutorostrata Minke Whale [33]		Species or species habitat may occur within area
Balaenoptera bonaerensis Antarctic Minke Whale, Dark-shoulder Minke Whale [67812]		Species or species habitat likely to occur within area
Balaenoptera borealis Sei Whale [34]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat likely to occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Migration route known to occur within area
Balaenoptera omurai Omura's Whale [87136]		Species or species habitat likely to occur within area
Balaenoptera physalus Fin Whale [37]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area

Current Scientific Name	Status	Type of Presence
[Delphinus delphis](#) Common Dolphin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area
[Eubalaena australis](#) Southern Right Whale [40]	Endangered	Species or species habitat likely to occur within area
[Feresa attenuata](#) Pygmy Killer Whale [61]		Species or species habitat may occur within area
[Globicephala macrorhynchus](#) Short-finned Pilot Whale [62]		Species or species habitat may occur within area
[Grampus griseus](#) Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area
[Indopacetus pacificus](#) Longman's Beaked Whale [72]		Species or species habitat may occur within area
[Kogia breviceps](#) Pygmy Sperm Whale [57]		Species or species habitat may occur within area
[Kogia sima](#) Dwarf Sperm Whale [85043]		Species or species habitat may occur within area
[Lagenodelphis hosei](#) Fraser's Dolphin, Sarawak Dolphin [41]		Species or species habitat may occur within area
[Megaptera novaeangliae](#) Humpback Whale [38]		Breeding known to occur within area
[Mesoplodon densirostris](#) Blainville's Beaked Whale, Dense-beaked Whale [74]		Species or species habitat may occur within area

Current Scientific Name	Status	Type of Presence
Mesoplodon ginkgodens Gingko-toothed Beaked Whale, Gingko-toothed Whale, Gingko Beaked Whale [59564]		Species or species habitat may occur within area
Orcaella heinsohni Australian Snubfin Dolphin [81322]	Vulnerable	Species or species habitat likely to occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Peponocephala electra Melon-headed Whale [47]		Species or species habitat may occur within area
Physeter macrocephalus Sperm Whale [59]		Species or species habitat may occur within area
Pseudorca crassidens False Killer Whale [48]		Species or species habitat likely to occur within area
Sousa sahulensis Australian Humpback Dolphin [87942]	Vulnerable	Species or species habitat likely to occur within area
Stenella attenuata Spotted Dolphin, Pantropical Spotted Dolphin [51]		Species or species habitat may occur within area
Stenella coeruleoalba Striped Dolphin, Euphrosyne Dolphin [52]		Species or species habitat may occur within area
Stenella longirostris Long-snouted Spinner Dolphin [29]		Species or species habitat may occur within area
Steno bredanensis Rough-toothed Dolphin [30]		Species or species habitat may occur within area

Current Scientific Name	Status	Type of Presence
Tursiops aduncus Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat likely to occur within area
Tursiops aduncus (Arafura/Timor Sea populations) Spotted Bottlenose Dolphin (Arafura/Timor Sea populations) [78900]		Species or species habitat likely to occur within area
Tursiops truncatus s. str. Bottlenose Dolphin [68417]		Species or species habitat may occur within area
Ziphius cavirostris Cuvier's Beaked Whale, Goose-beaked Whale [56]		Species or species habitat may occur within area

Australian Marine Parks	[Resource Information]
Park Name	Zone & IUCN Categories
Dampier	Habitat Protection Zone (IUCN IV)
Gascoyne	Habitat Protection Zone (IUCN IV)
Argo-Rowley Terrace	Multiple Use Zone (IUCN VI)
Dampier	Multiple Use Zone (IUCN VI)
Eighty Mile Beach	Multiple Use Zone (IUCN VI)
Gascoyne	Multiple Use Zone (IUCN VI)
Montebello	Multiple Use Zone (IUCN VI)
Dampier	National Park Zone (IUCN II)
Gascoyne	National Park Zone (IUCN II)
Ningaloo	National Park Zone (IUCN II)
Ningaloo	Recreational Use Zone (IUCN IV)

Habitat Critical to the Survival of Marine Turtles		[Resource Information]
Scientific Name	Behaviour	Presence
All year (Jun - Aug)		

Scientific Name	Behaviour	Presence
Natator depressus		
Flatback Turtle [59257]	Nesting	Known to occur
Nov-Feb		
Caretta caretta		
Loggerhead Turtle [1763]	Nesting	Known to occur
Oct - Feb		
Eretmochelys imbricata		
Hawksbill Turtle [1766]	Nesting	Known to occur
Oct - Mar		
Chelonia mydas		
Green Turtle [1765]	Nesting	Known to occur

Extra Information

State and Territory Reserves		[Resource Information]
Protected Area Name	Reserve Type	State
Airlie Island	Nature Reserve	WA
Barrow Island	Nature Reserve	WA
Barrow Island	Marine Park	WA
Barrow Island	Marine Management Area	WA
Bedout Island	Nature Reserve	WA
Bessieres Island	Nature Reserve	WA
Boodie, Double Middle Islands	Nature Reserve	WA
Bundegi Coastal Park	5(1)(h) Reserve	WA
Burnside And Simpson Island	Nature Reserve	WA
Cape Range	National Park	WA
Cape Range (South)	National Park	WA
Eighty Mile Beach	Marine Park	WA
Giralia	NRS Addition - Gazettal in Progress	WA
Gnandaroo Island	Nature Reserve	WA

Protected Area Name	Reserve Type	State
Great Sandy Island	Nature Reserve	WA
Great Sandy Island	Nature Reserve	WA
Jarrkunpungu	Nature Reserve	WA
Jurabi Coastal Park	5(1)(h) Reserve	WA
Kujungurru Warrarn	Nature Reserve	WA
Kujungurru Warrarn	Conservation Park	WA
Little Rocky Island	Nature Reserve	WA
Locker Island	Nature Reserve	WA
Lowendal Islands	Nature Reserve	WA
Montebello Islands	Conservation Park	WA
Montebello Islands	Conservation Park	WA
Montebello Islands	Marine Park	WA
Muiron Islands	Nature Reserve	WA
Muiron Islands	Marine Management Area	WA
Murujuga	5(1)(h) Reserve	WA
Murujuga	National Park	WA
Ningaloo	Marine Park	WA
North Sandy Island	Nature Reserve	WA
North Turtle Island	Nature Reserve	WA
Rocky Island	Nature Reserve	WA
Round Island	Nature Reserve	WA
Serrurier Island	Nature Reserve	WA
Tent Island	Nature Reserve	WA
Thevenard Island	Nature Reserve	WA
Thevenard Island	Nature Reserve	WA
Unnamed WA36907	5(1)(h) Reserve	WA

Protected Area Name	Reserve Type	State
Unnamed WA36909	5(1)(h) Reserve	WA
Unnamed WA36910	5(1)(h) Reserve	WA
Unnamed WA36913	Nature Reserve	WA
Unnamed WA36915	Nature Reserve	WA
Unnamed WA38287	5(1)(h) Reserve	WA
Unnamed WA40322	5(1)(h) Reserve	WA
Unnamed WA40877	5(1)(h) Reserve	WA
Unnamed WA44665	5(1)(h) Reserve	WA
Unnamed WA44667	5(1)(h) Reserve	WA
Unnamed WA44672	5(1)(h) Reserve	WA
Unnamed WA52366	Nature Reserve	WA
Unnamed WA53015	Nature Reserve	WA
Victor Island	Nature Reserve	WA
Weld Island	Nature Reserve	WA
Whalebone Island	Nature Reserve	WA
Whitmore,Roberts,Doole Islands And Sandalwood Landing	Nature Reserve	WA
Y Island	Nature Reserve	WA

EPBC Act Referrals

[Resource Information]

Title of referral	Reference	Referral Outcome	Assessment Status
3D Seismic Survey in the Carnarvon Bsin on the North West Shelf	2002/778		Completed
Ashburton Infrastructure Project	2021/9064		Completed
Babylon 3D Marine Seismic Survey, Commonwealth Waters, nr Exmouth WA	2013/7081		Completed
Balla Balla Export Facilities ? Design Variation	2022/09254		Assessment

Title of referral	Reference	Referral Outcome	Assessment Status
Browse to North West Shelf Development, Indian Ocean, WA	2018/8319		Approval
Burrup Common User Transmission Infrastructure	2022/09407		Post-Approval
Burrup Peninsula Seawater Supply Scheme Upgrade	2023/09698		Completed
Dampier Cargo Wharf Extension and Landside Redevelopment Project	2022/09237		Post-Approval
Dampier Seawater Desalination Plant	2022/09395		Completed
DAVROS MC 3D marine seismic survey northwaet of Dampier, WA	2013/7092		Completed
Deep Water Northwest Shelf 2D Seismic Survey	2007/3260		Completed
Development of Mutineer and Exeter petroleum fields for oil production, Permit	2003/1033		Completed
Gorgon Gas Development	2003/1294		Post-Approval
Ningaloo Lighthouse Development, 17km north west Exmouth, Western Australia	2020/8693		Post-Approval
North West Shelf Project Extension, Carnarvon Basin, WA	2018/8335		Approval
Offshore Dredge Spoil Disposal - Mardie Project	2024/10054		Referral Decision
Optimised Mardie Project ? Additional Triodia Grassland Habitat Clearing	2024/10094		Referral Decision
Optimised Mardie Solar Salt Project	2022/9169		Post-Approval
Port Hedland Green Steel Project - Stage 1	2023/09764		Assessment
Project Highclere Cable Lay and Operation	2022/09203		Completed
Ridley Magnetite Project	2023/09477		Referral Decision
Single Jetty Deep Water Port Renewable Hub, WA	2021/8942		Assessment

Title of referral	Reference	Referral Outcome	Assessment Status
Winu Copper and Gold Mine (Winu Project)	2024/09804		Completed
Action clearly unacceptable			
Asian Renewable Energy Hub Revised Proposal, WA	2021/8891	Action Clearly Unacceptable	Completed
Highlands 3D Marine Seismic Survey	2012/6680	Action Clearly Unacceptable	Completed
Controlled action			
'Van Gogh' Petroleum Field Development	2007/3213	Controlled Action	Post-Approval
Additional Rail Infrastructure between Herb Elliott Port Facility and Cloudbreak Mine Site	2010/5513	Controlled Action	Post-Approval
Ammonium Nitrate Project	2010/5423	Controlled Action	Completed
Anketell Point Iron Ore Processing & Export Port	2009/5120	Controlled Action	Post-Approval
Asian Renewable Energy Hub, 220 km east of Port Hedland, Western Australia	2017/8112	Controlled Action	Post-Approval
Balmoral South Iron Ore Mine	2008/4236	Controlled Action	Post-Approval
Binowee Iron Ore Project	2001/366	Controlled Action	Proposed Decision
Burrup North East Sand Mining Project	2008/4611	Controlled Action	Completed
Cape Lambert Port B Development	2008/4032	Controlled Action	Post-Approval
Construct and operate LNG & domestic gas plant including onshore and offshore facilities - Wheatston	2008/4469	Controlled Action	Post-Approval
Construction and operation of a Solar Salt Project, SW Onslow, WA	2016/7793	Controlled Action	Assessment Approach
Develop Jansz-Io deepwater gas field in Permit Areas WA-18-R, WA-25-R and WA-26-	2005/2184	Controlled Action	Post-Approval
Development of Angel gas and condensate field, North West Shelf	2004/1805	Controlled Action	Post-Approval
Development of an iron ore mine and associated infrastructure	2010/5630	Controlled Action	Assessment Approach

Title of referral	Reference	Referral Outcome	Assessment Status
Controlled action			
Development of Browse Basin Gas Fields (Upstream)	2008/4111	Controlled Action	Completed
Development of Coniston/Novara fields within the Exmouth Sub-basin	2011/5995	Controlled Action	Post-Approval
Development of Stybarrow petroleum field incl drilling and facility installation	2004/1469	Controlled Action	Post-Approval
Duplication of the Dampier Highway Stages 2 & 6	2010/5419	Controlled Action	Post-Approval
Echo-Yodel Production Wells	2000/11	Controlled Action	Post-Approval
Enfield full field development	2001/257	Controlled Action	Post-Approval
Equus Gas Fields Development Project, Carnarvon Basin	2012/6301	Controlled Action	Completed
Eramurra Industrial Salt Project	2021/9027	Controlled Action	Assessment Approach
Eramurra Industrial Salt Project, near Karratha, WA	2019/8448	Controlled Action	Completed
Gorgon Gas Development 4th Train Proposal	2011/5942	Controlled Action	Post-Approval
Gorgon Gas Revised Development	2008/4178	Controlled Action	Post-Approval
Greater Enfield (Vincent) Development	2005/2110	Controlled Action	Post-Approval
Greater Gorgon Development - Optical Fibre Cable, Mainland to Barrow Island	2005/2141	Controlled Action	Completed
Great Northern Pipeline - 630 km buried gas pipeline	2009/5257	Controlled Action	Completed
Learmonth Bundle Site and Launchway, WA	2017/8079	Controlled Action	Completed
Light Crude Oil Production	2001/365	Controlled Action	Post-Approval
Mardie Project, 80 km south west of Karratha, WA	2018/8236	Controlled Action	Post-Approval
North Star Magnetite Project	2012/6689	Controlled Action	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Controlled action			
North West Shelf Gas Venture Phase VI Expansion	2007/3436	Controlled Action	Referral Decision
Perdaman Urea Project, near Karratha, WA	2018/8383	Controlled Action	Post-Approval
Pluto Gas Project	2005/2258	Controlled Action	Completed
Pluto Gas Project Including Site B	2006/2968	Controlled Action	Post-Approval
Port Hedland Outer Harbour Development and associated marine and terrestrial in	2008/4159	Controlled Action	Post-Approval
Port Hedland Spoilbank Marina, WA	2019/8520	Controlled Action	Post-Approval
Proposed technical ammonium nitrate production facility	2008/4546	Controlled Action	Post-Approval
Proposed West Pilbara Iron Ore Project	2009/4706	Controlled Action	Post-Approval
Pyrenees Oil Fields Development	2005/2034	Controlled Action	Post-Approval
Simpson Development	2000/59	Controlled Action	Completed
Simpson Oil Field Development	2001/227	Controlled Action	Post-Approval
site preparations	2005/2391	Controlled Action	Post-Approval
The Scarborough Project - FLNG & assoc subsea infrastructure, Carnarvon Basin	2013/6811	Controlled Action	Post-Approval
Vincent Appraisal Well	2000/22	Controlled Action	Post-Approval
Widening and resurfacing two principal roads servicing the Dampier Port Authori	2010/5677	Controlled Action	Completed
Yannarie Solar Salt Project	2004/1679	Controlled Action	Completed
Yardie Creek Road Realignment Project	2021/8967	Controlled Action	Assessment Approach
Not controlled action			
'Goodwyn A' Low Pressure Train Project	2003/914	Not Controlled Action	Completed

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action			
'Van Gogh' Oil Appraisal Drilling Program, Exploration Permit Area WA-155-P(1)	2006/3148	Not Controlled Action	Completed
Airlie Island soil and groundwater investigations, Exmouth Gulf, offshore Pilbara coast	2014/7250	Not Controlled Action	Completed
Ammonia Plant	2001/199	Not Controlled Action	Completed
Baniyas-1 Exploration Well, EP-424, near Onslow	2007/3282	Not Controlled Action	Completed
Barrow Island 2D Seismic survey	2006/2667	Not Controlled Action	Completed
Bollinger 2D Seismic Survey 200km North of North West Cape WA	2004/1868	Not Controlled Action	Completed
Bultaco-2, Laverda-2, Laverda-3 and Montesa-2 Appraisal Wells	2000/103	Not Controlled Action	Completed
Cape Lambert Port A Marine Structures Refurbishment Project	2018/8370	Not Controlled Action	Completed
Carnarvon 3D Marine Seismic Survey	2004/1890	Not Controlled Action	Completed
Cazadores 2D seismic survey	2004/1720	Not Controlled Action	Completed
Construct 110km buried natural gas pipeline from Onslow, connecting to Dampier/Bunbury natural gas p	2013/7039	Not Controlled Action	Completed
Construction and operation of an unmanned sea platform and connecting pipeline to Varanus Island for	2004/1703	Not Controlled Action	Completed
Construction of a Commodities Berth, Wharf and Associated Infrastructure	2008/4129	Not Controlled Action	Completed
Construction of Loadout Facility and Laydown Area	2002/598	Not Controlled Action	Completed
Controlled Source Electromagnetic Survey	2007/3262	Not Controlled Action	Completed
Deep Gorge Boardwalk, Murujuga National Park, WA	2018/8283	Not Controlled Action	Completed
Development of Halyard Field off the west coast of WA	2010/5611	Not Controlled Action	Completed

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action			
Development of Industrial Land, Port of Dampier	2003/1293	Not Controlled Action	Completed
Development of iron ore facilities	2013/7013	Not Controlled Action	Completed
Development of iron ore resources in eastern Pilbara region, including port at P	2004/1562	Not Controlled Action	Completed
Differential Global Positioning System (DGPS)	2001/445	Not Controlled Action	Completed
Dimethyl ether plant	2001/509	Not Controlled Action	Completed
Drilling of an exploration well Gats-1 in Permit Area WA-261-P	2004/1701	Not Controlled Action	Completed
Eagle-1 Exploration Drilling, North West Shelf, WA	2019/8578	Not Controlled Action	Completed
Echo A Development WA-23-L, WA-24-L	2005/2042	Not Controlled Action	Completed
Expansion of the Sino Iron Ore Mine and export facilities, Cape Preston, WA	2017/7862	Not Controlled Action	Completed
Expansion Proposal, Mineralogy Cape Preston Iron Ore Project, Cape Preston, WA	2009/5010	Not Controlled Action	Completed
Exploration drilling well WA-155-P(1)	2003/971	Not Controlled Action	Completed
Exploration of appraisal wells	2006/3065	Not Controlled Action	Completed
Exploration Well (Taunton-2)	2002/731	Not Controlled Action	Completed
Exploration Well in Permit Area WA-155-P(1)	2002/759	Not Controlled Action	Completed
Exploratory drilling in permit area WA-225-P	2001/490	Not Controlled Action	Completed
Extension of Simpson Oil Platforms & Wells	2002/685	Not Controlled Action	Completed
Gulf Fishing Lodge	2010/5499	Not Controlled Action	Completed
HCA05X Macedon Experimental Survey	2004/1926	Not Controlled Action	Completed

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action			
Hess Exploration Drilling Programme	2007/3566	Not Controlled Action	Completed
Horizon Power South Hedland Transmission Line, WA	2012/6551	Not Controlled Action	Completed
Huascaran-1 exploration well (WA-292-P)	2001/539	Not Controlled Action	Completed
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed
INDIGO West Submarine Telecommunications Cable, WA	2017/8126	Not Controlled Action	Completed
Infill Production Well (Griffin-9)	2001/417	Not Controlled Action	Completed
Iron Bridge Port Facility, Port Hedland, WA	2015/7565	Not Controlled Action	Completed
Jansz-2 and 3 Appraisal Wells	2002/754	Not Controlled Action	Completed
King Bay East Rock Quarry & Industrial Estate Development	2003/1150	Not Controlled Action	Completed
Klammer 2D Seismic Survey	2002/868	Not Controlled Action	Completed
Mahimahi Aquaculture Facility	2002/891	Not Controlled Action	Completed
Maia-Gaea Exploration wells	2000/17	Not Controlled Action	Completed
Manaslu - 1 and Huascaran - 1 Offshore Exploration Wells	2001/235	Not Controlled Action	Completed
Mermaid Marine Australia Desalination Project	2011/5916	Not Controlled Action	Completed
Methanol manufacturing	2001/528	Not Controlled Action	Completed
Methanol plant	2001/521	Not Controlled Action	Completed
Montesa-1 and Bultaco-1 Exploration Wells	2000/102	Not Controlled Action	Completed
Murujuga archaeological excavation, collection and sampling, Dampier Archipelago, WA	2014/7160	Not Controlled Action	Completed

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action			
North Rankin B gas compression facility	2005/2500	Not Controlled Action	Completed
Onslow Power Infrastructure Upgrade Project, Onslow, WA	2014/7314	Not Controlled Action	Completed
Onslow Water Supply Infrastructure Upgrade Project, Onslow, WA	2014/7329	Not Controlled Action	Completed
Pilbara Bulk Ore Transport System Project, WA	2016/7637	Not Controlled Action	Completed
Pipeline System Modifications Project	2000/3	Not Controlled Action	Completed
Pluto-North West Shelf Interconnector, Burrup Peninsula, WA	2018/8353	Not Controlled Action	Completed
Port Expansion and Dredging	2003/1265	Not Controlled Action	Completed
Port Hedland Channel Risk and Optimisation Project, WA	2017/7915	Not Controlled Action	Completed
Project Highclere Geophysical Survey	2021/9023	Not Controlled Action	Completed
Rail and Port Facilities	2001/474	Not Controlled Action	Completed
Searipple gas and condensate field development	2000/89	Not Controlled Action	Completed
Spool Base Facility	2001/263	Not Controlled Action	Completed
Stages 1 & 2 Port of Dampier Security Upgrade & Associated Works	2004/1751	Not Controlled Action	Completed
Subsea Gas Pipeline From Stybarrow Field to Griffin Venture Gas Export Pipeline	2005/2033	Not Controlled Action	Completed
sub-sea tieback of Perseus field wells	2004/1326	Not Controlled Action	Completed
Telfer Gold Mine Project - Mine and Borefield Extensions and Upgrade of Storage	2002/787	Not Controlled Action	Completed
Telstra North Rankin Spur Fibre Optic Cable	2016/7836	Not Controlled Action	Completed
Thevenard Island Retirement Project	2015/7423	Not Controlled Action	Completed

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action			
To construct and operate an offshore submarine fibre optic cable, WA	2014/7373	Not Controlled Action	Completed
WA-295-P Kerr-McGee Exploration Wells	2001/152	Not Controlled Action	Completed
Walkway Lighting Upgrade	2009/4965	Not Controlled Action	Completed
Wanda Offshore Research Project, 80 km north-east of Exmouth, WA	2018/8293	Not Controlled Action	Completed
Western Flank Gas Development	2005/2464	Not Controlled Action	Completed
Wheatstone 3D seismic survey, 70km north of Barrow Island	2004/1761	Not Controlled Action	Completed
Widening of MOF Road	2005/2305	Not Controlled Action	Completed
Woodside Project Facilities Increase	2006/3191	Not Controlled Action	Completed
Not controlled action (particular manner)			
'Kate' 3D marine seismic survey, exploration permits WA-320-P and WA-345-P, 60km	2005/2037	Not Controlled Action (Particular Manner)	Post-Approval
'Tourmaline' 2D marine seismic survey, permit areas WA-323-P, WA-330-P and WA-32	2005/2282	Not Controlled Action (Particular Manner)	Post-Approval
"Leanne" offshore 3D seismic exploration, WA-356-P	2005/1938	Not Controlled Action (Particular Manner)	Post-Approval
2D and 3D seismic surveys	2005/2151	Not Controlled Action (Particular Manner)	Post-Approval
2D marine seismic survey	2012/6296	Not Controlled Action (Particular Manner)	Post-Approval
2D Seismic Survey	2005/2146	Not Controlled Action (Particular Manner)	Post-Approval
2D Seismic Survey Permit Area WA-352-P	2008/4628	Not Controlled Action	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
		(Particular Manner)	
2D seismic survey within permit WA-291	2007/3265	Not Controlled Action (Particular Manner)	Post-Approval
3D marine seismic survey	2008/4281	Not Controlled Action (Particular Manner)	Post-Approval
3D Marine Seismic Survey (WA-482-P, WA-363-P), WA	2013/6761	Not Controlled Action (Particular Manner)	Post-Approval
3D Marine Seismic Survey in Permit Areas WA-15-R, WA-18-R, WA-205-P, WA-253-P, WA-267-P and WA-268-P	2003/1271	Not Controlled Action (Particular Manner)	Post-Approval
3D Marine Seismic Survey in WA 457-P & WA 458-P, North West Shelf, offshore WA	2013/6862	Not Controlled Action (Particular Manner)	Post-Approval
3D marine seismic survey over petroleum title WA-268-P	2007/3458	Not Controlled Action (Particular Manner)	Post-Approval
3D Marine Seismic Surveys - Contos CT-13 & Supertubes CT-13, offshore WA	2013/6901	Not Controlled Action (Particular Manner)	Post-Approval
3D seismic survey	2006/2715	Not Controlled Action (Particular Manner)	Post-Approval
3D Seismic Survey, WA	2008/4428	Not Controlled Action (Particular Manner)	Post-Approval
3D sesmic survey	2006/2781	Not Controlled Action (Particular Manner)	Post-Approval
Acheron Non-Exclusive 2D Seismic Survey	2009/4968	Not Controlled Action (Particular Manner)	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
Acheron Non-Exclusive 2D Seismic Survey	2008/4565	Not Controlled Action (Particular Manner)	Post-Approval
Additional Rail Infrastructure	2012/6314	Not Controlled Action (Particular Manner)	Post-Approval
Agrippina 3D Seismic Marine Survey	2009/5212	Not Controlled Action (Particular Manner)	Post-Approval
Algae Farm and Processing Facilities	2012/6596	Not Controlled Action (Particular Manner)	Post-Approval
Ammonia Plant, Murujuga Burrup Peninsula - Renewable Hydrogen Project	2020/8739	Not Controlled Action (Particular Manner)	Post-Approval
Apache Northwest Shelf Van Gogh Field Appraisal Drilling Program	2007/3495	Not Controlled Action (Particular Manner)	Post-Approval
Aperio 3D Marine Seismic Survey, WA	2012/6648	Not Controlled Action (Particular Manner)	Post-Approval
Artemis-1 Drilling Program (WA-360-P)	2010/5432	Not Controlled Action (Particular Manner)	Post-Approval
Australia to Singapore Fibre Optic Submarine Cable System	2011/6127	Not Controlled Action (Particular Manner)	Post-Approval
Balnaves Condensate Field Development	2011/6188	Not Controlled Action (Particular Manner)	Post-Approval
Bonaventure 3D seismic survey	2006/2514	Not Controlled Action (Particular Manner)	Post-Approval
Cable Seismic Exploration Permit areas WA-323-P and WA-330-P	2008/4227	Not Controlled Action (Particular	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
		Manner)	
Cape Preston East - Iron Ore Export Facilities, Pilbara, WA	2013/6844	Not Controlled Action (Particular Manner)	Post-Approval
Cerberus exploration drilling campaign, Carnarvon Basin, WA	2016/7645	Not Controlled Action (Particular Manner)	Post-Approval
CGGVERITAS 2010 2D Seismic Survey	2010/5714	Not Controlled Action (Particular Manner)	Post-Approval
Charon 3D Marine Seismic Survey	2007/3477	Not Controlled Action (Particular Manner)	Post-Approval
Consturction & operation of the Varanus Island kitchen & mess cyclone refuge building, compression p	2013/6952	Not Controlled Action (Particular Manner)	Post-Approval
Coverack Marine Seismic Survey	2001/399	Not Controlled Action (Particular Manner)	Post-Approval
Cue Seismic Survey within WA-359-P, WA-361-P and WA-360-P	2007/3647	Not Controlled Action (Particular Manner)	Post-Approval
CVG 3D Marine Seismic Survey	2012/6654	Not Controlled Action (Particular Manner)	Post-Approval
Dampier Marine Services Facility including 300m Wharf and Dredging Works	2009/5108	Not Controlled Action (Particular Manner)	Post-Approval
Decommissioning of the Legendre facilities	2010/5681	Not Controlled Action (Particular Manner)	Post-Approval
Deep Water Drilling Program	2010/5532	Not Controlled Action (Particular Manner)	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
Demeter 3D Seismic Survey, off Dampier, WA	2002/900	Not Controlled Action (Particular Manner)	Post-Approval
Diesel Fuel Bunker Operation	2012/6289	Not Controlled Action (Particular Manner)	Post-Approval
Draeck 3D Marine Seismic Survey, WA-205-P	2006/3067	Not Controlled Action (Particular Manner)	Post-Approval
Dredging of marine sediment to enable construction of eight berths and a turnin	2010/5678	Not Controlled Action (Particular Manner)	Post-Approval
Drilling 35-40 offshore exploration wells in deep water	2008/4461	Not Controlled Action (Particular Manner)	Post-Approval
Earthworks for kitchen/mess, cyclone refuge building & Compression Plant, Varanus Island	2013/6900	Not Controlled Action (Particular Manner)	Post-Approval
Eendracht Multi-Client 3D Marine Seismic Survey	2009/4749	Not Controlled Action (Particular Manner)	Post-Approval
Effect of marine seismic sounds to demersal fish and pearl oysters, north-west WA	2018/8169	Not Controlled Action (Particular Manner)	Post-Approval
Enfield M3 & Vincent 4D Marine Seismic Surveys	2008/3981	Not Controlled Action (Particular Manner)	Completed
Enfield M3 4D, Vincent 4D & 4D Line Test Marine Seismic Surveys	2008/4122	Not Controlled Action (Particular Manner)	Post-Approval
Enfield M4 4D Marine Seismic Survey	2008/4558	Not Controlled Action (Particular Manner)	Post-Approval
Enfield oilfield 3D Seismic Survey	2006/3132	Not Controlled Action (Particular	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
		Manner)	
Exmouth West 2D Marine Seismic Survey	2008/4132	Not Controlled Action (Particular Manner)	Post-Approval
Exploration drilling of Zeus-1 well	2008/4351	Not Controlled Action (Particular Manner)	Post-Approval
Fletcher-Finucane Development, WA26-L and WA191-P	2011/6123	Not Controlled Action (Particular Manner)	Post-Approval
Foxhound 3D Non-Exclusive Marine Seismic Survey	2009/4703	Not Controlled Action (Particular Manner)	Post-Approval
Gazelle 3D Marine Seismic Survey in WA-399-P and WA-42-L	2010/5570	Not Controlled Action (Particular Manner)	Post-Approval
Geco Eagle 3D Marine Seismic Survey	2008/3958	Not Controlled Action (Particular Manner)	Post-Approval
Glencoe 3D Marine Seismic Survey WA-390-P	2007/3684	Not Controlled Action (Particular Manner)	Post-Approval
Greater Western Flank Phase 1 gas Development	2011/5980	Not Controlled Action (Particular Manner)	Post-Approval
Grimalkin 3D Seismic Survey	2008/4523	Not Controlled Action (Particular Manner)	Post-Approval
Guacamole 2D Marine Seismic Survey	2008/4381	Not Controlled Action (Particular Manner)	Post-Approval
Harmony 3D Marine Seismic Survey	2012/6699	Not Controlled Action (Particular Manner)	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
Harpy 1 exploration well	2001/183	Not Controlled Action (Particular Manner)	Post-Approval
Honeycombs MC3D Marine Seismic Survey	2012/6368	Not Controlled Action (Particular Manner)	Post-Approval
Huzzas MC3D Marine Seismic Survey (HZ-13) Carnarvon Basin, offshore WA	2013/7003	Not Controlled Action (Particular Manner)	Post-Approval
Huzzas phase 2 marine seismic survey, Exmouth Plateau, Northern Carnarvon Basin, WA	2013/7093	Not Controlled Action (Particular Manner)	Post-Approval
INDIGO Marine Cable Route Survey (INDIGO)	2017/7996	Not Controlled Action (Particular Manner)	Post-Approval
John Ross & Rosella Off Bottom Cable Seismic Exploration Program	2008/3966	Not Controlled Action (Particular Manner)	Post-Approval
Judo Marine 3D Seismic Survey within and adjacent to WA-412-P	2008/4630	Not Controlled Action (Particular Manner)	Post-Approval
Judo Marine 3D Seismic Survey within and adjacent to WA-412-P	2009/4801	Not Controlled Action (Particular Manner)	Post-Approval
Julimar Brunello Gas Development Project	2011/5936	Not Controlled Action (Particular Manner)	Post-Approval
Klimt 2D Marine Seismic Survey	2007/3856	Not Controlled Action (Particular Manner)	Post-Approval
Laverda 3D Marine Seismic Survey and Vincent M1 4D Marine Seismic Survey	2010/5415	Not Controlled Action (Particular Manner)	Post-Approval
Leopard 2D marine seismic survey	2005/2290	Not Controlled Action (Particular	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
		Manner)	
Lion 2D Marine Seismic Survey	2007/3777	Not Controlled Action (Particular Manner)	Post-Approval
Macedon Gas Field Development	2008/4605	Not Controlled Action (Particular Manner)	Post-Approval
Marine Geotechnical Drilling Program	2008/4012	Not Controlled Action (Particular Manner)	Post-Approval
Marine reconnaissance survey	2008/4466	Not Controlled Action (Particular Manner)	Post-Approval
Millstream 20GL Pipeline, Bungaroo, Borefield Integration	2012/6379	Not Controlled Action (Particular Manner)	Post-Approval
MOF Road Widening and Resurfacing Works	2011/5843	Not Controlled Action (Particular Manner)	Post-Approval
Moosehead 2D seismic survey within permit WA-192-P	2005/2167	Not Controlled Action (Particular Manner)	Post-Approval
Munmorah 2D seismic survey within permits WA-308/9-P	2003/970	Not Controlled Action (Particular Manner)	Post-Approval
Nelson Point Dredging	2009/4920	Not Controlled Action (Particular Manner)	Post-Approval
Nickol Bay Quarry Eastern Extension Proposal, Burrup Peninsula, WA	2013/6915	Not Controlled Action (Particular Manner)	Post-Approval
Ocean Bottom Cable Seismic Program, WA-264-P	2007/3844	Not Controlled Action (Particular Manner)	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
Ocean Bottom Cable Seismic Survey	2005/2017	Not Controlled Action (Particular Manner)	Post-Approval
Offshore Canning Multi Client 2D Marine Seismic Survey	2010/5393	Not Controlled Action (Particular Manner)	Post-Approval
Offshore Drilling Campaign	2011/5830	Not Controlled Action (Particular Manner)	Post-Approval
Offshore Fibre Optic Cable Network Construction & Operation, Port Hedland WA to Darwin NT	2014/7223	Not Controlled Action (Particular Manner)	Post-Approval
Onslow Seawater Desalination Plant Marine Geophysical Investigation	2020/8794	Not Controlled Action (Particular Manner)	Post-Approval
Orcus 3D Marine Seismic Survey in WA-450-P	2010/5723	Not Controlled Action (Particular Manner)	Post-Approval
Osprey and Dionysus Marine Seismic Survey	2011/6215	Not Controlled Action (Particular Manner)	Post-Approval
Palta-1 exploration well in Petroleum Permit Area WA-384-P	2011/5871	Not Controlled Action (Particular Manner)	Post-Approval
Phoenix 3D Seismic Survey, Bedout Sub-Basin	2010/5360	Not Controlled Action (Particular Manner)	Post-Approval
Pomodoro 3D Marine Seismic Survey in WA-426-P and WA-427-P	2010/5472	Not Controlled Action (Particular Manner)	Post-Approval
Port Headland Outer Harbour Pre-construction Pilling program	2012/6341	Not Controlled Action (Particular Manner)	Post-Approval
Port of Port Hedland channel marker replacement project, WA	2017/8010	Not Controlled Action (Particular	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
		Manner)	
Port Walcott upgrade, dredging & spoil disposal, & channel realignment	2006/2806	Not Controlled Action (Particular Manner)	Post-Approval
Pyrenees 4D Marine Seismic Monitor Survey, HCA12A	2012/6579	Not Controlled Action (Particular Manner)	Post-Approval
Pyrenees-Macedon 3D marine seismic survey	2005/2325	Not Controlled Action (Particular Manner)	Post-Approval
Quiberon 2D Seismic Survey, permit area WA-385P, offshore of Carnarvon	2009/5077	Not Controlled Action (Particular Manner)	Post-Approval
Realignment of the Great Northern Highway	2010/5793	Not Controlled Action (Particular Manner)	Post-Approval
Reindeer gas reservior development, Devil Creek, Carnarvon Basin - WA	2007/3917	Not Controlled Action (Particular Manner)	Post-Approval
Repsol 3d & 2D Marine Seismic Survey	2012/6658	Not Controlled Action (Particular Manner)	Post-Approval
Rose 3D Seismic Program	2008/4239	Not Controlled Action (Particular Manner)	Post-Approval
Rydal-1 Petroleum Exploration Well, WA	2012/6522	Not Controlled Action (Particular Manner)	Post-Approval
Salsa 3D Marine Seismic Survey	2010/5629	Not Controlled Action (Particular Manner)	Post-Approval
Santos Winchester three dimensional seismic survey - WA-323-P & WA-330-P	2011/6107	Not Controlled Action (Particular Manner)	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
Scarborough Development nearshore component, NWS, WA	2018/8362	Not Controlled Action (Particular Manner)	Post-Approval
Skorpion Marine Seismic Survey WA	2001/416	Not Controlled Action (Particular Manner)	Post-Approval
Sovereign 3D Marine Seismic Survey	2011/5861	Not Controlled Action (Particular Manner)	Post-Approval
Stag 4D & Reindeer MAZ Marine Seismic Surveys, WA	2013/7080	Not Controlled Action (Particular Manner)	Post-Approval
Stag Off-bottom Cable Seismic Survey	2007/3696	Not Controlled Action (Particular Manner)	Post-Approval
Stybarrow 4D Marine Seismic Survey	2011/5810	Not Controlled Action (Particular Manner)	Post-Approval
Stybarrow Baseline 4D marine seismic survey	2008/4530	Not Controlled Action (Particular Manner)	Post-Approval
Tantabiddi Boat Ramp Sand Bypassing	2015/7411	Not Controlled Action (Particular Manner)	Post-Approval
The Dampier Heavy Load Out Facility Berth and Swing Basin Expansion	2012/6271	Not Controlled Action (Particular Manner)	Post-Approval
Tidepole Maz 3D Seismic Survey Campaign	2007/3706	Not Controlled Action (Particular Manner)	Post-Approval
Tortilla 2D Seismic Survey, WA	2011/6110	Not Controlled Action (Particular Manner)	Post-Approval
Triton 3D Marine Seismic Survey, WA-2-R and WA-3-R	2006/2609	Not Controlled Action (Particular	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
		Manner)	
Undertake a 3D marine seismic survey	2010/5695	Not Controlled Action (Particular Manner)	Post-Approval
Undertake a three dimensional marine seismic survey	2010/5679	Not Controlled Action (Particular Manner)	Post-Approval
Undertake a three dimensional marine seismic survey	2010/5715	Not Controlled Action (Particular Manner)	Post-Approval
upgrade of 3 community recreation sites	2005/2349	Not Controlled Action (Particular Manner)	Post-Approval
Vincent M1 and Enfield M5 4D Marine Seismic Survey	2010/5720	Not Controlled Action (Particular Manner)	Post-Approval
Warramunga Non-Inclusive 3D Seismic Survey	2008/4553	Not Controlled Action (Particular Manner)	Post-Approval
West Anchor 3D Marine Seismic Survey	2008/4507	Not Controlled Action (Particular Manner)	Post-Approval
West Panaeus 3D seismic survey	2006/3141	Not Controlled Action (Particular Manner)	Post-Approval
Westralia SPAN Marine Seismic Survey, WA & NT	2012/6463	Not Controlled Action (Particular Manner)	Post-Approval
Wheatstone 3D MAZ Marine Seismic Survey	2011/6058	Not Controlled Action (Particular Manner)	Post-Approval
Wheatstone Iago Appraisal Well Drilling	2008/4134	Not Controlled Action (Particular Manner)	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
Wheatstone Iago Appraisal Well Drilling	2007/3941	Not Controlled Action (Particular Manner)	Post-Approval
Referral decision			
3D Marine Seismic Survey in the offshore northwest Carnarvon Basin	2011/6175	Referral Decision	Completed
3D Seismic Survey	2008/4219	Referral Decision	Completed
Bianchi 3D Marine Seismic Survey, Carnavon Basin, WA	2013/7078	Referral Decision	Completed
construction of a new loadout facility and associated laydown area south of the	2002/579	Referral Decision	Completed
CVG 3D Marine Seismic Survey	2012/6270	Referral Decision	Completed
Enfield 4D Marine Seismic Surveys, Production Permit WA-28-L	2005/2370	Referral Decision	Completed
Mardie Salt Project, Pilbara region, WA	2018/8183	Referral Decision	Completed
Outer Harbour Development and associated marine and terrestial infrastructure	2008/4148	Referral Decision	Completed
Relocation of 2 heritage sites to National Heritage Place	2010/5709	Referral Decision	Completed
Rose 3D Seismic acquisition survey	2008/4220	Referral Decision	Completed
Stybarrow Baseline 4D Marine Seismic Survey (Permit Areas WA-255-P, WA-32-L, WA-	2008/4165	Referral Decision	Completed
Two Dimensional Transition Zone Seismic Survey - TP/7 (R1)	2010/5507	Referral Decision	Completed
Varanus Island Compression Project	2012/6698	Referral Decision	Completed

Key Ecological Features [Resource Information]

Key Ecological Features are the parts of the marine ecosystem that are considered to be important for the biodiversity or ecosystem functioning and integrity of the Commonwealth Marine Area.

Name	Region

Name	Region
Ancient coastline at 125 m depth contour	North-west
Canyons linking the Cuvier Abyssal Plain and the Cape Range Peninsula	North-west
Commonwealth waters adjacent to Ningaloo Reef	North-west
Continental Slope Demersal Fish Communities	North-west
Exmouth Plateau	North-west
Glomar Shoals	North-west

Biologically Important Areas		[Resource Information]
Scientific Name	Behaviour	Presence
Dugong		
Dugong dugon Dugong [28]	Foraging	Known to occur
Dugong dugon Dugong [28]	Reproduction	Known to occur
Marine Turtles		
Caretta caretta Loggerhead Turtle [1763]	Foraging	Known to occur
Caretta caretta Loggerhead Turtle [1763]	Reproduction	Low density
Chelonia mydas Green Turtle [1765]	Foraging	Known to occur
Chelonia mydas Green Turtle [1765]	Migration	Known to occur
Chelonia mydas Green Turtle [1765]	Reproduction	Likely to occur
Chelonia mydas Green Turtle [1765]	Resting	Known to occur
Eretmochelys imbricata Hawksbill Turtle [1766]	Foraging	Likely to occur
Eretmochelys imbricata Hawksbill Turtle [1766]	Migration	Known to occur

Scientific Name	Behaviour	Presence
Eretmochelys imbricata Hawksbill Turtle [1766]	Reproduction	Known to occur
Natator depressus Flatback Turtle [59257]	Foraging	Known to occur
Natator depressus Flatback Turtle [59257]	Migration	Known to occur
Natator depressus Flatback Turtle [59257]	Reproduction	Known to occur
River shark		
Pristis clavata Dwarf Sawfish [68447]	Foraging	Known to occur
Pristis clavata Dwarf Sawfish [68447]	Reproduction	Known to occur
Pristis pristis Largetooth Sawfish [60756]	Foraging	Known to occur
Pristis pristis Largetooth Sawfish [60756]	Reproduction	Known to occur
Pristis zijsron Green Sawfish [68442]	Foraging	Known to occur
Pristis zijsron Green Sawfish [68442]	Reproduction	Known to occur
Seabirds		
Ardenna pacifica Wedge-tailed Shearwater [84292]	Reproduction	Known to occur
Fregata ariel Lesser Frigatebird [1012]	Reproduction	Known to occur
Phaethon lepturus White-tailed Tropicbird [1014]	Reproduction	Known to occur
Sterna dougallii Roseate Tern [817]	Reproduction	Known to occur

Scientific Name	Behaviour	Presence
Sternula albifrons sinensis Little Tern [82850]	Reproduction	Known to occur
Sternula nereis Fairy Tern [82949]	Reproduction	Known to occur
Sula leucogaster Brown Booby [1022]	Reproduction	Known to occur
Thalasseus bengalensis Lesser Crested Tern [66546]	Reproduction	Known to occur
Sharks		
Rhincodon typus Whale Shark [66680]	Foraging	Known to occur
Whales		
Balaenoptera musculus brevicauda Pygmy Blue Whale [81317]	Foraging	Likely to be present
Balaenoptera musculus brevicauda Pygmy Blue Whale [81317]	Migration	Known to occur
Eubalaena australis Southern Right Whale [40]	Migration	
Eubalaena australis Southern Right Whale [40]	Reproduction	
Megaptera novaeangliae Humpback Whale [38]	Migration	Known to occur
Megaptera novaeangliae Humpback Whale [38]	Resting	Known to occur

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data is available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance on the contents of this report.

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions when time permits.

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded breeding sites; and
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management, Northern Territory
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
Forestry Corporation, NSW
-Geoscience Australia
-CSIRO
-Australian Tropical Herbarium, Cairns
-eBird Australia
-Australian Government – Australian Antarctic Data Centre
-Museum and Art Gallery of the Northern Territory
-Australian Government National Environmental Science Program
-Australian Institute of Marine Science
-Reef Life Survey Australia
-American Museum of Natural History
-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
-Tasmanian Museum and Art Gallery, Hobart, Tasmania
-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact us page.

© Commonwealth of Australia
Department of Climate Change, Energy, the Environment and Water
GPO Box 3090
Canberra ACT 2601 Australia
+61 2 6274 1111

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

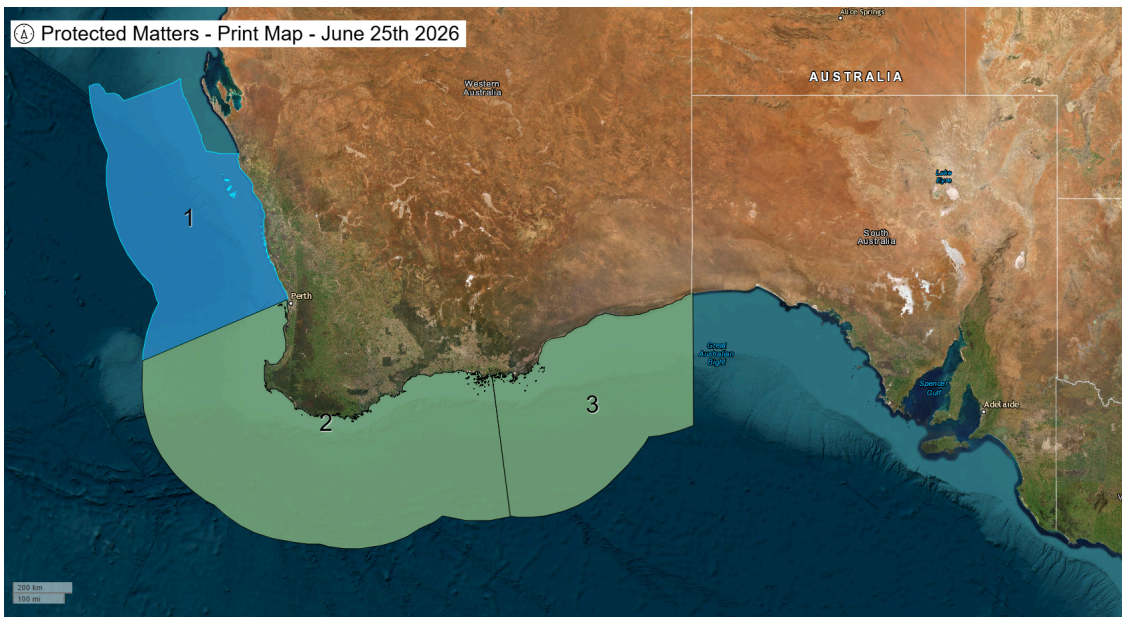


Figure 1: South West Marine Region - North (Part 1)

Report created: 25-Jun-2026

Summary
Details
Matters of NES
Other Matters Protected by the EPBC Act
Extra Information
Caveat
Acknowledgements

Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	None
National Heritage Places:	3
Wetlands of International Importance (Ramsar	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	5
Listed Threatened Ecological Communities:	6
Listed Threatened Species:	112
Listed Migratory Species:	81

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at https://www.dcceew.gov.au/parks-heritage/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	20
Commonwealth Heritage Places:	3
Listed Marine Species:	125
Whales and Other Cetaceans:	38
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	21
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have

State and Territory Reserves:	48
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	113
Key Ecological Features (Marine):	8
Biologically Important Areas:	23
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

National Heritage Places		[Resource Information]
Name	State	Legal Status
Historic		
HMAS Sydney II and HSK Kormoran Shipwreck Sites	EXT	Listed place
Batavia Shipwreck Site and Survivor Camps Area 1629 - Houtman Abrolhos	WA	Listed place
Natural		
Lesueur National Park	WA	Listed place

Commonwealth Marine Area	[Resource Information]

Approval is required for a proposed activity that is located within the Commonwealth Marine Area which has, will have, or is likely to have a significant impact on the environment. Approval may be required for a proposed action taken outside a Commonwealth Marine Area but which has, may have or is likely to have a significant impact on the environment in the Commonwealth Marine Area.

Feature Name
Commonwealth Marine Areas (EPBC Act)
Commonwealth Marine Areas (EPBC Act)
Commonwealth Marine Areas (EPBC Act)
Commonwealth Marine Areas (EPBC Act)
Commonwealth Marine Areas (EPBC Act)

Listed Threatened Ecological Communities	[Resource Information]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.
Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.

Community Name	Threatened Category	Presence Text
Aquatic Root Mat Community in Caves of the Swan Coastal Plain	Endangered	Community known to occur within area
Banksia Woodlands of the Swan Coastal Plain ecological community	Endangered	Community likely to occur within area
Honeymyrtle shrubland on limestone ridges of the Swan Coastal Plain Bioregion	Critically Endangered	Community likely to occur within area

Community Name	Threatened Category	Presence Text
Sedgelands in Holocene dune swales of the southern Swan Coastal Plain	Endangered	Community known to occur within area
Subtropical and Temperate Coastal Saltmarsh	Vulnerable	Community likely to occur within area
Tuart (Eucalyptus gomphocephala) Woodlands and Forests of the Swan Coastal Plain ecological community	Critically Endangered	Community likely to occur within area

Listed Threatened Species [Resource Information]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.
Number is the current name ID.

Scientific Name	Threatened Category	Presence Text
BIRD		
Anous tenuirostris melanops Australian Lesser Noddy [26000]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Aphelocephala leucopsis Southern Whiteface [529]	Vulnerable	Species or species habitat likely to occur within area
Ardenna grisea Sooty Shearwater [82651]	Vulnerable	Species or species habitat may occur within area
Arenaria interpres Ruddy Turnstone [872]	Vulnerable	Roosting likely to occur within area
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat likely to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Calidris tenuirostris Great Knot [862]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Calyptorhynchus banksii naso Forest Red-tailed Black-Cockatoo, Karrak [67034]	Vulnerable	Species or species habitat likely to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Diomedea amsterdamensis Amsterdam Albatross [64405]	Endangered	Species or species habitat likely to occur within area
Diomedea dabbenena Tristan Albatross [66471]	Endangered	Species or species habitat likely to occur within area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Species or species habitat may occur within area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Species or species habitat may occur within area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area
Halobaena caerulea Blue Petrel [1059]	Vulnerable	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Leipoa ocellata Malleefowl [934]	Vulnerable	Species or species habitat likely to occur within area
Limosa lapponica menzbieri Northern Siberian Bar-tailed Godwit, Russkoye Bar-tailed Godwit [86432]	Endangered	Species or species habitat likely to occur within area
Limosa limosa Black-tailed Godwit [845]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Pachyptila turtur subantarctica Fairy Prion (southern) [64445]	Vulnerable	Species or species habitat likely to occur within area
Phaethon lepturus fulvus Christmas Island White-tailed Tropicbird, Golden Bosunbird [26021]	Endangered	Species or species habitat may occur within area
Phaethon rubricauda westralis Red-tailed Tropicbird (Indian Ocean), Indian Ocean Red-tailed Tropicbird [91824]	Endangered	Species or species habitat likely to occur within area
Phoebetria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat may occur within area
Pluvialis squatarola Grey Plover [865]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area

Scientific Name	Threatened Category	Presence Text
Pterodroma mollis Soft-plumaged Petrel [1036]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
Sternula albifrons Little Tern [82849]	Vulnerable	Species or species habitat may occur within area
Sternula nereis nereis Australian Fairy Tern [82950]	Vulnerable	Breeding likely to occur within area
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat likely to occur within area
Thalassarche cauta Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable	Species or species habitat may occur within area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area
Turnix varius scintillans Painted Button-quail (Houtman Abrolhos) [82451]	Endangered	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
[Xenus cinereus](#)		
Terek Sandpiper [59300]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
[Zanda latirostris listed as Calyptorhynchus latirostris](#)		
Carnaby's Black Cockatoo, Short-billed Black-cockatoo [87737]	Endangered	Breeding likely to occur within area
FISH		
[Hoplostethus atlanticus](#)		
Orange Roughy, Deep-sea Perch, Red Roughy [68455]	Conservation Dependent	Species or species habitat likely to occur within area
[Nannatherina balstoni](#)		
Balston's Pygmy Perch [66698]	Vulnerable	Species or species habitat likely to occur within area
INSECT		
[Hesperocolletes douglasi](#)		
Douglas' Broad-headed Bee, Rottnest Bee [66734]	Critically Endangered	Species or species habitat may occur within area
MAMMAL		
[Balaenoptera borealis](#)		
Sei Whale [34]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
[Balaenoptera musculus](#)		
Blue Whale [36]	Endangered	Migration route known to occur within area
[Balaenoptera physalus](#)		
Fin Whale [37]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
[Bettongia penicillata ogilbyi](#)		
Woylie [66844]	Endangered	Species or species habitat likely to occur within area
[Dasyurus geoffroii](#)		
Chuditch, Western Quoll [330]	Vulnerable	Translocated population known to occur within area

Scientific Name	Threatened Category	Presence Text
Eubalaena australis Southern Right Whale [40]	Endangered	Breeding likely to occur within area
Neophoca cinerea Australian Sea-lion, Australian Sea Lion [22]	Endangered	Breeding known to occur within area
Parantechinus apicalis Dibbler [313]	Endangered	Translocated population known to occur within area
Petrogale lateralis lateralis Black-flanked Rock-wallaby, Mororong, Black-footed Rock Wallaby [66647]	Endangered	Species or species habitat likely to occur within area
Pseudocheirus occidentalis Western Ringtail Possum, Ngwayir, Womp, Woder, Ngoor, Ngoolangit [25911]	Critically Endangered	Species or species habitat likely to occur within area
Setonix brachyurus Quokka [229]	Vulnerable	Species or species habitat likely to occur within area
PLANT		
Andersonia gracilis Slender Andersonia [14470]	Endangered	Species or species habitat likely to occur within area
Androcalva bivillosa Straggling Androcalva [87807]	Critically Endangered	Species or species habitat likely to occur within area
Anigozanthos viridis subsp. terraspectans Dwarf Green Kangaroo Paw [3435]	Vulnerable	Species or species habitat likely to occur within area
Banksia mimica Summer Honeypot [82765]	Endangered	Species or species habitat may occur within area
Beyeria lepidopetala Small-petalled Beyeria, Short-petalled Beyeria [18362]	Endangered	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Caladenia barbarella Small Dragon Orchid, Common Dragon Orchid [68686]	Endangered	Species or species habitat may occur within area
Caladenia bryceana subsp. cracens Northern Dwarf Spider-orchid [64556]	Vulnerable	Species or species habitat likely to occur within area
Caladenia elegans Elegant Spider-orchid [56775]	Endangered	Species or species habitat likely to occur within area
Caladenia hoffmanii Hoffman's Spider-orchid [56719]	Endangered	Species or species habitat likely to occur within area
Caleana dixonii listed as Paracaleana dixonii Sandplain Duck Orchid [87944]	Endangered	Species or species habitat likely to occur within area
Chorizema humile Prostrate Flame Pea [32573]	Endangered	Species or species habitat may occur within area
Chorizema varium Limestone Pea [16981]	Endangered	Species or species habitat likely to occur within area
Conostylis dielsii subsp. teres Irwin's Conostylis [3614]	Endangered	Species or species habitat may occur within area
Conostylis micrantha Small-flowered Conostylis [17635]	Endangered	Species or species habitat may occur within area
Diuris drummondii Tall Donkey Orchid [4365]	Vulnerable	Species or species habitat may occur within area
Diuris micrantha Dwarf Bee-orchid [55082]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Diuris purdiei Purdie's Donkey-orchid [12950]	Endangered	Species or species habitat may occur within area
Drakaea concolor Kneeling Hammer-orchid [56777]	Vulnerable	Species or species habitat likely to occur within area
Drakaea elastica Glossy-leafed Hammer Orchid, Glossy-leaved Hammer Orchid, Warty Hammer Orchid [16753]	Endangered	Species or species habitat likely to occur within area
Drakaea micrantha Dwarf Hammer-orchid [56755]	Vulnerable	Species or species habitat may occur within area
Drummondita ericoides Morseby Range Drummondita [9193]	Endangered	Species or species habitat likely to occur within area
Eleocharis keigheryi Keighery's Eleocharis [64893]	Vulnerable	Species or species habitat likely to occur within area
Eucalyptus argutifolia Yanchep Mallee, Wabling Hill Mallee [24263]	Vulnerable	Species or species habitat likely to occur within area
Eucalyptus cuprea Mallee Box [56773]	Endangered	Species or species habitat likely to occur within area
Grevillea batrachioides Mt Lesueur Grevillea [21735]	Endangered	Species or species habitat may occur within area
Grevillea bracteosa subsp. howatharra [85002]	Critically Endangered	Species or species habitat likely to occur within area
Grevillea humifusa Spreading Grevillea [61182]	Endangered	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Hemiandra gardneri Red Snakebush [7945]	Endangered	Species or species habitat likely to occur within area
Hypocalymma angustifolium subsp. Hutt River (S.Patrick 2982) [85023]	Endangered	Species or species habitat likely to occur within area
Lechenaultia chlorantha Kalbarri Leschenaultia [16763]	Vulnerable	Species or species habitat likely to occur within area
Macarthuria keigheryi Keighery's Macarthuria [64930]	Endangered	Species or species habitat may occur within area
Marianthus paralius [83925]	Endangered	Species or species habitat likely to occur within area
Melaleuca sp. Wanneroo (G.J.Keighery 16705) [89456]	Endangered	Species or species habitat likely to occur within area
Pterostylis sinuata Northampton Midget Greenhood, Western Swan Greenhood [84991]	Endangered	Species or species habitat likely to occur within area
Stachystemon nematophorus Three-flowered Stachystemon [81447]	Vulnerable	Species or species habitat likely to occur within area
Styphelia marginata listed as Leucopogon marginatus Thick-margined Leucopogon [91870]	Endangered	Species or species habitat likely to occur within area
Styphelia obtecta listed as Leucopogon obtectus Hidden Beard-heath [50758]	Endangered	Species or species habitat may occur within area
Thelymitra stellata Star Sun-orchid [7060]	Endangered	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
[Thelymitra variegata](#) Queen of Sheba [12582]	Critically Endangered	Species or species habitat may occur within area
[Wurmbea tubulosa](#) Long-flowered Nancy [12739]	Endangered	Species or species habitat may occur within area
REPTILE		
[Caretta caretta](#) Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
[Chelonia mydas](#) Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
[Ctenotus lancelini](#) Lancelin Island Skink [1482]	Vulnerable	Translocated population known to occur within area
[Dermochelys coriacea](#) Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
[Egernia stokesii badia](#) Western Spiny-tailed Skink, Baudin Island Spiny-tailed Skink [64483]	Endangered	Species or species habitat may occur within area
[Liopholis pulchra longicauda](#) Jurien Bay Skink, Jurien Bay Rock-skink [83162]	Vulnerable	Species or species habitat likely to occur within area
[Natator depressus](#) Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area
SHARK		
[Carcharias taurus (west coast population)](#) Grey Nurse Shark (west coast population) [68752]	Vulnerable	Congregation or aggregation likely to occur within area
[Carcharodon carcharias](#) White Shark, Great White Shark [64470]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area

Scientific Name	Threatened Category	Presence Text
Centrophorus uyato		
Little Gulper Shark [68446]	Conservation Dependent	Species or species habitat likely to occur within area
Galeorhinus galeus		
Tope, Flake, Oil Shark, School Shark [68453]	Conservation Dependent	Species or species habitat may occur within area
Pristis pristis		
Largetooth Sawfish, Freshwater Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Endangered	Species or species habitat may occur within area
Rhincodon typus		
Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
Sphyrna lewini		
Scalloped Hammerhead [85267]	Conservation Dependent	Species or species habitat likely to occur within area
SPIDER		
Idiosoma nigrum		
Shield-backed Trapdoor Spider, Black Rugose Trapdoor Spider [66798]	Vulnerable	Species or species habitat may occur within area

Listed Migratory Species [Resource Information]

Scientific Name	Threatened Category	Presence Text
null		
Balaenoptera omurai		
Omura's Whale [87136]		Species or species habitat likely to occur within area
Migratory Marine Birds		
Anous stolidus		
Common Noddy [825]		Species or species habitat likely to occur within area
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardenna carneipes		
Flesh-footed Shearwater, Fleshy-footed Shearwater [82404]		Foraging, feeding or related behaviour likely to occur within area

Scientific Name	Threatened Category	Presence Text
Ardenna grisea Sooty Shearwater [82651]	Vulnerable	Species or species habitat may occur within area
Ardenna pacifica Wedge-tailed Shearwater [84292]		Breeding likely to occur within area
Diomedea amsterdamensis Amsterdam Albatross [64405]	Endangered	Species or species habitat likely to occur within area
Diomedea dabbenena Tristan Albatross [66471]	Endangered	Species or species habitat likely to occur within area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Species or species habitat may occur within area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Species or species habitat may occur within area
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area
Hydroprogne caspia Caspian Tern [808]		Breeding likely to occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area

Scientific Name	Threatened Category	Presence Text
Onychoprion anaethetus Bridled Tern [82845]		Breeding likely to occur within area
Phaethon lepturus White-tailed Tropicbird [1014]		Species or species habitat may occur within area
Phaethon rubricauda Red-tailed Tropicbird [994]		Species or species habitat may occur within area
Phoebetria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat may occur within area
Sterna dougallii Roseate Tern [817]		Breeding likely to occur within area
Sternula albifrons Little Tern [82849]	Vulnerable	Species or species habitat may occur within area
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat likely to occur within area
Thalassarche cauta Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable	Species or species habitat may occur within area
Migratory Marine Species		

Scientific Name	Threatened Category	Presence Text
Balaenoptera bonaerensis Antarctic Minke Whale, Dark-shoulder Minke Whale [67812]		Species or species habitat likely to occur within area
Balaenoptera borealis Sei Whale [34]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat likely to occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Migration route known to occur within area
Balaenoptera physalus Fin Whale [37]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Caperea marginata Pygmy Right Whale [39]		Foraging, feeding or related behaviour may occur within area
Carcharhinus longimanus Oceanic Whitetip Shark [84108]		Species or species habitat likely to occur within area
Carcharias taurus Grey Nurse Shark [64469]		Congregation or aggregation likely to occur within area
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Breeding likely to occur within area

Scientific Name	Threatened Category	Presence Text
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Eubalaena australis as Balaena glacialis australis Southern Right Whale [40]	Endangered	Breeding likely to occur within area
Isurus oxyrinchus Shortfin Mako, Mako Shark [79073]		Species or species habitat likely to occur within area
Isurus paucus Longfin Mako [82947]		Species or species habitat likely to occur within area
Lagenorhynchus obscurus Dusky Dolphin [43]		Species or species habitat likely to occur within area
Lamna nasus Porbeagle, Mackerel Shark [83288]		Species or species habitat likely to occur within area
Megaptera novaeangliae Humpback Whale [38]		Species or species habitat known to occur within area
Mobula alfredi as Manta alfredi Reef Manta Ray, Coastal Manta Ray [90033]		Species or species habitat likely to occur within area
Mobula birostris as Manta birostris Giant Manta Ray [90034]		Species or species habitat likely to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Physeter macrocephalus Sperm Whale [59]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
[Pristis pristis](#) Largetooth Sawfish, Freshwater Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Endangered	Species or species habitat may occur within area
[Rhincodon typus](#) Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
Migratory Terrestrial Species		
[Motacilla cinerea](#) Grey Wagtail [642]		Species or species habitat may occur within area
Migratory Wetlands Species		
[Actitis hypoleucos](#) Common Sandpiper [59309]		Species or species habitat likely to occur within area
[Arenaria interpres](#) Ruddy Turnstone [872]	Vulnerable	Roosting likely to occur within area
[Calidris acuminata](#) Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area
[Calidris alba](#) Sanderling [875]		Roosting likely to occur within area
[Calidris canutus](#) Red Knot, Knot [855]	Vulnerable	Species or species habitat likely to occur within area
[Calidris ferruginea](#) Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area
[Calidris melanotos](#) Pectoral Sandpiper [858]		Species or species habitat likely to occur within area
[Calidris ruficollis](#) Red-necked Stint [860]		Foraging, feeding or related behaviour likely to occur within area

Scientific Name	Threatened Category	Presence Text
[Calidris tenuirostris](#) Great Knot [862]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
[Charadrius bicinctus](#) Double-banded Plover [895]		Foraging, feeding or related behaviour likely to occur within area
[Charadrius leschenaultii](#) Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area
[Charadrius mongolus](#) Lesser Sand Plover, Mongolian Plover [879]	Endangered	Foraging, feeding or related behaviour likely to occur within area
[Gallinago megala](#) Swinhoe's Snipe [864]		Roosting likely to occur within area
[Gallinago stenura](#) Pin-tailed Snipe [841]		Roosting likely to occur within area
[Limosa lapponica](#) Bar-tailed Godwit [844]		Species or species habitat likely to occur within area
[Limosa limosa](#) Black-tailed Godwit [845]	Endangered	Foraging, feeding or related behaviour likely to occur within area
[Numenius madagascariensis](#) Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
[Numenius minutus](#) Little Curlew, Little Whimbrel [848]		Roosting likely to occur within area
[Numenius phaeopus](#) Whimbrel [849]		Foraging, feeding or related behaviour likely to occur within area

Scientific Name	Threatened Category	Presence Text
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area
Phalaropus lobatus Red-necked Phalarope [838]		Foraging, feeding or related behaviour likely to occur within area
Pluvialis fulva Pacific Golden Plover [25545]		Foraging, feeding or related behaviour likely to occur within area
Pluvialis squatarola Grey Plover [865]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thalasseus bergii Greater Crested Tern [83000]		Breeding likely to occur within area
Tringa brevipes Grey-tailed Tattler [851]		Foraging, feeding or related behaviour likely to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area
Tringa stagnatilis Marsh Sandpiper, Little Greenshank [833]		Foraging, feeding or related behaviour likely to occur within area
Tringa totanus Common Redshank, Redshank [835]		Foraging, feeding or related behaviour likely to occur within area
Xenus cinereus Terek Sandpiper [59300]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area

Other Matters Protected by the EPBC Act

Commonwealth Lands [Resource Information]

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Commonwealth Land Name	State
Australian Broadcasting Corporation	
Lot 3 P003065 [AGPR212]	WA
Australian Maritime Safety Authority	
Lot 2 S064031 [AGPR260]	WA
Lot 2 S064031 [AGPR261]	WA
Australian Postal Corporation	
Lot 1722 P167316 [AGPR7252]	WA
Department of Climate Change, Energy, the Environment and Water	
Geraldton Drill Hall Complex [CHL_105658]	WA
HMAS Sydney II and HSK Kormoran Shipwreck Sites [CHL_106062]	EXT
Lancelin Defence Training Area [CHL_105578]	WA
Department of Defence	
ANC TS MARMION - Hillarys [DD_3371]	WA
ANC TS Morrow - Geraldton [DD_0084]	WA
Geraldton Training Depot [DD_0705]	WA
Geraldton Training Depot [AGPR4445]	WA
Geraldton Training Depot [AGPR4444]	WA
Geraldton Training Depot [AGPR4446]	WA
Joondalup Training Depot [DD_1554]	WA
Lancelin Training Area [DD_0085]	WA
Lancelin Training Area [AGPR4486]	WA
Lancelin Training Area [AGPR4487]	WA
WA Offshore Training Area [DD_3034]	WA
Department of Home Affairs	
Lot 536 P044177 [AGPR6133]	WA
Lot 920 P057276 [AGPR4736]	WA

Commonwealth Heritage Places [Resource Information]

Name	State	Status
Historic		
Geraldton Drill Hall Complex	WA	Listed place
HMAS Sydney II and HSK Kormoran Shipwreck Sites	EXT	Listed place
Natural		
Lancelin Defence Training Area	WA	Listed place

Listed Marine Species [Resource Information]

Scientific Name	Threatened Category	Presence Text
Bird		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat likely to occur within area
Anous stolidus Common Noddy [825]		Species or species habitat likely to occur within area
Anous tenuirostris melanops Australian Lesser Noddy [26000]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area
Ardenna carneipes as Puffinus carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [82404]		Foraging, feeding or related behaviour likely to occur within area
Ardenna grisea as Puffinus griseus Sooty Shearwater [82651]	Vulnerable	Species or species habitat may occur within area
Ardenna pacifica as Puffinus pacificus Wedge-tailed Shearwater [84292]		Breeding likely to occur within area
Arenaria interpres Ruddy Turnstone [872]	Vulnerable	Roosting likely to occur within area

Scientific Name	Threatened Category	Presence Text
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area
Calidris alba Sanderling [875]		Roosting likely to occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat likely to occur within area overfly marine area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area overfly marine area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat likely to occur within area overfly marine area
Calidris ruficollis Red-necked Stint [860]		Foraging, feeding or related behaviour likely to occur within area overfly marine area
Calidris tenuirostris Great Knot [862]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area overfly marine area
Chalcites osculans as Chrysococcyx osculans Black-eared Cuckoo [83425]		Species or species habitat likely to occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Charadrius bicinctus Double-banded Plover [895]		Foraging, feeding or related behaviour likely to occur within area overfly marine area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Charadrius ruficapillus Red-capped Plover [881]		Foraging, feeding or related behaviour likely to occur within area overfly marine area
Chroicocephalus novaehollandiae as Larus novaehollandiae Silver Gull [82326]		Breeding likely to occur within area
Diomedea amsterdamensis Amsterdam Albatross [64405]	Endangered	Species or species habitat likely to occur within area
Diomedea dabbenena Tristan Albatross [66471]	Endangered	Species or species habitat likely to occur within area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Species or species habitat may occur within area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area
Gallinago megala Swinhoe's Snipe [864]		Roosting likely to occur within area overfly marine area
Gallinago stenura Pin-tailed Snipe [841]		Roosting likely to occur within area overfly marine area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area
Halobaena caerulea Blue Petrel [1059]	Vulnerable	Species or species habitat may occur within area
Himantopus himantopus Pied Stilt, Black-winged Stilt [870]		Foraging, feeding or related behaviour likely to occur within area overfly marine area
Hydroprogne caspia as Sterna caspia Caspian Tern [808]		Breeding likely to occur within area
Larus pacificus Pacific Gull [811]		Breeding likely to occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat likely to occur within area
Limosa limosa Black-tailed Godwit [845]	Endangered	Foraging, feeding or related behaviour likely to occur within area overfly marine area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area overfly marine area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Numenius minutus Little Curlew, Little Whimbrel [848]		Roosting likely to occur within area overfly marine area
Numenius phaeopus Whimbrel [849]		Foraging, feeding or related behaviour likely to occur within area
Onychoprion anaethetus as Sterna anaethetus Bridled Tern [82845]		Breeding likely to occur within area
Onychoprion fuscatus as Sterna fuscata Sooty Tern [90682]		Breeding likely to occur within area
Pachyptila turtur Fairy Prion [1066]		Species or species habitat likely to occur within area
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area
Pelagodroma marina White-faced Storm-Petrel [1016]		Breeding likely to occur within area

Scientific Name	Threatened Category	Presence Text
Phaethon lepturus White-tailed Tropicbird [1014]		Species or species habitat may occur within area
Phaethon lepturus fulvus Christmas Island White-tailed Tropicbird, Golden Bosunbird [26021]	Endangered	Species or species habitat may occur within area
Phaethon rubricauda Red-tailed Tropicbird [994]		Species or species habitat may occur within area
Phalacrocorax fuscescens Black-faced Cormorant [59660]		Breeding likely to occur within area
Phalaropus lobatus Red-necked Phalarope [838]		Foraging, feeding or related behaviour likely to occur within area
Phoebetria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat may occur within area
Pluvialis fulva Pacific Golden Plover [25545]		Foraging, feeding or related behaviour likely to occur within area
Pluvialis squatarola Grey Plover [865]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area overfly marine area
Pterodroma macroptera Great-winged Petrel [1035]		Foraging, feeding or related behaviour known to occur within area
Pterodroma mollis Soft-plumaged Petrel [1036]	Vulnerable	Foraging, feeding or related behaviour known to occur within area

Scientific Name	Threatened Category	Presence Text
Puffinus assimilis Little Shearwater [59363]		Foraging, feeding or related behaviour known to occur within area
Puffinus huttoni Hutton's Shearwater [1025]		Foraging, feeding or related behaviour likely to occur within area
Recurvirostra novaehollandiae Red-necked Avocet [871]		Foraging, feeding or related behaviour likely to occur within area overfly marine area
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area
Stercorarius antarcticus as Catharacta skua Brown Skua [85039]		Species or species habitat may occur within area
Sterna dougallii Roseate Tern [817]		Breeding likely to occur within area
Sternula albifrons as Sterna albifrons Little Tern [82849]	Vulnerable	Species or species habitat may occur within area
Sternula nereis as Sterna nereis Fairy Tern [82949]		Breeding likely to occur within area
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat likely to occur within area
Thalassarche cauta Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area

Scientific Name	Threatened Category	Presence Text
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable	Species or species habitat may occur within area
Thalasseus bergii as Sterna bergii Greater Crested Tern [83000]		Breeding likely to occur within area
Thinornis cucullatus as Thinornis rubricollis Hooded Plover, Hooded Dotterel [87735]		Species or species habitat likely to occur within area overfly marine area
Tringa brevipes as Heteroscelus brevipes Grey-tailed Tattler [851]		Foraging, feeding or related behaviour likely to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area overfly marine area
Tringa stagnatilis Marsh Sandpiper, Little Greenshank [833]		Foraging, feeding or related behaviour likely to occur within area overfly marine area
Tringa totanus Common Redshank, Redshank [835]		Foraging, feeding or related behaviour likely to occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
[Xenus cinereus](#) Terek Sandpiper [59300]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area overfly marine area
Fish		
[Campichthys galei](#) Gale's Pipefish [66191]		Species or species habitat may occur within area
[Choeroichthys suillus](#) Pig-snouted Pipefish [66198]		Species or species habitat may occur within area
[Festucalex scalaris](#) Ladder Pipefish [66216]		Species or species habitat may occur within area
[Filicampus tigris](#) Tiger Pipefish [66217]		Species or species habitat may occur within area
[Halicampus brocki](#) Brock's Pipefish [66219]		Species or species habitat may occur within area
[Haliichthys taeniophora as Haliichthys taeniophorus](#) Ribboned Pipehorse, Ribboned Pipefish, Ribboned Seadragon [94706]		Species or species habitat may occur within area
[Heraldia nocturna](#) Upside-down Pipefish, Eastern Upside-down Pipefish, Eastern Upside-down Pipefish [66227]		Species or species habitat may occur within area
[Hippocampus angustus](#) Western Spiny Seahorse, Narrow-bellied Seahorse [66234]		Species or species habitat may occur within area
[Hippocampus breviceps](#) Short-head Seahorse, Short-snouted Seahorse [66235]		Species or species habitat may occur within area
[Hippocampus histrix](#) Spiny Seahorse, Thorny Seahorse [66236]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Hippocampus planifrons Flat-face Seahorse [66238]		Species or species habitat may occur within area
Hippocampus subelongatus West Australian Seahorse [66722]		Species or species habitat may occur within area
Hippocampus trimaculatus Three-spot Seahorse, Low-crowned Seahorse, Flat-faced Seahorse [66720]		Species or species habitat may occur within area
Histiogamphelus cristatus Rhino Pipefish, Macleay's Crested Pipefish, Ring-back Pipefish [66243]		Species or species habitat may occur within area
Idiotropiscis australe as Acentronura australe Southern Pygmy Pipehorse [74958]		Species or species habitat may occur within area
Lissocampus caudalis Australian Smooth Pipefish, Smooth Pipefish [66249]		Species or species habitat may occur within area
Lissocampus fatiloquus Prophet's Pipefish [66250]		Species or species habitat may occur within area
Lissocampus runa Javelin Pipefish [66251]		Species or species habitat may occur within area
Maroubra perserrata Sawtooth Pipefish [66252]		Species or species habitat may occur within area
Mitotichthys meraculus Western Crested Pipefish [66259]		Species or species habitat may occur within area
Nannocampus subosseus Bonyhead Pipefish, Bony-headed Pipefish [66264]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Phycodurus eques Leafy Seadragon [66267]		Species or species habitat may occur within area
Phyllopteryx taeniolatus Common Seadragon, Weedy Seadragon [66268]		Species or species habitat may occur within area
Pugnaso curtirostris Pugnose Pipefish, Pug-nosed Pipefish [66269]		Species or species habitat may occur within area
Solegnathus lettiensis Gunther's Pipehorse, Indonesian Pipefish [66273]		Species or species habitat may occur within area
Solenostomus cyanopterus Robust Ghostpipefish, Blue-finned Ghost Pipefish, [66183]		Species or species habitat may occur within area
Stigmatopora argus Spotted Pipefish, Gulf Pipefish, Peacock Pipefish [66276]		Species or species habitat may occur within area
Stigmatopora nigra Widebody Pipefish, Wide-bodied Pipefish, Black Pipefish [66277]		Species or species habitat may occur within area
Syngnathoides biaculeatus Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279]		Species or species habitat may occur within area
Trachyrhamphus bicoarctatus Bentstick Pipefish, Bend Stick Pipefish, Short-tailed Pipefish [66280]		Species or species habitat may occur within area
Urocampus carinirostris Hairy Pipefish [66282]		Species or species habitat may occur within area
Vanacampus margaritifer Mother-of-pearl Pipefish [66283]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
[Vanacampus phillipi](#) Port Phillip Pipefish [66284]		Species or species habitat may occur within area
[Vanacampus poecilolaemus](#) Longsnout Pipefish, Australian Long-snout Pipefish, Long-snouted Pipefish [66285]		Species or species habitat may occur within area
Mammal		
[Arctocephalus forsteri](#) Long-nosed Fur-seal, New Zealand Fur-seal [20]		Species or species habitat may occur within area
[Neophoca cinerea](#) Australian Sea-lion, Australian Sea Lion [22]	Endangered	Breeding known to occur within area
Reptile		
[Aipysurus laevis](#) Olive Sea Snake, Olive-brown Sea Snake [1120]		Species or species habitat may occur within area
[Aipysurus pooleorum](#) Shark Bay Sea Snake [66061]		Species or species habitat may occur within area
[Caretta caretta](#) Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
[Chelonia mydas](#) Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
[Dermochelys coriacea](#) Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
[Ephalophis greyae as Ephalophis greyi](#) Mangrove Sea Snake [93738]		Species or species habitat may occur within area
[Hydrophis kingii as Disteira kingii](#) Spectacled Sea Snake [93511]		Species or species habitat may occur within area
[Hydrophis major as Disteira major](#) Olive-headed Sea Snake [93512]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Hydrophis platura as Pelamis platurus		
Yellow-bellied Sea Snake [93746]		Species or species habitat may occur within area
Natator depressus		
Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area

Whales and Other Cetaceans [Resource Information]

Current Scientific Name	Status	Type of Presence
Mammal		
Balaenoptera acutorostrata		
Minke Whale [33]		Species or species habitat may occur within area
Balaenoptera bonaerensis		
Antarctic Minke Whale, Dark-shoulder Minke Whale [67812]		Species or species habitat likely to occur within area
Balaenoptera borealis		
Sei Whale [34]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Balaenoptera edeni		
Bryde's Whale [35]		Species or species habitat likely to occur within area
Balaenoptera musculus		
Blue Whale [36]	Endangered	Migration route known to occur within area
Balaenoptera omurai		
Omura's Whale [87136]		Species or species habitat likely to occur within area
Balaenoptera physalus		
Fin Whale [37]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Caperea marginata		
Pygmy Right Whale [39]		Foraging, feeding or related behaviour may occur within area

Current Scientific Name	Status	Type of Presence
Delphinus delphis Common Dolphin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area
Eubalaena australis Southern Right Whale [40]	Endangered	Breeding likely to occur within area
Feresa attenuata Pygmy Killer Whale [61]		Species or species habitat may occur within area
Globicephala macrorhynchus Short-finned Pilot Whale [62]		Species or species habitat may occur within area
Globicephala melas Long-finned Pilot Whale [59282]		Species or species habitat may occur within area
Grampus griseus Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area
Hyperoodon planifrons Southern Bottlenose Whale [71]		Species or species habitat may occur within area
Kogia breviceps Pygmy Sperm Whale [57]		Species or species habitat may occur within area
Kogia sima Dwarf Sperm Whale [85043]		Species or species habitat may occur within area
Lagenodelphis hosei Fraser's Dolphin, Sarawak Dolphin [41]		Species or species habitat may occur within area
Lagenorhynchus obscurus Dusky Dolphin [43]		Species or species habitat likely to occur within area

Current Scientific Name	Status	Type of Presence
Lissodelphis peronii Southern Right Whale Dolphin [44]		Species or species habitat may occur within area
Megaptera novaeangliae Humpback Whale [38]		Species or species habitat known to occur within area
Mesoplodon bowdoini Andrew's Beaked Whale [73]		Species or species habitat may occur within area
Mesoplodon densirostris Blainville's Beaked Whale, Dense-beaked Whale [74]		Species or species habitat may occur within area
Mesoplodon ginkgodens Gingko-toothed Beaked Whale, Gingko-toothed Whale, Gingko Beaked Whale [59564]		Species or species habitat may occur within area
Mesoplodon grayi Gray's Beaked Whale, Scamperdown Whale [75]		Species or species habitat may occur within area
Mesoplodon layardii Strap-toothed Beaked Whale, Strap-toothed Whale, Layard's Beaked Whale [25556]		Species or species habitat may occur within area
Mesoplodon mirus True's Beaked Whale [54]		Species or species habitat may occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Peponocephala electra Melon-headed Whale [47]		Species or species habitat may occur within area
Physeter macrocephalus Sperm Whale [59]		Species or species habitat may occur within area

Current Scientific Name	Status	Type of Presence
Pseudorca crassidens False Killer Whale [48]		Species or species habitat likely to occur within area
Stenella attenuata Spotted Dolphin, Pantropical Spotted Dolphin [51]		Species or species habitat may occur within area
Stenella coeruleoalba Striped Dolphin, Euphrosyne Dolphin [52]		Species or species habitat may occur within area
Stenella longirostris Long-snouted Spinner Dolphin [29]		Species or species habitat may occur within area
Steno bredanensis Rough-toothed Dolphin [30]		Species or species habitat may occur within area
Tursiops aduncus Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat likely to occur within area
Tursiops truncatus s. str. Bottlenose Dolphin [68417]		Species or species habitat may occur within area
Ziphius cavirostris Cuvier's Beaked Whale, Goose-beaked Whale [56]		Species or species habitat may occur within area

Australian Marine Parks	[Resource Information]
Park Name	Zone & IUCN Categories
Abrolhos	Habitat Protection Zone (IUCN IV)
Perth Canyon	Habitat Protection Zone (IUCN IV)
Perth Canyon	Habitat Protection Zone (IUCN IV)
Perth Canyon	Habitat Protection Zone (IUCN IV)

Park Name	Zone & IUCN Categories
Abrolhos	Multiple Use Zone (IUCN VI)
Abrolhos	Multiple Use Zone (IUCN VI)
Abrolhos	Multiple Use Zone (IUCN VI)
Perth Canyon	Multiple Use Zone (IUCN VI)
Perth Canyon	Multiple Use Zone (IUCN VI)
South-west Corner	Multiple Use Zone (IUCN VI)
Two Rocks	Multiple Use Zone (IUCN VI)
Abrolhos	National Park Zone (IUCN II)
Abrolhos	National Park Zone (IUCN II)
Jurien	National Park Zone (IUCN II)
Perth Canyon	National Park Zone (IUCN II)
Perth Canyon	National Park Zone (IUCN II)
South-west Corner	National Park Zone (IUCN II)
Two Rocks	National Park Zone (IUCN II)
Abrolhos	Special Purpose Zone (IUCN VI)
Abrolhos	Special Purpose Zone (IUCN VI)
Jurien	Special Purpose Zone (IUCN VI)

Extra Information

State and Territory Reserves		[Resource Information]
Protected Area Name	Reserve Type	State
Beagle Islands	Nature Reserve	WA
Beekeepers	Nature Reserve	WA
Boullanger, Whitlock, Favourite, Tern And Osprey Islands	Nature Reserve	WA
Buller,Whittell & Green Islands	Nature Reserve	WA
Buller, Whittell And Green Islands	Nature Reserve	WA

Protected Area Name	Reserve Type	State
Cervantes Islands	Nature Reserve	WA
Dongara	Nature Reserve	WA
Drovers Cave	National Park	WA
Escape Island	Nature Reserve	WA
Essex Rocks	Nature Reserve	WA
Fisherman Islands	Nature Reserve	WA
Houtman Abrolhos Islands	National Park	WA
Jurien Bay	Marine Park	WA
Kalbarri	National Park	WA
Lancelin And Edwards Islands	Nature Reserve	WA
Lesueur	National Park	WA
Lipfert, Milligan, Etc Islands	Nature Reserve	WA
Marmion	Marine Park	WA
Nambung	National Park	WA
Neerabup	National Park	WA
Neerabup	Nature Reserve	WA
Nilgen	Nature Reserve	WA
Nilligarri	Nature Reserve	WA
Oakabella	Nature Reserve	WA
Outer Rocks	Nature Reserve	WA
Port Gregory	NRS Addition - Gazettal in Progress	WA
Ronsard Rocks	Nature Reserve	WA
Rottnest Island	State Reserve	WA
Rottnest Island	State Reserve	WA
Sandland Island	Nature Reserve	WA
Southern Beekeepers	Nature Reserve	WA

Protected Area Name	Reserve Type	State
Unnamed WA11883	5(1)(h) Reserve	WA
Unnamed WA33287	Nature Reserve	WA
Unnamed WA33799	Nature Reserve	WA
Unnamed WA34039	5(1)(h) Reserve	WA
Unnamed WA42030	5(1)(g) Reserve	WA
Unnamed WA44682	5(1)(h) Reserve	WA
Unnamed WA46982	5(1)(h) Reserve	WA
Unnamed WA46983	5(1)(h) Reserve	WA
Unnamed WA46984	5(1)(h) Reserve	WA
Unnamed WA48205	5(1)(h) Reserve	WA
Unnamed WA48717	Conservation Park	WA
Unnamed WA48858	Nature Reserve	WA
Unnamed WA49994	Conservation Park	WA
Utcha Well	Nature Reserve	WA
Wanagarren	Nature Reserve	WA
Wedge Island	Nature Reserve	WA
Yanchep	National Park	WA

EPBC Act Referrals

[Resource Information]

Title of referral	Reference	Referral Outcome	Assessment Status
Alkimos Seawater Desalination	2019/8453		Completed
Carabooda Quarry	2023/09554		Completed
Eradication of the European House Borer, Perth metropolitan area, WA	2009/5027		Completed
Gonneville Nickel-Copper-Platinum Group Element Mine Development Project	2024/09839		Assessment
Jurien Bay Borefield Expansion Bore 29/01	2024/10095		Referral Decision

Title of referral	Reference	Referral Outcome	Assessment Status
Jurien East Road Upgrade, 3 km NNE Jurien Bay, WA	2020/8740		Post-Approval
Marine Route Survey for Subsea Fibre Optic Data Cable System - Australia West	2024/09826		Completed
Midwest Offshore Wind Farm	2022/09264		Assessment
Murchison Hydrogen Renewables Project	2022/09217		Assessment
Samphire Offshore Wind Farm	2022/09306		Assessment
SMAP telecommunications submarine cable installation	2024/09989		Completed
Urban Development of Part Lot 801 Marmion Avenue, Eglinton	2024/09881		Completed
Yanchep Rail Extension, WA	2018/8262		Post-Approval
Yogi Magnetite Project, 225km east, northeast of Geraldton, WA	2017/8124		Post-Approval
Controlled action			
Airborne sonar trials	2001/540	Controlled Action	Completed
Alkimos city centre and central development, WA	2015/7561	Controlled Action	Post-Approval
Alkimos Coastal Node	2020/8861	Controlled Action	Further Information Request
Butler North District Open Space playing fields development, Wanneroo, WA	2017/8053	Controlled Action	Post-Approval
Catalina Residential Development	2010/5785	Controlled Action	Post-Approval
Coburn Mineral Sand Project	2003/1221	Controlled Action	Post-Approval
construction and operation of a unmanned platform at the Cliff Head oil field, a	2003/1300	Controlled Action	Post-Approval
Construction of the Oakajee Port and Rail Project	2011/5797	Controlled Action	Post-Approval
development of land based tourist facilities on Long Island	2006/2792	Controlled Action	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Controlled action			
Eglinton/South Yanchep Residential Development	2011/6021	Controlled Action	Post-Approval
Eglinton Estates - Clearing of native vegetation from Lot 1007 & part Lot 1008	2010/5777	Controlled Action	Post-Approval
Excavate sand and limestone resources	2010/5621	Controlled Action	Completed
Hematite (iron ore) Mine and Beneficiation Plant	2001/542	Controlled Action	Completed
Jindee Residential Development	2012/6631	Controlled Action	Post-Approval
Karara Magnetite Project	2006/3017	Controlled Action	Post-Approval
Mitchell Freeway Extension and Wanneroo Road Upgrade, WA	2018/8367	Controlled Action	Post-Approval
Mitchell Freeway Extension between Burns Beach Rd and Hester Av, Neerabup, WA	2013/7091	Controlled Action	Post-Approval
Mount Gibson Iron Ore Pellet Project	2000/95	Controlled Action	Completed
Nava-1 Cable System	2001/510	Controlled Action	Completed
Neerabup Industrial Estate, Lot 701 Flynn Drive Neerabup WA	2012/6424	Controlled Action	Post-Approval
Oakajee Rail Development	2010/5500	Controlled Action	Post-Approval
Ocean Reef Marina Development	2009/4937	Controlled Action	Completed
open cut mine & assoc infrastructure	2005/2381	Controlled Action	Post-Approval
Port Enhancement Project	2001/266	Controlled Action	Post-Approval
Proposed Urban Development of Lots 1005 & 1006	2008/4638	Controlled Action	Post-Approval
Residential development,Lot 609, Yanchep Beach Road, Yanchep, WA	2014/7146	Controlled Action	Post-Approval
Residential development Lot 1004 Alkimos WA	2011/5902	Controlled Action	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Controlled action			
Shark Hazard Mitigation Drum Line Program, WA	2014/7174	Controlled Action	Completed
Shenton Park Subdivision	2004/1479	Controlled Action	Completed
Tourism Facility and Associated Infrastructure	2005/2038	Controlled Action	Post-Approval
Urban and Residential Development at Lot 9 Brighton	2011/6137	Controlled Action	Post-Approval
Urban development in accordance with the Local Structure Plan	2008/4601	Controlled Action	Post-Approval
Urban Residential Development at Lot 9049 Marmoin Avenue	2009/5155	Controlled Action	Post-Approval
Vegetation Clearing, Wannaroo Rd and Nowergup Rd	2011/5955	Controlled Action	Completed
Not controlled action			
Alkimos seawater desalination plant, offshore investigations, WA	2018/8224	Not Controlled Action	Completed
Amberton West urban development - Part lot 9005 Eglington WA	2013/7068	Not Controlled Action	Completed
APX-West Fibre-optic telecommunications cable system, WA to Singapore	2013/7102	Not Controlled Action	Completed
Butler Railway Extension Project - Nowergup Depot Eastern Alignment	2011/5989	Not Controlled Action	Completed
Cliff Head 6 appraisal well	2004/1702	Not Controlled Action	Completed
Cliff Head Appraisal Wells	2003/938	Not Controlled Action	Completed
Construction of several passing lanes between Lancelin and Jurien Bay, WA	2015/7509	Not Controlled Action	Completed
Container Deposit Scheme Project	2019/8517	Not Controlled Action	Completed
Development of new Alkimos Wastwater Treatment Plant	2007/3259	Not Controlled Action	Completed
Drilling between Kalbarri and Cliff Head	2005/2185	Not Controlled Action	Completed

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action			
Establishment of a 12.7 ha Gypsum Mine	2007/3398	Not Controlled Action	Completed
Exploration drilling program located in exploration permits WA-286-P and TP/15	2002/676	Not Controlled Action	Completed
Extension of 7.5km of the Joondalup Line electrified passenger railway from Cla	2010/5632	Not Controlled Action	Completed
Geo-science Investigations	2005/2069	Not Controlled Action	Completed
Glenfield Beach Project	2012/6359	Not Controlled Action	Completed
Hadda 1,Flying Foam 1,Magnat 1 exploration drill	2004/1697	Not Controlled Action	Completed
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed
Indian Ocean Drive Passing Lane and Widening 52-258 SLK	2017/7884	Not Controlled Action	Completed
Indian Ocean Drive Widening, Gingin Shire, WA	2018/8346	Not Controlled Action	Completed
INDIGO Central Submarine Telecommunications Cable	2017/8127	Not Controlled Action	Completed
INDIGO West Submarine Telecommunications Cable, WA	2017/8126	Not Controlled Action	Completed
Lancelin Caravan Park Project, Hopkins Dve & Casserley Way, Lancelin	2015/7546	Not Controlled Action	Completed
Maintenance Dredging in the Geraldton Port Outer Channel	2010/5488	Not Controlled Action	Completed
Nowergup Strawberry Farm McLennan Drive, Nowergup, WA	2017/8042	Not Controlled Action	Completed
Ocean Reef Marina Development, City of Joondalup, WA	2014/7237	Not Controlled Action	Completed
Oman Australia Cable Installation, WA	2021/8922	Not Controlled Action	Completed
Oman Australia Cable - Marine Route Survey	2020/8731	Not Controlled Action	Completed
Quinns Main sewer extension, Clarkson - Neerabup, WA	2018/8215	Not Controlled Action	Completed

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action			
Residential development, Lots 9010 and 9031, Yanchep Beach Rd, Yanchep	2016/7642	Not Controlled Action	Completed
Residential Development Eglinton West, Lot 5000 & part Lot 5001, Pipidinny Road, Eglinton	2014/7137	Not Controlled Action	Completed
residential subdivision	2005/1965	Not Controlled Action	Completed
Rottnest Lodge Redevelopment	2019/8565	Not Controlled Action	Completed
Scientific Sonar Trial	2002/680	Not Controlled Action	Completed
Seismic Survey, Bremer Basin, Mentelle Basin and Zeewyck Sub-basin	2004/1700	Not Controlled Action	Completed
WA-286-P Exploration Drilling Programme	2007/3863	Not Controlled Action	Completed
Yellowfin Tuna Aquaculture Trial	2003/1115	Not Controlled Action	Completed
Yngling-1 exploration well for WA-368-P	2007/3523	Not Controlled Action	Completed
Not controlled action (particular manner)			
2D Marine Seismic Survey in Permit Area WA-337-P	2003/1158	Not Controlled Action (Particular Manner)	Post-Approval
2D seismic survey	2008/4493	Not Controlled Action (Particular Manner)	Post-Approval
3D Marine Seismic Survey	2007/3800	Not Controlled Action (Particular Manner)	Post-Approval
Acheron Non-Exclusive 2D Seismic Survey	2009/4968	Not Controlled Action (Particular Manner)	Post-Approval
Acheron Non-Exclusive 2D Seismic Survey	2008/4565	Not Controlled Action (Particular Manner)	Post-Approval
Australian Square Kilometre Array Pathfinder telescope &	2009/4891	Not Controlled Action	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
infrastructure		(Particular Manner)	
Australia to Singapore Fibre Optic Submarine Cable System	2011/6127	Not Controlled Action (Particular Manner)	Post-Approval
develop and operate a new deepwater port	2010/5760	Not Controlled Action (Particular Manner)	Post-Approval
Grand Southern Margin 2D Marine Seismic Survey	2008/4599	Not Controlled Action (Particular Manner)	Post-Approval
INDIGO Marine Cable Route Survey (INDIGO)	2017/7996	Not Controlled Action (Particular Manner)	Post-Approval
Laying a submarine optical fibre telecommunications cable, Perth to Singapore and Jakarta	2014/7332	Not Controlled Action (Particular Manner)	Post-Approval
Marine Environmental Survey	2012/6275	Not Controlled Action (Particular Manner)	Post-Approval
Marine reconnaissance survey	2008/4466	Not Controlled Action (Particular Manner)	Post-Approval
Marine Seismic Survey for oil and gas in Commonwealth waters off the WA coast.	2004/1802	Not Controlled Action (Particular Manner)	Post-Approval
Marine Seismic Survey in Permit WA-481P	2012/6626	Not Controlled Action (Particular Manner)	Post-Approval
Nexus Energy Seismic survey WA	2006/2569	Not Controlled Action (Particular Manner)	Post-Approval
North Perth Marine Survey	2011/6067	Not Controlled Action (Particular Manner)	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
Quiberon 2D Seismic Survey, permit area WA-385P, offshore of Carnarvon	2009/5077	Not Controlled Action (Particular Manner)	Post-Approval
search for HMAS Sydney	2006/3071	Not Controlled Action (Particular Manner)	Post-Approval
Study of behavioural responses of Austn Humpback Whales to seismic surveys, offshore Dongara, WA	2013/6927	Not Controlled Action (Particular Manner)	Post-Approval
Westralia SPAN Marine Seismic Survey, WA & NT	2012/6463	Not Controlled Action (Particular Manner)	Post-Approval
Referral decision			
3D Marine Seismic survey	2007/3729	Referral Decision	Completed
3D Seismic Survey	2012/6245	Referral Decision	Completed
Exploration Drilling 2014/2015 WA-481-P	2013/7043	Referral Decision	Completed
Grand Southern Margin 2D Marine Seismic Survey	2008/4573	Referral Decision	Completed
Proposed exploration drilling activities, Abrolhos Commonwealth Marine Reserve	2013/6949	Referral Decision	Completed
Residential Subdivision of 60ha, Swan Location 2424	2004/1928	Referral Decision	Completed
Sonar Trials and Acoustic Trials	2001/538	Referral Decision	Completed

Key Ecological Features [Resource Information]

Key Ecological Features are the parts of the marine ecosystem that are considered to be important for the biodiversity or ecosystem functioning and integrity of the Commonwealth Marine Area.

Name	Region
Ancient coastline at 90-120m depth	South-west
Commonwealth marine environment surrounding the Houtman Abrolhos Islands	South-west
Commonwealth marine environment within and adjacent to the west coast inshore lagoons	South-west

Name	Region
Naturaliste Plateau	South-west
Perth Canyon and adjacent shelf break, and other west coast canyons	South-west
Wallaby Saddle	North-west
Western demersal slope and associated fish communities	South-west
Western rock lobster	South-west

Biologically Important Areas		[Resource Information]
Scientific Name	Behaviour	Presence
Seabirds		
Anous stolidus Common Noddy [825]	Foraging	Likely to occur
Anous tenuirostris melanops Australian Lesser Noddy [26000]	Foraging	Known to occur
Ardenna carneipes Flesh-footed Shearwater [82404]	Foraging	Known to occur
Ardenna pacifica Wedge-tailed Shearwater [84292]	Foraging	Known to occur
Ardenna pacifica Wedge-tailed Shearwater [84292]	Reproduction	Known to occur
Eudyptula minor Little Penguin [1085]	Foraging	Likely to occur
Hydroprogne caspia Caspian Tern [808]	Foraging	Known to occur
Larus pacificus Pacific Gull [811]	Foraging	Known to occur
Onychoprion anaethetus Bridled Tern [82845]	Foraging	Likely to occur
Onychoprion fuscatus Sooty Tern [90682]	Foraging	Known to occur
Pelagodroma marina White-faced Storm-petrel [1016]	Foraging	Known to occur

Scientific Name	Behaviour	Presence
Pterodroma mollis Soft-plumaged Petrel [1036]	Foraging	Known to occur
Puffinus assimilis Little Shearwater [59363]	Foraging	Likely to occur
Sterna dougallii Roseate Tern [817]	Foraging	Known to occur
Sternula nereis Fairy Tern [82949]	Foraging	Known to occur
Seals		
Neophoca cinerea Australian Sea Lion [22]	Foraging	Likely to occur
Sharks		
Carcharodon carcharias White Shark [64470]	Foraging	Known to occur
Whales		
Balaenoptera musculus Blue and Pygmy Blue Whale [36]	Foraging	Known to occur
Balaenoptera musculus brevicauda Pygmy Blue Whale [81317]	Foraging	Likely to be present
Balaenoptera musculus brevicauda Pygmy Blue Whale [81317]	Migration	Known to occur
Eubalaena australis Southern Right Whale [40]	Migration	
Megaptera novaeangliae Humpback Whale [38]	Migration	Known to occur
Physeter macrocephalus Sperm Whale [59]	Foraging	Known to occur

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data is available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance on the contents of this report.

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions when time permits.

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded breeding sites; and
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management, Northern Territory
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
Forestry Corporation, NSW
-Geoscience Australia
-CSIRO
-Australian Tropical Herbarium, Cairns
-eBird Australia
-Australian Government – Australian Antarctic Data Centre
-Museum and Art Gallery of the Northern Territory
-Australian Government National Environmental Science Program
-Australian Institute of Marine Science
-Reef Life Survey Australia
-American Museum of Natural History
-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
-Tasmanian Museum and Art Gallery, Hobart, Tasmania
-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact us page.

© Commonwealth of Australia
Department of Climate Change, Energy, the Environment and Water
GPO Box 3090
Canberra ACT 2601 Australia
+61 2 6274 1111

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 25-Jun-2026

[Summary](#)
[Details](#)
- [Matters of NES](#)
- [Other Matters Protected by the EPBC Act](#)
- [Extra Information](#)

[Caveat](#)
[Acknowledgements](#)

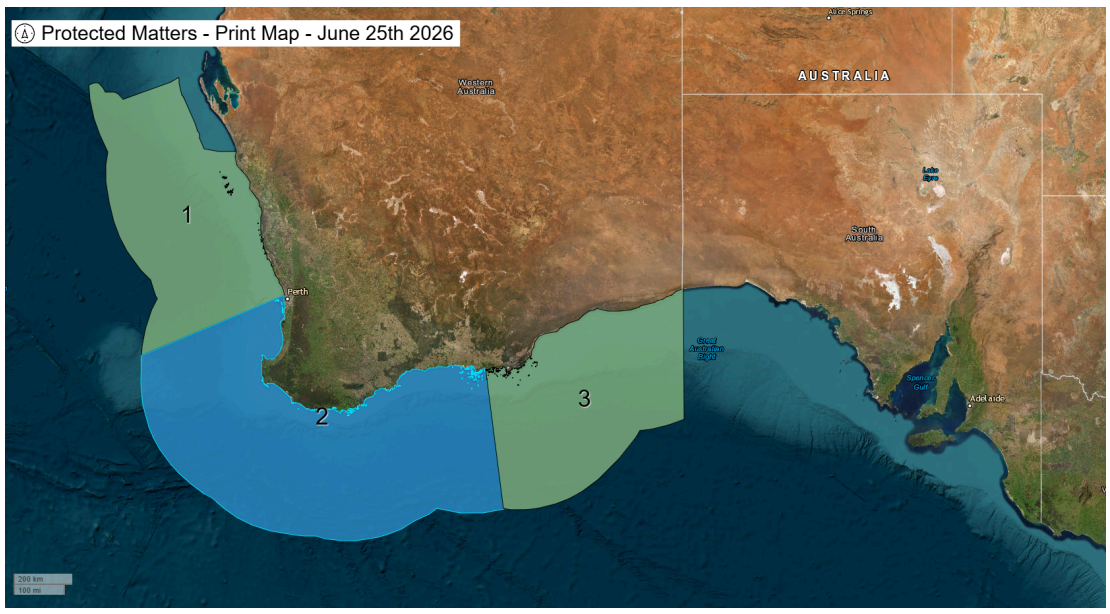


Figure 1: South West Marine Region - Central (Part 2)

Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	1
National Heritage Places:	3
Wetlands of International Importance (Ramsar	6
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	3
Listed Threatened Ecological Communities:	14
Listed Threatened Species:	176
Listed Migratory Species:	86

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at https://www.dcceew.gov.au/parks-heritage/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	66
Commonwealth Heritage Places:	5
Listed Marine Species:	124
Whales and Other Cetaceans:	39
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	29
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have

State and Territory Reserves:	158
Regional Forest Agreements:	1
Nationally Important Wetlands:	None
EPBC Act Referrals:	303
Key Ecological Features (Marine):	11
Biologically Important Areas:	27
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

World Heritage Properties [Resource Information]

Name	State	Legal Status
Australian Convict Sites (Fremantle Prison)	WA	Declared property

National Heritage Places [Resource Information]

Name	State	Legal Status
Historic		
Fremantle Prison (former)	WA	Listed place
Indigenous		
Cheetup Rock Shelter	WA	Listed place
Natural		
Fitzgerald River National Park	WA	Listed place

Wetlands of International Importance (Ramsar Wetlands) [Resource Information]

Ramsar Site Name	Proximity
Becher point wetlands	Within Ramsar site
Forrestdale and thomsons lakes	Within Ramsar site
Lake gore	Within Ramsar site
Lake warden system	Within Ramsar site
Peel-yalgorup system	Within Ramsar site
Vasse-wonnerup system	Within Ramsar site

Commonwealth Marine Area [Resource Information]

Approval is required for a proposed activity that is located within the Commonwealth Marine Area which has, will have, or is likely to have a significant impact on the environment. Approval may be required for a proposed action taken outside a Commonwealth Marine Area but which has, may have or is likely to have a significant impact on the environment in the Commonwealth Marine Area.

Feature Name
Commonwealth Marine Areas (EPBC Act)
Commonwealth Marine Areas (EPBC Act)
Commonwealth Marine Areas (EPBC Act)

Listed Threatened Ecological Communities [Resource Information]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.
Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.

Community Name	Threatened Category	Presence Text
Aquatic Root Mat Community 1 in Caves of the Leeuwin Naturaliste Ridge	Endangered	Community known to occur within area
Aquatic Root Mat Community 3 in Caves of the Leeuwin Naturaliste Ridge	Endangered	Community known to occur within area
Aquatic Root Mat Community 4 in Caves of the Leeuwin Naturaliste Ridge	Endangered	Community known to occur within area
Banksia Woodlands of the Swan Coastal Plain ecological community	Endangered	Community likely to occur within area
Clay Pans of the Swan Coastal Plain	Critically Endangered	Community likely to occur within area
Empodisma peatlands of southwestern Australia	Endangered	Community likely to occur within area
Honeymyrtle shrubland on limestone ridges of the Swan Coastal Plain Bioregion	Critically Endangered	Community likely to occur within area
Proteaceae Dominated Kwongkan Shrublands of the Southeast Coastal Floristic Province of Western Australia	Endangered	Community likely to occur within area
Scott River Ironstone Association	Endangered	Community likely to occur within area
Sedgelands in Holocene dune swales of the southern Swan Coastal Plain	Endangered	Community known to occur within area
Subtropical and Temperate Coastal Saltmarsh	Vulnerable	Community likely to occur within area
Thrombolite (microbial) community of coastal freshwater lakes of the Swan Coastal Plain (Lake Richmond)	Endangered	Community known to occur within area
Thrombolite (microbialite) Community of a Coastal Brackish Lake (Lake Clifton)	Critically Endangered	Community known to occur within area
Tuart (Eucalyptus gomphocephala) Woodlands and Forests of the Swan Coastal Plain ecological community	Critically Endangered	Community likely to occur within area

Listed Threatened Species [Resource Information]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.
Number is the current name ID.

Scientific Name	Threatened Category	Presence Text
BIRD		
Anous tenuirostris melanops Australian Lesser Noddy [26000]	Vulnerable	Species or species habitat may occur within area
Aphelocephala leucopsis Southern Whiteface [529]	Vulnerable	Species or species habitat may occur within area
Ardenna grisea Sooty Shearwater [82651]	Vulnerable	Species or species habitat may occur within area
Arenaria interpres Ruddy Turnstone [872]	Vulnerable	Roosting likely to occur within area
Atrichornis clamosus Noisy Scrub-bird, Tjimiluk [654]	Endangered	Species or species habitat likely to occur within area
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat likely to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat likely to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area
Calidris tenuirostris Great Knot [862]	Vulnerable	Roosting likely to occur within area
Calyptorhynchus banksii naso Forest Red-tailed Black-Cockatoo, Karrak [67034]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Cereopsis novaehollandiae grisea Cape Barren Goose (south-western), Recherche Cape Barren Goose [25978]	Vulnerable	Breeding likely to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting likely to occur within area
Dasyornis longirostris Western Bristlebird [515]	Endangered	Species or species habitat likely to occur within area
Diomedea amsterdamensis Amsterdam Albatross [64405]	Endangered	Species or species habitat likely to occur within area
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea dabbenena Tristan Albatross [66471]	Endangered	Species or species habitat likely to occur within area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Species or species habitat may occur within area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Species or species habitat may occur within area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Halobaena caerulea Blue Petrel [1059]	Vulnerable	Species or species habitat may occur within area
Leipoa ocellata Malleefowl [934]	Vulnerable	Species or species habitat likely to occur within area
Limosa lapponica menzbieri Northern Siberian Bar-tailed Godwit, Russkoye Bar-tailed Godwit [86432]	Endangered	Species or species habitat likely to occur within area
Limosa limosa Black-tailed Godwit [845]	Endangered	Roosting likely to occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Pachyptila turtur subantarctica Fairy Prion (southern) [64445]	Vulnerable	Species or species habitat likely to occur within area
Pezoporus flaviventris Western Ground Parrot, Kyloring [84650]	Critically Endangered	Species or species habitat may occur within area
Phaethon rubricauda westralis Red-tailed Tropicbird (Indian Ocean), Indian Ocean Red-tailed Tropicbird [91824]	Endangered	Species or species habitat likely to occur within area
Phoebetria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Pluvialis squatarola Grey Plover [865]	Vulnerable	Roosting likely to occur within area
Psophodes nigrogularis nigrogularis Western Heath Whipbird [64449]	Endangered	Species or species habitat likely to occur within area
Pterodroma mollis Soft-plumaged Petrel [1036]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
Sternula albifrons Little Tern [82849]	Vulnerable	Species or species habitat may occur within area
Sternula nereis nereis Australian Fairy Tern [82950]	Vulnerable	Breeding likely to occur within area
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat likely to occur within area
Thalassarche cauta Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Thalassarche chrysostoma Grey-headed Albatross [66491]	Endangered	Species or species habitat may occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area

Scientific Name	Threatened Category	Presence Text
Thalassarche steadi		
White-capped Albatross [64462]	Vulnerable	Species or species habitat may occur within area
Tringa nebularia		
Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area
Xenus cinereus		
Terek Sandpiper [59300]	Vulnerable	Roosting likely to occur within area
Zanda baudinii listed as Calyptorhynchus baudinii		
Baudin's Cockatoo, Baudin's Black-Cockatoo, Long-billed Black-cockatoo [87736]	Endangered	Breeding likely to occur within area
Zanda latirostris listed as Calyptorhynchus latirostris		
Carnaby's Black Cockatoo, Short-billed Black-cockatoo [87737]	Endangered	Breeding likely to occur within area
CRUSTACEAN		
Cherax tenuimanus		
Hairy Marron, Margaret River Hairy Marron, Margaret River Marron [78931]	Critically Endangered	Species or species habitat may occur within area
Engaewa pseudoreducta		
Margaret River Burrowing Crayfish [82674]	Critically Endangered	Species or species habitat may occur within area
Engaewa reducta		
Dunsborough Burrowing Crayfish [82675]	Critically Endangered	Species or species habitat likely to occur within area
Engaewa walpolea		
Walpole Burrowing Crayfish [82676]	Endangered	Species or species habitat likely to occur within area
FISH		
Galaxias truttaceus (Western Australian population)		
Western Trout Minnow [89857]	Endangered	Species or species habitat likely to occur within area
Galaxiella munda		
Western Dwarf Galaxias, Western Mud Minnow [79240]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Galaxiella nigrostriata		
Blackstriped Dwarf Galaxias, Black-stripe Minnow [88677]	Endangered	Species or species habitat likely to occur within area
Hoplostethus atlanticus		
Orange Roughy, Deep-sea Perch, Red Roughy [68455]	Conservation Dependent	Species or species habitat likely to occur within area
Nannatherina balstoni		
Balston's Pygmy Perch [66698]	Vulnerable	Species or species habitat likely to occur within area
Nannoperca pygmaea		
Little Pygmy Perch [88315]	Endangered	Species or species habitat likely to occur within area
FROG		
Spicospina flammocaerulea		
Sunset Frog [64782]	Vulnerable	Species or species habitat likely to occur within area
INSECT		
Hesperocolletes douglasi		
Douglas' Broad-headed Bee, Rottnest Bee [66734]	Critically Endangered	Species or species habitat may occur within area
Trioza barrettae		
Banksia brownii plant louse [87805]	Endangered	Species or species habitat likely to occur within area
MAMMAL		
Balaenoptera borealis		
Sei Whale [34]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Balaenoptera musculus		
Blue Whale [36]	Endangered	Migration route known to occur within area
Balaenoptera physalus		
Fin Whale [37]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area

Scientific Name	Threatened Category	Presence Text
Bettongia penicillata ogilbyi Woylie [66844]	Endangered	Species or species habitat likely to occur within area
Dasyurus geoffroii Chuditch, Western Quoll [330]	Vulnerable	Species or species habitat likely to occur within area
Eubalaena australis Southern Right Whale [40]	Endangered	Breeding likely to occur within area
Myrmecobius fasciatus Numbat [294]	Endangered	Species or species habitat may occur within area
Neophoca cinerea Australian Sea-lion, Australian Sea Lion [22]	Endangered	Breeding known to occur within area
Parantechinus apicalis Dibbler [313]	Endangered	Translocated population known to occur within area
Petrogale lateralis hacketti Recherche Rock-wallaby [66849]	Vulnerable	Species or species habitat likely to occur within area
Petrogale lateralis lateralis Black-flanked Rock-wallaby, Mooroorong, Black-footed Rock Wallaby [66647]	Endangered	Translocated population known to occur within area
Phascogale calura Red-tailed Phascogale, Red-tailed Wambenger, Kenngoor [316]	Vulnerable	Species or species habitat may occur within area
Potorous gilbertii Gilbert's Potoroo, Ngilkat [66642]	Critically Endangered	Translocated population known to occur within area
Pseudocheirus occidentalis Western Ringtail Possum, Ngwayir, Womp, Woder, Ngoor, Ngoolangit [25911]	Critically Endangered	Breeding likely to occur within area
Pseudomys shortridgei Heath Mouse, Dayang, Heath Rat [77]	Endangered	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Setonix brachyurus Quokka [229]	Vulnerable	Species or species habitat likely to occur within area
OTHER		
Westralunio carteri Carter's Freshwater Mussel, Ambiguus Mussel [86266]	Vulnerable	Species or species habitat likely to occur within area
PLANT		
Adenanthos dobagii Fitzgerald Woollybush [21253]	Endangered	Species or species habitat likely to occur within area
Adenanthos ellipticus Oval-leaf Adenanthos [4570]	Vulnerable	Species or species habitat likely to occur within area
Andersonia gracilis Slender Andersonia [14470]	Endangered	Species or species habitat may occur within area
Andersonia pinaster Two Peoples Bay Andersonia [67444]	Vulnerable	Species or species habitat likely to occur within area
Anigozanthos bicolor subsp. minor Little Kangaroo Paw, Two-coloured Kangaroo Paw, Small Two-colour Kangaroo Paw [21241]	Endangered	Species or species habitat likely to occur within area
Austrostipa bronweniae listed as Austrostipa bronwenae [92773]	Endangered	Species or species habitat likely to occur within area
Austrostipa jacobsiana [87809]	Critically Endangered	Species or species habitat likely to occur within area
Banksia anatona Cactus Dryandra [82758]	Critically Endangered	Species or species habitat may occur within area
Banksia brownii Brown's Banksia, Feather-leaved Banksia [8277]	Critically Endangered	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Banksia goodii Good's Banksia [16727]	Vulnerable	Species or species habitat likely to occur within area
Banksia mimica Summer Honeypot [82765]	Endangered	Species or species habitat may occur within area
Banksia nivea subsp. uliginosa Swamp Honeypot [82766]	Endangered	Species or species habitat likely to occur within area
Banksia pseudoplumosa False Plumed-Banksia [82760]	Endangered	Species or species habitat likely to occur within area
Banksia squarrosa subsp. argillacea Whicher Range Dryandra [82769]	Vulnerable	Species or species habitat likely to occur within area
Banksia verticillata Granite Banksia, Albany Banksia, River Banksia [8333]	Vulnerable	Species or species habitat likely to occur within area
Boronia clavata Bremer Boronia [5538]	Endangered	Species or species habitat likely to occur within area
Boronia exilis Scott River Boronia [64844]	Endangered	Species or species habitat likely to occur within area
Brachyscias verecundus Ironstone Brachyscias [81321]	Critically Endangered	Species or species habitat may occur within area
Caladenia busselliana Bussell's Spider-orchid [24369]	Endangered	Species or species habitat likely to occur within area
Caladenia caesarea subsp. maritima Cape Spider-orchid [64856]	Endangered	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Caladenia excelsa		
Giant Spider-orchid [56717]	Endangered	Species or species habitat likely to occur within area
Caladenia granitora		
[65292]	Endangered	Species or species habitat likely to occur within area
Caladenia harringtoniae		
Harrington's Spider-orchid, Pink Spider-orchid [56786]	Vulnerable	Species or species habitat likely to occur within area
Caladenia hoffmanii		
Hoffman's Spider-orchid [56719]	Endangered	Species or species habitat may occur within area
Caladenia huegelii		
King Spider-orchid, Grand Spider-orchid, Rusty Spider-orchid [7309]	Endangered	Species or species habitat likely to occur within area
Caladenia lodgeana		
Lodge's Spider-orchid [68664]	Critically Endangered	Species or species habitat likely to occur within area
Caladenia procera		
Carbunup King Spider Orchid [68679]	Critically Endangered	Species or species habitat likely to occur within area
Caladenia viridescens		
Dunsborough Spider-orchid [56776]	Endangered	Species or species habitat likely to occur within area
Calectasia cyanea		
Blue Tinsel Lily [7669]	Critically Endangered	Species or species habitat likely to occur within area
Chamelaucium lullfitzii listed as Chamelaucium sp. Gingin (N.G.Marchant 6)		
Gingin Wax [92777]	Endangered (listed as Chamelaucium sp. Gingin	Species or species habitat likely to occur within area
Chamelaucium roycei listed as Chamelaucium sp. S coastal plain (R.D.Royce 4872)		
Royce's Waxflower [56751]	Vulnerable (listed as Chamelaucium sp. S coastal plain	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Chordifex abortivus Manypeaks Rush [64868]	Endangered	Species or species habitat likely to occur within area
Commersonia apella Many-flowered Commersonia [86877]	Critically Endangered	Species or species habitat likely to occur within area
Conospermum quadripetalum [65312]	Critically Endangered	Species or species habitat likely to occur within area
Conostylis misera Grass Conostylis [21320]	Endangered	Species or species habitat likely to occur within area
Coopernookia georgei Mauve Coopernookia [21218]	Endangered	Species or species habitat likely to occur within area
Darwinia ferricola Scott River Darwinia [56706]	Endangered	Species or species habitat likely to occur within area
Daviesia obovata Paddle-leaf Daviesia [17311]	Endangered	Species or species habitat likely to occur within area
Daviesia ovata Broad-leaf Daviesia [21193]	Critically Endangered	Species or species habitat likely to occur within area
Diuris drummondii Tall Donkey Orchid [4365]	Vulnerable	Species or species habitat likely to occur within area
Diuris micrantha Dwarf Bee-orchid [55082]	Vulnerable	Species or species habitat likely to occur within area
Diuris purdiei Purdie's Donkey-orchid [12950]	Endangered	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Drakaea elastica Glossy-leafed Hammer Orchid, Glossy-leaved Hammer Orchid, Warty Hammer Orchid [16753]	Endangered	Species or species habitat likely to occur within area
Drakaea micrantha Dwarf Hammer-orchid [56755]	Vulnerable	Species or species habitat likely to occur within area
Eleocharis keigheryi Keighery's Eleocharis [64893]	Vulnerable	Species or species habitat likely to occur within area
Eucalyptus argutifolia Yanchep Mallee, Wabling Hill Mallee [24263]	Vulnerable	Species or species habitat may occur within area
Eucalyptus burdettiana Burdett Gum [13505]	Endangered	Species or species habitat likely to occur within area
Eucalyptus coronata Crowned Mallee [2308]	Vulnerable	Species or species habitat likely to occur within area
Eucalyptus insularis Twin Peak Island Mallee [3057]	Endangered	Species or species habitat likely to occur within area
Eucalyptus x phylacis Meelup Mallee [87817]	Endangered	Species or species habitat likely to occur within area
Gastrolobium argyrotrichum Metricup Pea [89145]	Critically Endangered	Species or species habitat likely to occur within area
Gastrolobium papilio Butterfly-leaved Gastrolobium [78415]	Endangered	Species or species habitat may occur within area
Grevillea brachystylis subsp. australis [55525]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Grevillea elongata Ironstone Grevillea [64578]	Vulnerable	Species or species habitat may occur within area
Grevillea infundibularis Fan-leaf Grevillea [5772]	Endangered	Species or species habitat likely to occur within area
Isopogon uncinatus Albany Cone Bush, Hook-leaf Isopogon [20871]	Endangered	Species or species habitat likely to occur within area
Kennedia glabrata Northcliffe Kennedia [16452]	Vulnerable	Species or species habitat likely to occur within area
Kennedia lateritia Augusta Kennedia [45985]	Endangered	Species or species habitat likely to occur within area
Kunzea similis subsp. similis [84068]	Critically Endangered	Species or species habitat likely to occur within area
Lambertia echinata subsp. echinata Prickly Honeysuckle [56729]	Endangered	Species or species habitat likely to occur within area
Lambertia echinata subsp. occidentalis Western Prickly Honeysuckle [64528]	Endangered	Species or species habitat may occur within area
Lambertia orbifolia Roundleaf Honeysuckle [15725]	Endangered	Species or species habitat likely to occur within area
Leptomeria dielsiana Diels' Currant Bush [5146]	Vulnerable	Species or species habitat likely to occur within area
Microtis globula South-Coast Mignonette Orchid [6780]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Morelotia australiensis listed as Tetraria australiensis		
Southern Tetraria [92784]	Vulnerable	Species or species habitat likely to occur within area
Myoporum cordifolium		
Jerramungup Myoporum [24223]	Vulnerable	Species or species habitat likely to occur within area
Petrophile latericola		
Laterite Petrophile [64532]	Endangered	Species or species habitat likely to occur within area
Reedia spathacea		
Reedia [2995]	Critically Endangered	Species or species habitat likely to occur within area
Ricinocarpos trichophorus		
Barrens Wedding Bush [19931]	Endangered	Species or species habitat may occur within area
Scaevola macrophylla		
Large-flowered Scaevola [11806]	Critically Endangered	Species or species habitat may occur within area
Sphenotoma drummondii		
Mountain Paper-heath [21160]	Endangered	Species or species habitat likely to occur within area
Stylidium galioides		
Yellow Mountain Triggerplant [4666]	Vulnerable	Species or species habitat likely to occur within area
Synaphea sp. Fairbridge Farm (D.Papenfus 696)		
Selena's Synaphea [82881]	Critically Endangered	Species or species habitat likely to occur within area
Synaphea sp. Serpentine (G.R.Brand 103)		
[86879]	Critically Endangered	Species or species habitat may occur within area
Synaphea stenoloba		
Dwellingup Synaphea [66311]	Endangered	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Thelymitra variegata Queen of Sheba [12582]	Critically Endangered	Species or species habitat likely to occur within area
Verticordia apecta Hay River Featherflower, Scruffy Verticordia [65545]	Critically Endangered	Species or species habitat may occur within area
Verticordia crebra [55678]	Vulnerable	Species or species habitat likely to occur within area
Verticordia densiflora var. pedunculata Long-stalked Featherflower [55689]	Endangered	Species or species habitat may occur within area
Verticordia fimbrilepis subsp. australis Southern Shy Featherflower [24630]	Vulnerable	Species or species habitat likely to occur within area
Verticordia helichrysantha Coast Featherflower [8204]	Vulnerable	Species or species habitat likely to occur within area
Verticordia pityrhops Little Pine Verticordia, Pine-like Featherflower [55798]	Endangered	Species or species habitat likely to occur within area
Verticordia plumosa var. ananeotes Tufted Plumed Featherflower [23871]	Endangered	Species or species habitat may occur within area
Verticordia plumosa var. vassensis Vasse Featherflower [55804]	Endangered	Species or species habitat likely to occur within area
Wurmbea calcicola Naturaliste Nancy [64691]	Endangered	Species or species habitat likely to occur within area
REPTILE		
Caretta caretta Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area

Scientific Name	Threatened Category	Presence Text
Chelonia mydas Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area
SHARK		
Carcharias taurus (west coast population) Grey Nurse Shark (west coast population) [68752]	Vulnerable	Congregation or aggregation likely to occur within area
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Centrophorus uyato Little Gulper Shark [68446]	Conservation Dependent	Species or species habitat likely to occur within area
Galeorhinus galeus Tope, Flake, Oil Shark, School Shark [68453]	Conservation Dependent	Species or species habitat may occur within area
Pristis pristis Largetooth Sawfish, Freshwater Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Endangered	Species or species habitat may occur within area
Rhincodon typus Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
Sphyrna lewini Scalloped Hammerhead [85267]	Conservation Dependent	Species or species habitat likely to occur within area
SPIDER		
Bertmainius tingle Tingle Pygmy Trapdoor Spider [89126]	Endangered	Species or species habitat likely to occur within area

Listed Migratory Species		[Resource Information]
Scientific Name	Threatened Category	Presence Text

Scientific Name	Threatened Category	Presence Text
Migratory Marine Birds		
[Anous stolidus](#) Common Noddy [825]		Species or species habitat likely to occur within area
[Apus pacificus](#) Fork-tailed Swift [678]		Species or species habitat likely to occur within area
[Ardenna carneipes](#) Flesh-footed Shearwater, Fleshy-footed Shearwater [82404]		Foraging, feeding or related behaviour likely to occur within area
[Ardenna grisea](#) Sooty Shearwater [82651]	Vulnerable	Species or species habitat may occur within area
[Ardenna pacifica](#) Wedge-tailed Shearwater [84292]		Breeding likely to occur within area
[Ardenna tenuirostris](#) Short-tailed Shearwater [82652]		Breeding likely to occur within area
[Diomedea amsterdamensis](#) Amsterdam Albatross [64405]	Endangered	Species or species habitat likely to occur within area
[Diomedea antipodensis](#) Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
[Diomedea dabbenena](#) Tristan Albatross [66471]	Endangered	Species or species habitat likely to occur within area
[Diomedea epomophora](#) Southern Royal Albatross [89221]	Vulnerable	Species or species habitat may occur within area
[Diomedea exulans](#) Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area

Scientific Name	Threatened Category	Presence Text
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Species or species habitat may occur within area
Hydroprogne caspia Caspian Tern [808]		Breeding likely to occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Onychoprion anaethetus Bridled Tern [82845]		Breeding likely to occur within area
Phaethon rubricauda Red-tailed Tropicbird [994]		Species or species habitat may occur within area
Phoebetria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat likely to occur within area
Sterna dougallii Roseate Tern [817]		Breeding likely to occur within area
Sternula albifrons Little Tern [82849]	Vulnerable	Species or species habitat may occur within area
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat likely to occur within area
Thalassarche cauta Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area

Scientific Name	Threatened Category	Presence Text
Thalassarche chrysostoma		
Grey-headed Albatross [66491]	Endangered	Species or species habitat may occur within area
Thalassarche impavida		
Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
Thalassarche melanophris		
Black-browed Albatross [66472]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thalassarche steadi		
White-capped Albatross [64462]	Vulnerable	Species or species habitat may occur within area
Migratory Marine Species		
Balaenoptera bonaerensis		
Antarctic Minke Whale, Dark-shoulder Minke Whale [67812]		Species or species habitat likely to occur within area
Balaenoptera borealis		
Sei Whale [34]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Balaenoptera edeni		
Bryde's Whale [35]		Species or species habitat likely to occur within area
Balaenoptera musculus		
Blue Whale [36]	Endangered	Migration route known to occur within area
Balaenoptera physalus		
Fin Whale [37]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Caperea marginata		
Pygmy Right Whale [39]		Foraging, feeding or related behaviour likely to occur within area

Scientific Name	Threatened Category	Presence Text
Carcharhinus longimanus Oceanic Whitetip Shark [84108]		Species or species habitat likely to occur within area
Carcharias taurus Grey Nurse Shark [64469]		Congregation or aggregation likely to occur within area
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Eubalaena australis as Balaena glacialis australis Southern Right Whale [40]	Endangered	Breeding likely to occur within area
Isurus oxyrinchus Shortfin Mako, Mako Shark [79073]		Species or species habitat likely to occur within area
Lagenorhynchus obscurus Dusky Dolphin [43]		Species or species habitat likely to occur within area
Lamna nasus Porbeagle, Mackerel Shark [83288]		Species or species habitat likely to occur within area
Megaptera novaeangliae Humpback Whale [38]		Foraging, feeding or related behaviour known to occur within area
Mobula alfredi as Manta alfredi Reef Manta Ray, Coastal Manta Ray [90033]		Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Mobula birostris as Manta birostris Giant Manta Ray [90034]		Species or species habitat likely to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Physeter macrocephalus Sperm Whale [59]		Foraging, feeding or related behaviour known to occur within area
Pristis pristis Largetooth Sawfish, Freshwater Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Endangered	Species or species habitat may occur within area
Rhincodon typus Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
Migratory Terrestrial Species		
Motacilla cinerea Grey Wagtail [642]		Species or species habitat likely to occur within area
Migratory Wetlands Species		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat likely to occur within area
Arenaria interpres Ruddy Turnstone [872]	Vulnerable	Roosting likely to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area
Calidris alba Sanderling [875]		Roosting likely to occur within area

Scientific Name	Threatened Category	Presence Text
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat likely to occur within area
Calidris falcinellus as Limicola falcinellus Broad-billed Sandpiper [91731]		Roosting likely to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat likely to occur within area
Calidris pugnax as Philomachus pugnax Ruff [91256]		Roosting likely to occur within area
Calidris ruficollis Red-necked Stint [860]		Roosting likely to occur within area
Calidris subminuta Long-toed Stint [861]		Roosting likely to occur within area
Calidris tenuirostris Great Knot [862]	Vulnerable	Roosting likely to occur within area
Charadrius bicinctus Double-banded Plover [895]		Roosting likely to occur within area
Charadrius dubius Little Ringed Plover [896]		Species or species habitat likely to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting likely to occur within area
Gallinago megala Swinhoe's Snipe [864]		Roosting likely to occur within area

Scientific Name	Threatened Category	Presence Text
Gallinago stenura Pin-tailed Snipe [841]		Roosting likely to occur within area
Glareola maldivarum Oriental Pratincole [840]		Roosting likely to occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat likely to occur within area
Limosa limosa Black-tailed Godwit [845]	Endangered	Roosting likely to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Numenius minutus Little Curlew, Little Whimbrel [848]		Roosting likely to occur within area
Numenius phaeopus Whimbrel [849]		Roosting likely to occur within area
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area
Phalaropus lobatus Red-necked Phalarope [838]		Roosting likely to occur within area
Pluvialis fulva Pacific Golden Plover [25545]		Roosting likely to occur within area
Pluvialis squatarola Grey Plover [865]	Vulnerable	Roosting likely to occur within area
Thalasseus bergii Greater Crested Tern [83000]		Breeding likely to occur within area
Tringa brevipes Grey-tailed Tattler [851]		Roosting likely to occur within area

Scientific Name	Threatened Category	Presence Text
Tringa glareola Wood Sandpiper [829]		Roosting likely to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area
Tringa stagnatilis Marsh Sandpiper, Little Greenshank [833]		Roosting likely to occur within area
Tringa totanus Common Redshank, Redshank [835]		Roosting likely to occur within area
Xenus cinereus Terek Sandpiper [59300]	Vulnerable	Roosting likely to occur within area

Other Matters Protected by the EPBC Act

Commonwealth Lands [Resource Information]

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Commonwealth Land Name	State
Australian Broadcasting Corporation	
BUNBUT 00320 [AGPR210]	WA
Lot 31 P027286 [AGPR208]	WA
Australian Postal Corporation	
Lot 0 S020494 [AGPR7372]	WA
Lot 10 D017395 [AGPR7218]	WA
Lot 17 D070540 [AGPR7188]	WA
Lot 1 D084946 [AGPR7186]	WA
Lot 2 D091270 [AGPR6994]	WA
Lot 30 D067227 [AGPR7256]	WA
Lot 4 D072395 [AGPR7388]	WA
Lot 51 D092398 [AGPR7204]	WA
Bureau of Meteorology	

Commonwealth Land Name	State
Lot 50 D034438 [AGPR322]	WA
Commonwealth of Australia	
Lot B 42 P144904 [AGPR6654]	WA
Lot B 44 P144904 [AGPR6655]	WA
Department of Climate Change, Energy, the Environment and Water	
Artillery Barracks [CHL_105332]	WA
Cape Leeuwin Lighthouse [CHL_105416]	WA
Cliff Point Historic Site [CHL_105273]	WA
Garden Island [CHL_105274]	WA
J Gun Battery [CHL_105272]	WA
Department of Defence	
AAC 511 Army Cadet Unit - Busselton [DD_3353]	WA
AAFC 705 Squadron - Albany [DD_0950]	WA
AAFC 707 Squadron - Mandurah [DD_3378]	WA
Albany AIRTC Depot [AGPR4282]	WA
Albany AIRTC Depot [AGPR4283]	WA
Albany Training Depot [DD_0670]	WA
AMC Henderson Common User Facility [DD_3219]	WA
ANC TS KYBRA - Esperance [DD_3221]	WA
ANC TS VANCOUVER - Albany [DD_0078]	WA
ANZAC SPO - 85 Chalgrove Ave Rockingham [DD_3166]	WA
Artillery Barracks - Fremantle [DD_0704]	WA
Bunbury Training Depot [DD_0681]	WA
Campbell Barracks [AGPR4473]	WA
Campbell Barracks [AGPR4478]	WA
Campbell Barracks [AGPR4477]	WA
Campbell Barracks [AGPR4481]	WA
Campbell Barracks [AGPR4480]	WA

Commonwealth Land Name	State
Campbell Barracks [AGPR4479]	WA
Campbell Barracks [AGPR4384]	WA
Campbell Barracks - Swanbourne [DD_0767]	WA
COCKBL 00696 [AGPR4395]	WA
Coolilup Rifle Range [DD_0689]	WA
DMFS - 23 Chalgrove Ave - Rockingham [DD_0090]	WA
Fremantle Harbour Dockyard [DD_0175]	WA
HMAS Stirling [AGPR4442]	WA
HMAS Stirling [DD_0089]	WA
HMAS Stirling [AGPR4443]	WA
HMAS Stirling [AGPR4440]	WA
HMAS Stirling [AGPR4441]	WA
Lot 1 Plan D065920 [AGPR4438]	WA
Lot 2196 P176417 [AGPR4469]	WA
Lot 3055 Plan P189811 [AGPR4468]	WA
Lot 50 D095534 [AGPR4470]	WA
Lot 601 P065368 [AGPR4439]	WA
Lot 70 D079287 [AGPR4396]	WA
Navy Capability Centre - Henderson [DD_1030]	WA
Submarine Escape and Rescue Sys Facility [DD_1237]	WA
Swanbourne Rifle Range [AGPR4476]	WA
Swanbourne Rifle Range [AGPR4483]	WA
Swanbourne Rifle Range [AGPR4482]	WA
Swanbourne Rifle Ranges [DD_0768]	WA
WA Offshore Training Area [DD_3034]	WA
Department of Home Affairs	
Lot 167 P050251 [AGPR6101]	WA

Commonwealth Land Name	State
Lot 324 P013885 [AGPR6134]	WA
Lot 359 P019014 [AGPR6135]	WA
Lot 62 D056867 [AGPR6132]	WA
Lot 669 P055175 [AGPR4737]	WA
Royal Australian Navy Central Canteens Board (Royal Australian Navy Central Canteens Fund)	
Lot 5 D019592 [AGPR5813]	WA

Commonwealth Heritage Places [Resource Information]

Name	State	Status
Historic		
Artillery Barracks	WA	Listed place
Cape Leeuwin Lighthouse	WA	Listed place
Cliff Point Historic Site	WA	Listed place
J Gun Battery	WA	Listed place
Natural		
Garden Island	WA	Listed place

Listed Marine Species [Resource Information]

Scientific Name	Threatened Category	Presence Text
Bird		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat likely to occur within area
Anous stolidus Common Noddy [825]		Species or species habitat likely to occur within area
Anous tenuirostris melanops Australian Lesser Noddy [26000]	Vulnerable	Species or species habitat may occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Ardenna carneipes as Puffinus carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [82404]		Foraging, feeding or related behaviour likely to occur within area
Ardenna grisea as Puffinus griseus Sooty Shearwater [82651]	Vulnerable	Species or species habitat may occur within area
Ardenna pacifica as Puffinus pacificus Wedge-tailed Shearwater [84292]		Breeding likely to occur within area
Ardenna tenuirostris as Puffinus tenuirostris Short-tailed Shearwater [82652]		Breeding likely to occur within area
Arenaria interpres Ruddy Turnstone [872]	Vulnerable	Roosting likely to occur within area
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area
Calidris alba Sanderling [875]		Roosting likely to occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat likely to occur within area overfly marine area
Calidris falcinellus as Limicola falcinellus Broad-billed Sandpiper [91731]		Roosting likely to occur within area overfly marine area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat likely to occur within area overfly marine area
Calidris pugnax as Philomachus pugnax Ruff [91256]		Roosting likely to occur within area overfly marine area
Calidris ruficollis Red-necked Stint [860]		Roosting likely to occur within area overfly marine area
Calidris subminuta Long-toed Stint [861]		Roosting likely to occur within area overfly marine area
Calidris tenuirostris Great Knot [862]	Vulnerable	Roosting likely to occur within area overfly marine area
Cereopsis novaehollandiae grisea Cape Barren Goose (south-western), Recherche Cape Barren Goose [25978]	Vulnerable	Breeding likely to occur within area overfly marine area
Chalcites osculans as Chrysococcyx osculans Black-eared Cuckoo [83425]		Species or species habitat likely to occur within area overfly marine area
Charadrius bicinctus Double-banded Plover [895]		Roosting likely to occur within area overfly marine area
Charadrius dubius Little Ringed Plover [896]		Species or species habitat likely to occur within area overfly marine area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting likely to occur within area

Scientific Name	Threatened Category	Presence Text
Charadrius ruficapillus Red-capped Plover [881]		Roosting likely to occur within area overfly marine area
Chroicocephalus novaehollandiae as Larus novaehollandiae Silver Gull [82326]		Breeding likely to occur within area
Diomedea amsterdamensis Amsterdam Albatross [64405]	Endangered	Species or species habitat likely to occur within area
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea dabbenena Tristan Albatross [66471]	Endangered	Species or species habitat likely to occur within area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Species or species habitat may occur within area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Species or species habitat may occur within area
Eudyptula minor Little Penguin [1085]		Breeding likely to occur within area
Gallinago megala Swinhoe's Snipe [864]		Roosting likely to occur within area overfly marine area
Gallinago stenura Pin-tailed Snipe [841]		Roosting likely to occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Glareola maldivarum Oriental Pratincole [840]		Roosting likely to occur within area overfly marine area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area
Halobaena caerulea Blue Petrel [1059]	Vulnerable	Species or species habitat may occur within area
Himantopus himantopus Pied Stilt, Black-winged Stilt [870]		Roosting likely to occur within area overfly marine area
Hydroprogne caspia as Sterna caspia Caspian Tern [808]		Breeding likely to occur within area
Larus dominicanus Kelp Gull [809]		Breeding likely to occur within area
Larus pacificus Pacific Gull [811]		Breeding likely to occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat likely to occur within area
Limosa limosa Black-tailed Godwit [845]	Endangered	Roosting likely to occur within area overfly marine area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area

Scientific Name	Threatened Category	Presence Text
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area
Motacilla cinerea Grey Wagtail [642]		Species or species habitat likely to occur within area overfly marine area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Numenius minutus Little Curlew, Little Whimbrel [848]		Roosting likely to occur within area overfly marine area
Numenius phaeopus Whimbrel [849]		Roosting likely to occur within area
Onychoprion anaethetus as Sterna anaethetus Bridled Tern [82845]		Breeding likely to occur within area
Onychoprion fuscatus as Sterna fuscata Sooty Tern [90682]		Breeding likely to occur within area
Pachyptila turtur Fairy Prion [1066]		Species or species habitat likely to occur within area
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area
Pelagodroma marina White-faced Storm-Petrel [1016]		Breeding likely to occur within area
Phaethon rubricauda Red-tailed Tropicbird [994]		Species or species habitat may occur within area
Phalacrocorax fuscescens Black-faced Cormorant [59660]		Breeding likely to occur within area

Scientific Name	Threatened Category	Presence Text
Phalaropus lobatus Red-necked Phalarope [838]		Roosting likely to occur within area
Phoebetria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat likely to occur within area
Pluvialis fulva Pacific Golden Plover [25545]		Roosting likely to occur within area
Pluvialis squatarola Grey Plover [865]	Vulnerable	Roosting likely to occur within area overfly marine area
Pterodroma macroptera Great-winged Petrel [1035]		Foraging, feeding or related behaviour known to occur within area
Pterodroma mollis Soft-plumaged Petrel [1036]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Puffinus assimilis Little Shearwater [59363]		Foraging, feeding or related behaviour known to occur within area
Recurvirostra novaehollandiae Red-necked Avocet [871]		Roosting likely to occur within area overfly marine area
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area
Stercorarius antarcticus as Catharacta skua Brown Skua [85039]		Species or species habitat may occur within area
Sterna dougallii Roseate Tern [817]		Breeding likely to occur within area

Scientific Name	Threatened Category	Presence Text
Sternula albifrons as Sterna albifrons Little Tern [82849]	Vulnerable	Species or species habitat may occur within area
Sternula nereis as Sterna nereis Fairy Tern [82949]		Breeding likely to occur within area
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat likely to occur within area
Thalassarche cauta Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Thalassarche chrysostoma Grey-headed Albatross [66491]	Endangered	Species or species habitat may occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable	Species or species habitat may occur within area
Thalasseus bergii as Sterna bergii Greater Crested Tern [83000]		Breeding likely to occur within area
Thinornis cucullatus as Thinornis rubricollis Hooded Plover, Hooded Dotterel [87735]		Species or species habitat likely to occur within area overfly marine area
Tringa brevipes as Heteroscelus brevipes Grey-tailed Tattler [851]		Roosting likely to occur within area

Scientific Name	Threatened Category	Presence Text
Tringa glareola Wood Sandpiper [829]		Roosting likely to occur within area overfly marine area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area overfly marine area
Tringa stagnatilis Marsh Sandpiper, Little Greenshank [833]		Roosting likely to occur within area overfly marine area
Tringa totanus Common Redshank, Redshank [835]		Roosting likely to occur within area overfly marine area
Xenus cinereus Terek Sandpiper [59300]	Vulnerable	Roosting likely to occur within area overfly marine area
Fish		
Campichthys galei Gale's Pipefish [66191]		Species or species habitat may occur within area
Choeroichthys suillus Pig-snouted Pipefish [66198]		Species or species habitat may occur within area
Halicampus brocki Brock's Pipefish [66219]		Species or species habitat may occur within area
Heraldia nocturna Upside-down Pipefish, Eastern Upside-down Pipefish, Eastern Upside-down Pipefish [66227]		Species or species habitat may occur within area
Hippocampus angustus Western Spiny Seahorse, Narrow-bellied Seahorse [66234]		Species or species habitat may occur within area
Hippocampus breviceps Short-head Seahorse, Short-snouted Seahorse [66235]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Hippocampus subelongatus West Australian Seahorse [66722]		Species or species habitat may occur within area
Histiogamphelus cristatus Rhino Pipefish, Macleay's Crested Pipefish, Ring-back Pipefish [66243]		Species or species habitat may occur within area
Idiotropiscis australe as Acentronura australe Southern Pygmy Pipehorse [74958]		Species or species habitat may occur within area
Leptoichthys fistularius Brushtail Pipefish [66248]		Species or species habitat may occur within area
Lissocampus caudalis Australian Smooth Pipefish, Smooth Pipefish [66249]		Species or species habitat may occur within area
Lissocampus fatiloquus Prophet's Pipefish [66250]		Species or species habitat may occur within area
Lissocampus runa Javelin Pipefish [66251]		Species or species habitat may occur within area
Maroubra perserrata Sawtooth Pipefish [66252]		Species or species habitat may occur within area
Mitotichthys meraculus Western Crested Pipefish [66259]		Species or species habitat may occur within area
Nannocampus subosseus Bonyhead Pipefish, Bony-headed Pipefish [66264]		Species or species habitat may occur within area
Notiocampus ruber Red Pipefish [66265]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Phycodurus eques Leafy Seadragon [66267]		Species or species habitat may occur within area
Phyllopteryx taeniolatus Common Seadragon, Weedy Seadragon [66268]		Species or species habitat may occur within area
Pugnaso curtirostris Pugnose Pipefish, Pug-nosed Pipefish [66269]		Species or species habitat may occur within area
Solegnathus lettiensis Gunther's Pipehorse, Indonesian Pipefish [66273]		Species or species habitat may occur within area
Stigmatopora argus Spotted Pipefish, Gulf Pipefish, Peacock Pipefish [66276]		Species or species habitat may occur within area
Stigmatopora nigra Widebody Pipefish, Wide-bodied Pipefish, Black Pipefish [66277]		Species or species habitat may occur within area
Syngnathoides biaculeatus Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279]		Species or species habitat may occur within area
Urocampus carinirostris Hairy Pipefish [66282]		Species or species habitat may occur within area
Vanacampus margaritifer Mother-of-pearl Pipefish [66283]		Species or species habitat may occur within area
Vanacampus phillipi Port Phillip Pipefish [66284]		Species or species habitat may occur within area
Vanacampus poecilolaemus Longsnout Pipefish, Australian Long-snout Pipefish, Long-snouted Pipefish [66285]		Species or species habitat may occur within area
Mammal		

Scientific Name	Threatened Category	Presence Text
[Arctocephalus forsteri](#)		
Long-nosed Fur-seal, New Zealand Fur-seal [20]		Breeding likely to occur within area
[Neophoca cinerea](#)		
Australian Sea-lion, Australian Sea Lion [22]	Endangered	Breeding known to occur within area
Reptile		
[Aipysurus pooleorum](#)		
Shark Bay Sea Snake [66061]		Species or species habitat may occur within area
[Caretta caretta](#)		
Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
[Chelonia mydas](#)		
Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
[Dermochelys coriacea](#)		
Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
[Hydrophis kingii as Disteira kingii](#)		
Spectacled Sea Snake [93511]		Species or species habitat may occur within area
[Hydrophis platura as Pelamis platurus](#)		
Yellow-bellied Sea Snake [93746]		Species or species habitat may occur within area
[Natator depressus](#)		
Flatback Turtle [59257]	Vulnerable	Breeding likely to occur within area

Whales and Other Cetaceans		[Resource Information]
Current Scientific Name	Status	Type of Presence
Mammal		
[Balaenoptera acutorostrata](#)		
Minke Whale [33]		Species or species habitat may occur within area
[Balaenoptera bonaerensis](#)		
Antarctic Minke Whale, Dark-shoulder Minke Whale [67812]		Species or species habitat likely to occur within area

Current Scientific Name	Status	Type of Presence
[Balaenoptera borealis](#) Sei Whale [34]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
[Balaenoptera edeni](#) Bryde's Whale [35]		Species or species habitat likely to occur within area
[Balaenoptera musculus](#) Blue Whale [36]	Endangered	Migration route known to occur within area
[Balaenoptera physalus](#) Fin Whale [37]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
[Berardius arnuxii](#) Arnoux's Beaked Whale [70]		Species or species habitat may occur within area
[Caperea marginata](#) Pygmy Right Whale [39]		Foraging, feeding or related behaviour likely to occur within area
[Delphinus delphis](#) Common Dolphin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area
[Eubalaena australis](#) Southern Right Whale [40]	Endangered	Breeding likely to occur within area
[Feresa attenuata](#) Pygmy Killer Whale [61]		Species or species habitat may occur within area
[Globicephala macrorhynchus](#) Short-finned Pilot Whale [62]		Species or species habitat may occur within area
[Globicephala melas](#) Long-finned Pilot Whale [59282]		Species or species habitat may occur within area

Current Scientific Name	Status	Type of Presence
Grampus griseus Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area
Hyperoodon planifrons Southern Bottlenose Whale [71]		Species or species habitat may occur within area
Kogia breviceps Pygmy Sperm Whale [57]		Species or species habitat may occur within area
Kogia sima Dwarf Sperm Whale [85043]		Species or species habitat may occur within area
Lagenorhynchus obscurus Dusky Dolphin [43]		Species or species habitat likely to occur within area
Lissodelphis peronii Southern Right Whale Dolphin [44]		Species or species habitat may occur within area
Megaptera novaeangliae Humpback Whale [38]		Foraging, feeding or related behaviour known to occur within area
Mesoplodon bowdoini Andrew's Beaked Whale [73]		Species or species habitat may occur within area
Mesoplodon densirostris Blainville's Beaked Whale, Dense-beaked Whale [74]		Species or species habitat may occur within area
Mesoplodon ginkgodens Gingko-toothed Beaked Whale, Gingko-toothed Whale, Gingko Beaked Whale [59564]		Species or species habitat may occur within area
Mesoplodon grayi Gray's Beaked Whale, Scamperdown Whale [75]		Species or species habitat may occur within area

Current Scientific Name	Status	Type of Presence
Mesoplodon hectori Hector's Beaked Whale [76]		Species or species habitat may occur within area
Mesoplodon layardii Strap-toothed Beaked Whale, Strap-toothed Whale, Layard's Beaked Whale [25556]		Species or species habitat may occur within area
Mesoplodon mirus True's Beaked Whale [54]		Species or species habitat may occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Peponocephala electra Melon-headed Whale [47]		Species or species habitat may occur within area
Physeter macrocephalus Sperm Whale [59]		Foraging, feeding or related behaviour known to occur within area
Pseudorca crassidens False Killer Whale [48]		Species or species habitat likely to occur within area
Stenella attenuata Spotted Dolphin, Pantropical Spotted Dolphin [51]		Species or species habitat may occur within area
Stenella coeruleoalba Striped Dolphin, Euphrosyne Dolphin [52]		Species or species habitat may occur within area
Stenella longirostris Long-snouted Spinner Dolphin [29]		Species or species habitat may occur within area
Steno bredanensis Rough-toothed Dolphin [30]		Species or species habitat may occur within area

Current Scientific Name	Status	Type of Presence
Tasmacetus shepherdi Shepherd's Beaked Whale, Tasman Beaked Whale [55]		Species or species habitat may occur within area
Tursiops aduncus Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat likely to occur within area
Tursiops truncatus s. str. Bottlenose Dolphin [68417]		Species or species habitat may occur within area
Ziphius cavirostris Cuvier's Beaked Whale, Goose-beaked Whale [56]		Species or species habitat may occur within area

Australian Marine Parks	[Resource Information]
Park Name	Zone & IUCN Categories
Geographe	Habitat Protection Zone (IUCN IV)
Perth Canyon	Habitat Protection Zone (IUCN IV)
Perth Canyon	Habitat Protection Zone (IUCN IV)
South-west Corner	Habitat Protection Zone (IUCN IV)
Geographe	Multiple Use Zone (IUCN VI)
Perth Canyon	Multiple Use Zone (IUCN VI)
Perth Canyon	Multiple Use Zone (IUCN VI)
South-west Corner	Multiple Use Zone (IUCN VI)
South-west Corner	Multiple Use Zone (IUCN VI)
South-west Corner	Multiple Use Zone (IUCN VI)
South-west Corner	Multiple Use Zone (IUCN VI)
South-west Corner	Multiple Use Zone (IUCN VI)
Bremer	National Park Zone (IUCN II)
Geographe	National Park Zone (IUCN II)

Park Name	Zone & IUCN Categories
Perth Canyon	National Park Zone (IUCN II)
Perth Canyon	National Park Zone (IUCN II)
South-west Corner	National Park Zone (IUCN II)
South-west Corner	National Park Zone (IUCN II)
South-west Corner	National Park Zone (IUCN II)
South-west Corner	National Park Zone (IUCN II)
South-west Corner	National Park Zone (IUCN II)
South-west Corner	National Park Zone (IUCN II)
South-west Corner	National Park Zone (IUCN II)
South-west Corner	Special Purpose Zone (IUCN VI)
South-west Corner	Special Purpose Zone (IUCN VI)
Bremer	Special Purpose Zone (Mining Exclusion) (IUCN VI)
Bremer	Special Purpose Zone (Mining Exclusion) (IUCN VI)
Geographe	Special Purpose Zone (Mining Exclusion) (IUCN VI)
South-west Corner	Special Purpose Zone (Mining Exclusion) (IUCN VI)
South-west Corner	Special Purpose Zone (Mining Exclusion) (IUCN VI)

Extra Information

State and Territory Reserves		[Resource Information]
Protected Area Name	Reserve Type	State
Arpenteur	Nature Reserve	WA
Bald Island	Nature Reserve	WA
Basil Road	Nature Reserve	WA
Bold Park	Botanic Gardens	WA
Boorara-Gardner	National Park	WA

Protected Area Name	Reserve Type	State
Breaksea Island	Nature Reserve	WA
Broadwater	Nature Reserve	WA
Cape Le Grand	National Park	WA
Carnac Island	Nature Reserve	WA
Chatham Island	Nature Reserve	WA
Cheyne Island	Nature Reserve	WA
Creery Island	Nature Reserve	WA
D'Entrecasteaux	National Park	WA
Doubtful Islands	Nature Reserve	WA
Eclipse Island	Nature Reserve	WA
Esperance 827 and Part 373 & 826	NRS Addition - Gazettal in Progress	WA
Fitzgerald River	National Park	WA
Flinders Bay	Nature Reserve	WA
Gingilup Swamps	Nature Reserve	WA
Glasse Island	Nature Reserve	WA
Greater Hawke	National Park	WA
Green Island	Nature Reserve	WA
Gull Rock	National Park	WA
Hamelin Island	Nature Reserve	WA
Harry Waring Marsupial Reserve	Nature Reserve	WA
Henderson	Conservation Park	WA
Investigator Island	Nature Reserve	WA
Jerdacuttup Lakes	Nature Reserve	WA
Kalgulup	Conservation Park	WA
Kordabup	Nature Reserve	WA
Lake Shaster	Nature Reserve	WA

Protected Area Name	Reserve Type	State
Lake Warden	Nature Reserve	WA
Leeuwin-Naturaliste	National Park	WA
Len Howard	Conservation Park	WA
Leschenault Peninsula	Conservation Park	WA
Locke	Nature Reserve	WA
Marmion	Marine Park	WA
Mehniup	Nature Reserve	WA
Michaelmas Island	Nature Reserve	WA
Mistaken Island	Nature Reserve	WA
Mount Frankland South	National Park	WA
Mount Manypeaks	Nature Reserve	WA
Mount Mason	Nature Reserve	WA
Mount Shadforth	Nature Reserve	WA
Mullet Lake	Nature Reserve	WA
Ngari Capes	Marine Park	WA
NTWA Bushland covenant (0003)	Conservation Covenant	WA
NTWA Bushland covenant (0004)	Conservation Covenant	WA
NTWA Bushland covenant (0005)	Conservation Covenant	WA
NTWA Bushland covenant (0013)	Conservation Covenant	WA
NTWA Bushland covenant (0015A)	Conservation Covenant	WA
NTWA Bushland covenant (0015B)	Conservation Covenant	WA
NTWA Bushland covenant (0017)	Conservation Covenant	WA
NTWA Bushland covenant (0044A)	Conservation Covenant	WA
NTWA Bushland covenant (0044B)	Conservation Covenant	WA
NTWA Bushland covenant (0044C)	Conservation Covenant	WA
NTWA Bushland covenant (0072A)	Conservation Covenant	WA
NTWA Bushland covenant (0072B)	Conservation Covenant	WA

Protected Area Name	Reserve Type	State
NTWA Bushland covenant (0085A)	Conservation Covenant	WA
NTWA Bushland covenant (0085B)	Conservation Covenant	WA
NTWA Bushland covenant (0090)	Conservation Covenant	WA
NTWA Bushland covenant (0095)	Conservation Covenant	WA
NTWA Bushland covenant (0102)	Conservation Covenant	WA
NTWA Bushland covenant (0137)	Conservation Covenant	WA
NTWA Bushland covenant (0144)	Conservation Covenant	WA
NTWA Bushland covenant (0164)	Conservation Covenant	WA
NTWA Bushland covenant (0173)	Conservation Covenant	WA
NTWA Bushland covenant (0178)	Conservation Covenant	WA
NTWA Bushland covenant (0190)	Conservation Covenant	WA
Owingup	Nature Reserve	WA
Penguin Island	Conservation Park	WA
Point Peron	Conservation Park	WA
Point Peron Reserve	5(1)(h) Reserve	WA
Port Kennedy Scientific Park	Nature Reserve	WA
Quagering	Nature Reserve	WA
Quarram	Nature Reserve	WA
Recherche Archipelago	Nature Reserve	WA
Rottnest Island	State Reserve	WA
Rottnest Island	State Reserve	WA
Rudyard Beach	Nature Reserve	WA
Sabina	Nature Reserve	WA
Scott	National Park	WA
Seal Island (WA25645)	Nature Reserve	WA
Seal Island (WA32199)	Nature Reserve	WA
Shannon	National Park	WA

Protected Area Name	Reserve Type	State
Shark Lake	Nature Reserve	WA
Shelter Island	Nature Reserve	WA
Shoalwater Bay Islands	Nature Reserve	WA
Shoalwater Bay Islands	Nature Reserve	WA
Shoalwater Islands	Marine Park	WA
St Alouarn Island	Nature Reserve	WA
Stockdill Road	Nature Reserve	WA
Stokes	National Park	WA
Sugar Loaf Rock	Nature Reserve	WA
Swan River	Management Area	WA
Tennessee North	Nature Reserve	WA
Thomsons Lake	Nature Reserve	WA
Torndirrup	National Park	WA
Tuart Forest	National Park	WA
Two Peoples Bay	Nature Reserve	WA
Unnamed WA01086	5(1)(h) Reserve	WA
Unnamed WA04182	Nature Reserve	WA
Unnamed WA11962	5(1)(h) Reserve	WA
Unnamed WA15185	Nature Reserve	WA
Unnamed WA24309	5(1)(h) Reserve	WA
Unnamed WA24511	Nature Reserve	WA
Unnamed WA25836	Nature Reserve	WA
Unnamed WA26620	Nature Reserve	WA
Unnamed WA26885	Nature Reserve	WA
Unnamed WA27888	Nature Reserve	WA
Unnamed WA29777	Nature Reserve	WA
Unnamed WA31468	Nature Reserve	WA

Protected Area Name	Reserve Type	State
Unnamed WA32259	Nature Reserve	WA
Unnamed WA32419	Nature Reserve	WA
Unnamed WA32478	5(1)(h) Reserve	WA
Unnamed WA32601	5(1)(h) Reserve	WA
Unnamed WA33308	5(1)(h) Reserve	WA
Unnamed WA40564	Nature Reserve	WA
Unnamed WA41102	5(1)(h) Reserve	WA
Unnamed WA41568	Nature Reserve	WA
Unnamed WA41597	Nature Reserve	WA
Unnamed WA42379	5(1)(h) Reserve	WA
Unnamed WA42469	Nature Reserve	WA
Unnamed WA42879	Nature Reserve	WA
Unnamed WA42942	Nature Reserve	WA
Unnamed WA43903	Nature Reserve	WA
Unnamed WA44004	Nature Reserve	WA
Unnamed WA44676	5(1)(h) Reserve	WA
Unnamed WA44685	5(1)(h) Reserve	WA
Unnamed WA44690	5(1)(h) Reserve	WA
Unnamed WA44709	5(1)(h) Reserve	WA
Unnamed WA45089	Nature Reserve	WA
Unnamed WA46661	Nature Reserve	WA
Unnamed WA46895	5(1)(h) Reserve	WA
Unnamed WA48291	Conservation Park	WA
Unnamed WA48837	Nature Reserve	WA
Unnamed WA48955	5(1)(h) Reserve	WA
Unnamed WA49220	Conservation Park	WA
Unnamed WA49385	Nature Reserve	WA

Protected Area Name	Reserve Type	State
Unnamed WA50017	Nature Reserve	WA
Unnamed WA50270	5(1)(h) Reserve	WA
Unnamed WA50574	5(1)(h) Reserve	WA
Unnamed WA50792	5(1)(h) Reserve	WA
Unnamed WA51943	5(1)(h) Reserve	WA
Unnamed WA53313	Conservation Park	WA
Unnamed WA53843	National Park	WA
Unnamed WA54326	Nature Reserve	WA
Vasse-Wonnerup Wetlands	Nature Reserve	WA
Voyagers Park	5(1)(h) Reserve	WA
Walpole And Nornalup Inlets	Marine Park	WA
Walpole-Nornalup	National Park	WA
Waychinicup	National Park	WA
West Cape Howe	National Park	WA
West Mount Mason	Nature Reserve	WA
William Bay	National Park	WA
Woody Island	Nature Reserve	WA
Woody Lake	Nature Reserve	WA
Yalgorup	National Park	WA

Regional Forest Agreements

[Resource Information]

Note that all areas with completed RFAs have been included. Please see the associated resource information for specific caveats and use limitations associated with RFA boundary information.

RFA Name	State
South-West Forest Region of Western Australia	Western Australia

EPBC Act Referrals

[Resource Information]

Title of referral	Reference	Referral Outcome	Assessment Status
25 Lot Residential Subdivision	2009/4830		Completed

Title of referral	Reference	Referral Outcome	Assessment Status
Abercrombie Road Quarry	2023/09465		Assessment
Aerial Application of Larvicide	2010/5490		Completed
Aerial Mosquito Spraying Vasse-Wonnerup System	2005/1952		Completed
Albany Heritage Park Link Trail, WA	2019/8480		Post-Approval
Anketell Road Upgrade (Leith Road to Kwinana Freeway)	2024/09841		Assessment
Bayonet Head Residential Development, Albany, WA	2015/7624		Completed
Beale Park Redevelopment	2022/09297		Completed
Bluewaters Power Station Expansion Phases 3 & 4	2008/4113		Completed
Bunbury Hospital Redevelopment Project	2025/10104		Referral Decision
Bunbury Water Resource Recovery Scheme - Stage 2 Pipeline	2022/9145		Completed
Construct and operate a 132kV transmission line and upgrade Kemerton Terminal Si	2008/4484		Completed
Dunsborough water supply pipeline upgrade	2024/09883		Completed
Freight handling expansion, Kwinana Rail Depot	2023/09474		Assessment
Fremantle District Police Complex Project	2022/09345		Completed
Gnarabup Tourism Development: Resort and Beach Village	2022/09224		Approval
H2Perth hydrogen and ammonia project	2023/09559		Completed
Installation of additional potable water tank	2023/09518		Assessment
Kwinana Alumina Refinery ? Future Residue Storage Area	2023/09454		Completed
Land clearing for limestone quarry	2023/09558		Completed

Title of referral	Reference	Referral Outcome	Assessment Status
Leeuwin Offshore Wind Farm	2022/9160		Assessment
Lillydale Road Widening	2023/09476		Completed
Lots 123,124& Pt Loc 170 Geographe Bay Road	2005/2317		Completed
Marina Quay Residential Development	2023/09673		Completed
Marine Route Survey for Subsea Fibre Optic Data Cable System - Australia West	2024/09826		Completed
Monaghan's Roundabout Project - Intersection of Bussell Highway and Caves Road, Shire of Busselton	2007/3515		Completed
Outer Harbour Port Development, Kwinana	2024/09859		Assessment
Production horticulture in Lot 6 and Lot 8 Old Coast Road, Myalup	2020/8827		Assessment
Proposed Sand Extraction at Lot 601 Stanley Road, Wellesley, WA	2020/8635		Completed
Residential development, Dalyellup, WA	2023/09550		Assessment
Residential Development, Lot 522 Ditchingham Place Australind, WA	2019/8432		Completed
Residential Development, Wattleup Road, Hammond Park, WA	2021/8933		Post-Approval
Runnymede Road Sand Quarry	2022/09262		Completed
Runnymede Road Sand Quarry	2022/09332		Completed
Sand Extraction on 150 Runnymede Road Binningup	2022/09364		Assessment
Sand Extraction Project Lot 5 Wellesley Road, Wellesley Shire of Harvey	2021/9034		Approval
SMAP telecommunications submarine cable installation	2024/09989		Completed
South Thomson Development Barge Landing Development	2024/09975		Completed

Title of referral	Reference	Referral Outcome	Assessment Status
Submarine Rotational Force ? West, Priority Infrastructure Works	2024/10031		Approval
Submarine Rotational Force ? West, Priority Infrastructure Works: Maritime Upgrades	2024/09943		Completed
Sydney Street Subdivision	2023/09530		Completed
WA Offshore Windfarm	2021/8961		Completed
Werillup Pipeline	2025/10121		Referral Decision
Controlled action			
313-316 Mimminup Road, Dalyellup	2012/6274	Controlled Action	Post-Approval
Aerial Application of Lavicide to Vasse-Wonnerup Wetlands	2010/5593	Controlled Action	Post-Approval
Airborne sonar trials	2001/540	Controlled Action	Completed
Albany Heritage Park Trail Network Concept Plan	2017/7943	Controlled Action	Completed
Albany Port Authority dredging project	2006/2540	Controlled Action	Post-Approval
Albany Ring Road Stages 2 and 3B, WA	2020/8769	Controlled Action	Post-Approval
Albemarle Lithium hydroxide manufacturing plant, Kemerton, WA	2017/8099	Controlled Action	Post-Approval
Alcoa Bauxite Residue Storage Area Extension	2011/5878	Controlled Action	Further Information Request
All weather access track road between Windy Harbour and Nelson Location 7965	2011/6121	Controlled Action	Post-Approval
Binningup Beach Residential Development, Lots 195, 304, 9003 Lakes Parade, Binningup WA	2009/5046	Controlled Action	Post-Approval
Bunbury Outer Ring Road Northern and Central Section Project, WA	2019/8471	Controlled Action	Post-Approval
Bunbury Outer Ring Road Southern Section	2012/6652	Controlled Action	Completed

Title of referral	Reference	Referral Outcome	Assessment Status
Controlled action			
Bunbury Outer Ring Road Southern Section project, WA	2019/8543	Controlled Action	Final PD
Bunbury Port Berth 14A Expansion & Coal Storage & Loading Facility, WA	2014/7200	Controlled Action	Post-Approval
Bussell Highway - Capel to Hutton Section, WA	2015/7626	Controlled Action	Post-Approval
Bussell Highway Duplication Hutton to Sabina	2020/8800	Controlled Action	Post-Approval
Busselton Foreshore Redevelopment from West Street to Ford Road	2013/6830	Controlled Action	Post-Approval
Capecare, urban and commercial new development, Aged Care - Naturaliste Terrace, Dunsborough, WA	2006/2834	Controlled Action	Post-Approval
Cape View Resort at Lot 190 Little Colin Street	2006/3070	Controlled Action	Post-Approval
Clear 2.86 ha of native vegetation for the purpose of horticulture	2010/5655	Controlled Action	Post-Approval
Clearing for Bunbury Airport Expansion, WA	2013/6872	Controlled Action	Post-Approval
Clearing of Lots 2 and 10 Rowley Road, Mandogalup WA	2018/8182	Controlled Action	Assessment Approach
Construction of a Deepwater, General Container Port	2009/5178	Controlled Action	Proposed Decision
Construction of New Perth Bunbury Highway project	2005/2193	Controlled Action	Post-Approval
Construction of new sporting field	2007/3333	Controlled Action	Post-Approval
Dalyellup Beach Estate - Residential Development	2007/3361	Controlled Action	Post-Approval
Dawson Beach Estate Stage 2	2005/2153	Controlled Action	Post-Approval
Development Guide Plan for 46 ha Residential Subdivision	2008/4102	Controlled Action	Post-Approval
Development of Busselton Health Campus	2011/6011	Controlled Action	Post-Approval
Development of Kwinana Quay port facility	2008/4387	Controlled Action	Completed

Title of referral	Reference	Referral Outcome	Assessment Status
Controlled action			
Development of Lot 9018 Martingale Road and Lot 377 Clinker Drive, Dunsborough, WA	2018/8278	Controlled Action	Further Information Request
Develop three sites into residential housing and mixed use developments, Western Australia	2013/6916	Controlled Action	Post-Approval
Develop Trails and a Wetlands Demonstration Site and Centre	2008/4439	Controlled Action	Post-Approval
Eastern Link Project, Busselton WA	2018/8155	Controlled Action	Post-Approval
Emu Point Residential Area Project	2010/5479	Controlled Action	Completed
Extension of Beeliar Drive between the junction of Mayor and Fawcett Roads an...	2003/1029	Controlled Action	Completed
Flat Rock boating facility	2008/4506	Controlled Action	Post-Approval
Grain Receivals Depot	2001/170	Controlled Action	Post-Approval
Halls Head Shopping Centre stages 2 & 3 expansion	2010/5636	Controlled Action	Post-Approval
Industry Zone	2010/5337	Controlled Action	Post-Approval
Latitude 32-industrial development of various lots, Ashley and Sayer Roads, Hope Valley, WA	2016/7695	Controlled Action	Post-Approval
Lennox Weir Removal, 12kms west Busselton	2021/8915	Controlled Action	Assessment Approach
Lot 2 Corner Durrant Avenue and Sicklemore Road - Residential Development	2011/5882	Controlled Action	Completed
Lot 4 Runnymede Road, Wellesley - Proposed Sand Extraction	2020/8862	Controlled Action	Assessment Approach
Lot 505 Hungerford Avenue, Halls Head, WA Residential Development	2009/4789	Controlled Action	Post-Approval
Lower Vasse River Sediment Removal	2021/9051	Controlled Action	Post-Approval
Mandurah Junction Commercial and Residential Development	2010/5410	Controlled Action	Completed

Title of referral	Reference	Referral Outcome	Assessment Status
Controlled action			
Mangles Bay Marina Based Tourist Precinct	2010/5659	Controlled Action	Post-Approval
Milyeannup Wind Farm	2009/4911	Controlled Action	Post-Approval
Mixed Use Residential and Commercial Development	2009/4919	Controlled Action	Post-Approval
Natural Gas Pipeline Expansion	2006/2813	Controlled Action	Post-Approval
Neighbourhood Shopping Centre and Mixed Business Centre, Ocean Road, Dawesville	2006/3155	Controlled Action	Post-Approval
Old Broadwater Farm Estate Subdivision - Stage 3	2009/5231	Controlled Action	Post-Approval
Parklands West Estate Development	2010/5693	Controlled Action	Post-Approval
Peel's Retreat Estate - Residential development	2006/3063	Controlled Action	Post-Approval
Peppermint Park Residential Subdivision - Stage 5	2008/4028	Controlled Action	Post-Approval
Plantagenet Location 1181, Cape Riche	2001/158	Controlled Action	Completed
Point Grey Marina Project	2010/5515	Controlled Action	Post-Approval
Point Grey Residential Development - Terrestrial Component	2011/5825	Controlled Action	Post-Approval
Proposed excavation and earthworks at existing quarry, prior to subdivision	2008/4562	Controlled Action	Completed
Proposed Urban Development	2008/3984	Controlled Action	Post-Approval
Ravensthorpe Nickel Project	2001/172	Controlled Action	Post-Approval
Residential/Industrial subdivision, Lot 18, Vasse Highway, Shire of Busselton	2006/3208	Controlled Action	Post-Approval
Residential Development	2007/3463	Controlled Action	Post-Approval
Residential development, College Grove, WA	2015/7579	Controlled Action	Completed

Title of referral	Reference	Referral Outcome	Assessment Status
Controlled action			
Residential Development, Lot 3 & 4 Dorsett Street	2006/2774	Controlled Action	Completed
Residential development, Lots 21 and 100 Southern Estuary Road, Herron, WA	2017/8135	Controlled Action	Completed
Residential development Lot 3, 500 Bussell Highway, WA	2013/7098	Controlled Action	Post-Approval
Residential development Lots 8 & 9 King Street	2006/2787	Controlled Action	Completed
Residential subdivision, Lot 501 Vasse Hwy, Yalyalup, WA	2018/8244	Controlled Action	Post-Approval
retirement units & aged care facility development	2007/3533	Controlled Action	Post-Approval
Roe Highway extension, Kwinana Freeway to Stock Road, WA	2009/5031	Controlled Action	Post-Approval
Rural Subdivision of a 975.2ha property	2004/1635	Controlled Action	Completed
Sand and limestone extraction	2003/1284	Controlled Action	Completed
Sand and Limestone Extraction on Lots 313 and 314, Harewoods Road	2005/2291	Controlled Action	Completed
Sand Mine, Lot 122 Old Coast Road, Parkfield, Binningup, WA	2014/7164	Controlled Action	Post-Approval
Sand Mining on Lot 7 Runnymede Road	2011/5996	Controlled Action	Post-Approval
Shark Hazard Mitigation Drum Line Program, WA	2014/7174	Controlled Action	Completed
Shenton Park Subdivision	2004/1479	Controlled Action	Completed
Smiths Beach Project, Yallingup - Coastal Tourism Village	2021/9141	Controlled Action	Referral Publication
Somerville Drive Extension	2011/6153	Controlled Action	Post-Approval
Southdown Magnetite Mine	2006/2544	Controlled Action	Completed
Southdown Magnetite Project	2011/6053	Controlled Action	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Controlled action			
Southern Bluefin Tuna Farm	2005/2165	Controlled Action	Completed
Southern Seawater Desalination Project	2008/4173	Controlled Action	Post-Approval
Subdivision Lot 1 Dawesville Rd	2005/2394	Controlled Action	Post-Approval
Three Turning Pockets West of Busselton Townsite	2002/846	Controlled Action	Post-Approval
Tourism Villa Facility Development	2008/4025	Controlled Action	Post-Approval
tourist and residential development	2007/3483	Controlled Action	Post-Approval
Upgrade of Ford Road	2005/2113	Controlled Action	Completed
Urban development, multiple lots Northerly Street, Vasse, WA	2019/8494	Controlled Action	Assessment Approach
Urban Development Ravendale Drive, Coodanup Drive & Wanjeep Street	2011/5928	Controlled Action	Post-Approval
Vasse Diversion Drain Upgrade	2017/7932	Controlled Action	Post-Approval
Warders Hotel, Block 1 Warders Cottages, Fremantle, WA	2018/8144	Controlled Action	Post-Approval
Wonnerup South Mineral Sands Project, Yalyalup, WA	2014/7135	Controlled Action	Post-Approval
Wonnerup Titanium Mineral Mining Project	2010/5403	Controlled Action	Post-Approval
Yarragadee Water Supply Development	2005/2073	Controlled Action	Completed
Not controlled action			
'Looping 10' gas transmission pipeline from Kwinana to Hopelands	2005/2212	Not Controlled Action	Completed
4wd coastal track stabilisation & rehabilitation, Bettys Beach Reserve, WA	2013/7087	Not Controlled Action	Completed
9 lot 40.4407 ha rural residential subdivision development 1181 Sandalwood Rd, Wellstead	2007/3451	Not Controlled Action	Completed

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action			
Aerial application of mosquito larvicides to Vasse Wonnerup Wetlands, WA	2016/7780	Not Controlled Action	Completed
Albany Port Maintenance Dredging, Albany, WA	2014/7246	Not Controlled Action	Completed
Anzac Centre Develpment, Albany, WA	2012/6571	Not Controlled Action	Completed
Anzac Interpretive Centre Development, Albany, WA	2013/6903	Not Controlled Action	Completed
APX-West Fibre-optic telecommunications cable system, WA to Singapore	2013/7102	Not Controlled Action	Completed
Bibra Lake Aboriginal Cultural Centre Development	2020/8642	Not Controlled Action	Completed
Bunbury Water Resources Recovery Scheme-Recycled Water Treatment Plant	2021/8986	Not Controlled Action	Completed
Bushfire Mitigation Works - City of Mandurah	2020/8674	Not Controlled Action	Completed
Busselton-Margaret River Regional Airport Development Project, WA	2016/7675	Not Controlled Action	Completed
Busselton to Flinders Bay Rails to Trails Project, WA	2013/6835	Not Controlled Action	Completed
Cape Naturaliste Road Shared Pathway, Dunsborough, WA	2018/8282	Not Controlled Action	Completed
Causeway Bridge Duplication, Busselton, WA	2018/8309	Not Controlled Action	Completed
Caves Road and Cape Naturaliste Road Intersection Upgrade	2012/6395	Not Controlled Action	Completed
Caves Road widening project between Dunsborough and Yallingup(20.3 -24.6 SLK), WA	2015/7475	Not Controlled Action	Completed
Clearing and development of 220 and 234 Wattleup Rd, Wattleup, WA	2016/7738	Not Controlled Action	Completed
Clear Lot 503, 54 Ocean Road Dawesville, WA	2014/7375	Not Controlled Action	Completed
Construction and operation of an 8 turbine wind farm at Rous Head Harbour, Frema	2003/933	Not Controlled Action	Completed

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action			
Construction of a water soak dam for fire suppression Lot 304 Rest Point Road, Walpole, WA	2014/7409	Not Controlled Action	Completed
Construction of Secret Harbour High School	2004/1489	Not Controlled Action	Completed
CTBT - Cape Leeuwin Hydroacoustic Station Proposal	2000/27	Not Controlled Action	Completed
Demolish and replace Old Mandurah Traffic Bridge, Mandurah, WA	2015/7415	Not Controlled Action	Completed
Development of Grasmere Wind Farm	2008/4368	Not Controlled Action	Completed
Development of Lots 100-101 Sayer Road, Hope Valley, WA	2019/8399	Not Controlled Action	Completed
Disposal of residential properties, Fremantle, WA	2019/8593	Not Controlled Action	Completed
Earthworks and Excavation of Lots 2, 13 & 22 Old Coast Road	2009/5101	Not Controlled Action	Completed
Eastport canal estate development stage 5	2007/3737	Not Controlled Action	Completed
Establishment of a National Lifestyle Village	2011/6081	Not Controlled Action	Completed
Expansion of berthing facilities at Kwinana Bulk Terminal	2006/2509	Not Controlled Action	Completed
Expansion of existing Ammonium Nitrate Production Facility	2005/1941	Not Controlled Action	Completed
Expedition 369-Australian Cretaceous Climate and Tectonics, Australian EEZ waters	2017/7891	Not Controlled Action	Completed
Extension of Brittain Road to connect with the South Western Hwy/Robertson Drive intersection	2007/3707	Not Controlled Action	Completed
Extension of commercial sand extraction operation, Shire of Capel WA	2003/1250	Not Controlled Action	Completed
Extension of Existing Limestone Quarry at Lot 5 Old Coast Road	2006/2831	Not Controlled Action	Completed
Florida Estate Residential Subdivision Development Stage 13	2011/6045	Not Controlled Action	Completed
Florida North residential development, Lot 9008, Ocean	2015/7462	Not Controlled Action	Completed

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action			
Road, Dawesville, WA			
Fremantle Ports Inner Harbour Capital Dredging Proposal	2005/2477	Not Controlled Action	Completed
Gas-fired Power Station	2005/2213	Not Controlled Action	Completed
Geo-science Investigations	2005/2069	Not Controlled Action	Completed
Hammond West Urban Development, Hammond Park, WA	2017/7917	Not Controlled Action	Completed
Hope Valley-Wattleup Redevelopment Project	2020/8644	Not Controlled Action	Completed
Horizontal drilling from Lot 35 Ballarat Rd under Wonnerup Inlet	2004/1354	Not Controlled Action	Completed
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed
INDIGO Central Submarine Telecommunications Cable	2017/8127	Not Controlled Action	Completed
Industrial development, Lot 561 Paris Road, Australind, WA	2016/7712	Not Controlled Action	Completed
Industrial development 105 Sayer Road, Hope Valley, WA	2014/7261	Not Controlled Action	Completed
Industrial Development Lot 64 Ashley Road, Hope Valley, WA	2014/7238	Not Controlled Action	Completed
Kemerton Lateral Gas Pipeline Project	2005/2388	Not Controlled Action	Completed
Kennedy Bay urban development, Port Kennedy, WA	2014/7122	Not Controlled Action	Completed
Kennedy Park Estate Residential Development	2003/1044	Not Controlled Action	Completed
Kwinana Depot Upgrade	2011/6035	Not Controlled Action	Completed
Kwinana Gas-Fired Power Station	2005/2101	Not Controlled Action	Completed
larvaciding of potential mosquito breeding wetlands	2006/2601	Not Controlled Action	Completed
Latitude 32 industrial development 6A, Cockburn, WA	2018/8193	Not Controlled Action	Completed

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action			
Limestone quarry expansion	2005/2268	Not Controlled Action	Completed
Limestone Quarry Expansion, Lots 3618 and 1794, Finn Road	2005/2332	Not Controlled Action	Completed
Limestone quarry mining	2006/2942	Not Controlled Action	Completed
Lot 101 Mandurah Road, Madora Bay, WA	2012/6466	Not Controlled Action	Completed
Lot 170 Hope Valley Road, Hope Valley	2020/8830	Not Controlled Action	Completed
Lot 200 Caves Road Tourist Accommodation	2020/8775	Not Controlled Action	Completed
Mandurah Quay Residential Development	2010/5754	Not Controlled Action	Completed
Mount Barker to Albany Water Supply Pipeline	2013/6720	Not Controlled Action	Completed
New automotive centre at the Southwest Institute of Technology, Bunbury, WA	2010/5766	Not Controlled Action	Completed
Oman Australia Cable Installation, WA	2021/8922	Not Controlled Action	Completed
Oman Australia Cable - Marine Route Survey	2020/8731	Not Controlled Action	Completed
Palm Beach Caravan Park Redevelopment, Rockingham, WA	2013/6853	Not Controlled Action	Completed
Perth Desalination Plant 2	2019/8454	Not Controlled Action	Completed
Perth Seawater Desalination Project: Thomsons Lake to Kogolup Pipeline	2005/1971	Not Controlled Action	Completed
Port of Esperance Maintenance Dredging, WA	2013/6822	Not Controlled Action	Completed
Proposed Expansion of Existing Gracetown Townsite & Upgrade of Existing Associa	2010/5358	Not Controlled Action	Completed
Proposed Fuel Reduction Burn, Loughton Park, Bunbury, WA	2014/7148	Not Controlled Action	Completed
Protected Harbour Development	2006/3091	Not Controlled Action	Completed

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action			
Redevelopment of Lots 3 & 4, Kent Street	2007/3243	Not Controlled Action	Completed
Redevelopment of Purvis Street school site, Hamilton Hill, WA	2018/8255	Not Controlled Action	Completed
Replacement Floodgates	2003/1010	Not Controlled Action	Completed
Residential & Light Industrial Development, Vasse WA	2013/6932	Not Controlled Action	Completed
Residential development, Lot 42, Farmhouse Court, Bovell, WA	2014/7195	Not Controlled Action	Completed
Residential development, Lot 74 Wattleup Road, Hammond Park, WA	2018/8273	Not Controlled Action	Completed
Residential development, Lots 120-121 Minninup Road, Dalyellup WA	2018/8254	Not Controlled Action	Completed
Residential Development - Assorted Lots Parade Rd, Washington Av & Bussell Hwy, Usher WA	2013/6935	Not Controlled Action	Completed
Residential Development of Lots 76 and 107 Wattleup Road, Hamond Park	2020/8865	Not Controlled Action	Completed
Residential development on part of Lot 2 Fanstone Avenue, Beeliar, WA	2016/7726	Not Controlled Action	Completed
Residential-Rural Subdivision, Lot 1 Kudardup Rd, Kudardup, WA	2012/6471	Not Controlled Action	Completed
Residential Subdivision, Lot 90 Leisure Way, Halls Head, WA	2018/8175	Not Controlled Action	Completed
Re-zoning of Land for Future Residential Development Purposes	2009/4908	Not Controlled Action	Completed
Rezoning of Lot 31, 80-lot Residential Subdivision	2008/4680	Not Controlled Action	Completed
Roe Highway - Karel Avenue to Hope Road Bridge Project	2005/2061	Not Controlled Action	Completed
Rottnest Lodge Redevelopment	2019/8565	Not Controlled Action	Completed
Rural Residential Development Lot 7 Dunkeld Drive, Herron, WA	2014/7340	Not Controlled Action	Completed

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action			
Sand Extraction, Lot 265 Ducane Road, Gelorup, WA	2012/6616	Not Controlled Action	Completed
Scuttling of the HMAS Perth	2001/171	Not Controlled Action	Completed
Secondary School Campus Development at Lot 150 Leisure Drive, Australind	2013/6744	Not Controlled Action	Completed
Seismic Survey, Bremer Basin, Mentelle Basin and Zeewyck Sub-basin	2004/1700	Not Controlled Action	Completed
Sepia Depression Ocean Outlet Landline Duplication	2012/6248	Not Controlled Action	Completed
Stanley Road waste management facility, Wellesley, WA	2014/7131	Not Controlled Action	Completed
Tea Tree Planting, Walpole region, WA	2019/8397	Not Controlled Action	Completed
Titanium Mining	2001/340	Not Controlled Action	Completed
Urban development, Lot 109 Wattleup Road, Hammond Park, WA	2015/7425	Not Controlled Action	Completed
Urban development of Lot 107 Wattleup Road, Hammond Park, WA	2017/7890	Not Controlled Action	Completed
urban residential development	2006/2924	Not Controlled Action	Completed
Vasse Hotel and Supermarket Redevelopment	2001/288	Not Controlled Action	Completed
Vegetation Clearance for Horticulture Operation Expansion, Lot 2, Springfield Rd, Parkfield, WA	2014/7196	Not Controlled Action	Completed
Vegetation clearing for sand extraction, Lot 268 Leeuwin Road, Augusta	2013/6860	Not Controlled Action	Completed
Warders' Cottages Block 2 'W2'	2022/9148	Not Controlled Action	Completed
Warders' Cottages W2 minor works, Fremantle, WA	2018/8185	Not Controlled Action	Completed
Wind Farm development	2005/2105	Not Controlled Action	Completed

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action			
Woodcrest Rise Estate Residential Development	2007/3794	Not Controlled Action	Completed
Not controlled action (particular manner)			
2D seismic survey	2008/4493	Not Controlled Action (Particular Manner)	Post-Approval
2D seismic survey	2007/3273	Not Controlled Action (Particular Manner)	Post-Approval
3D Marine Seismic Survey Within WA-382-P	2007/3799	Not Controlled Action (Particular Manner)	Post-Approval
Ambergate North Residential Development	2009/4802	Not Controlled Action (Particular Manner)	Post-Approval
Arcadia Petroleum - BR12 3D Marine Seismic Survey	2012/6476	Not Controlled Action (Particular Manner)	Post-Approval
Australian Underwater Discovery Centre	2021/9019	Not Controlled Action (Particular Manner)	Post-Approval
Australia to Singapore Fibre Optic Submarine Cable System	2011/6127	Not Controlled Action (Particular Manner)	Post-Approval
Australind Piggery expansion	2014/7117	Not Controlled Action (Particular Manner)	Post-Approval
Bremer Basin 2D Marine Seismic Survey, WA	2009/5013	Not Controlled Action (Particular Manner)	Post-Approval
CETO 6 Garden Island Project, offshore WA	2016/7635	Not Controlled Action (Particular Manner)	Post-Approval
CETO 6 Geophysical and Geotechnical Surveys	2014/7408	Not Controlled Action (Particular Manner)	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
City of Cockburn Sporting Facilties	2005/2139	Not Controlled Action (Particular Manner)	Post-Approval
Construction of Mandurah Entrance Road	2009/4692	Not Controlled Action (Particular Manner)	Post-Approval
Construction of urea production plant and supporting infrastructure	2009/5067	Not Controlled Action (Particular Manner)	Post-Approval
Coodanup residential development	2006/3073	Not Controlled Action (Particular Manner)	Post-Approval
Country Road Estate - Final Stage Development	2006/3095	Not Controlled Action (Particular Manner)	Post-Approval
Dalyellup Beach Estate Stages 12 and 14, near Bunbury	2004/1726	Not Controlled Action (Particular Manner)	Post-Approval
Dalyellup Beach Estate - Stages 13 and 16	2006/3075	Not Controlled Action (Particular Manner)	Post-Approval
Extension and Renewal of Existing Sand Quarry	2008/4326	Not Controlled Action (Particular Manner)	Post-Approval
Extension of existing mains water supply pipeline	2009/4686	Not Controlled Action (Particular Manner)	Post-Approval
Extension of Spearwood Ave, from Barrington Rd to Miguel Rd	2009/5140	Not Controlled Action (Particular Manner)	Post-Approval
Grand Southern Margin 2D Marine Seismic Survey	2008/4599	Not Controlled Action (Particular Manner)	Post-Approval
INDIGO Marine Cable Route Survey (INDIGO)	2017/7996	Not Controlled Action (Particular	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
		Manner)	
Lake Richmond Boardwalk installation, Rockingham, WA	2013/6977	Not Controlled Action (Particular Manner)	Post-Approval
Laying a submarine optical fibre telecommunications cable, Perth to Singapore and Jakarta	2014/7332	Not Controlled Action (Particular Manner)	Post-Approval
Limestone Extraction on Lot 5 Old Coast Road, Myalup, WA	2012/6468	Not Controlled Action (Particular Manner)	Post-Approval
Marine Environmental Survey	2012/6275	Not Controlled Action (Particular Manner)	Post-Approval
McCourt Hills Estate Stage 3	2006/2760	Not Controlled Action (Particular Manner)	Post-Approval
Multipurpose development stage 1 within 340ha	2004/1913	Not Controlled Action (Particular Manner)	Post-Approval
Novacare Lifestyle Village	2001/311	Not Controlled Action (Particular Manner)	Post-Approval
Road upgrades and walk trail development	2009/4958	Not Controlled Action (Particular Manner)	Post-Approval
Sand and Limestone Extraction on Lots 313 and 314, Harewoods Road	2005/2346	Not Controlled Action (Particular Manner)	Post-Approval
South Busselton Primary School	2001/290	Not Controlled Action (Particular Manner)	Post-Approval
South West Metropolitan Railway Project	2003/1175	Not Controlled Action (Particular Manner)	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
Stratham Park Estate Subdivision - Lots 70, 11 and 12	2008/4068	Not Controlled Action (Particular Manner)	Post-Approval
Subdivision and development of residential dwelling on part Lot 1, Bussell Highw	2006/3023	Not Controlled Action (Particular Manner)	Post-Approval
Widening of Ludlow North Road Between Peppermint Grove Road and Mallokup Road	2009/5242	Not Controlled Action (Particular Manner)	Post-Approval
Referral decision			
3D Marine Seismic survey	2007/3725	Referral Decision	Completed
3D Seismic Survey	2012/6245	Referral Decision	Completed
Albany Port Maintenance Dredging	2010/5527	Referral Decision	Completed
Ambergate North Residential Community (4896 lots)	2008/4617	Referral Decision	Completed
Bunbury Port Berth 14 Development, Bunbury Port Inner Harbour	2011/6023	Referral Decision	Completed
Bunbury WRRS - Stage 2 Pipeline	2021/9092	Referral Decision	Completed
CO2 3D Seismic Survey Vlaming Sub-Basin	2012/6343	Referral Decision	Completed
Grand Southern Margin 2D Marine Seismic Survey	2008/4573	Referral Decision	Completed
Harvesting of Pinus Radiata Plantation	2010/5414	Referral Decision	Completed
Kennedy Bay Urban Development,PortKennedy,Rockingh	2013/7022	Referral Decision	Completed
Lots 1-5 Bluerise Cove & Lots 801 & 124 Pleasant Grove Rezoning and Subdivision	2008/4295	Referral Decision	Completed
Narelle 3D Marine Seismic Survey	2008/4575	Referral Decision	Completed
Residential Subdivision Lot 801 Pleasant Grove Circle, Falcon, WA	2012/6507	Referral Decision	Referral Publication

Title of referral	Reference	Referral Outcome	Assessment Status
Referral decision			
Rezoning of Crown Reserve 39181 to facilitate future residential development	2005/2096	Referral Decision	Completed
Riverbank and Country Road Estates Lot 43 Bussell Highway	2005/2367	Referral Decision	Completed
Sonar Trials and Acoustic Trials	2001/538	Referral Decision	Completed
Water quality improvement trial, Lower Vasse River, Busselton, WA	2013/6975	Referral Decision	Completed

Key Ecological Features [Resource Information]

Key Ecological Features are the parts of the marine ecosystem that are considered to be important for the biodiversity or ecosystem functioning and integrity of the Commonwealth Marine Area.

Name	Region
Albany Canyons group and adjacent shelf break	South-west
Ancient coastline at 90-120m depth	South-west
Cape Mentelle upwelling	South-west
Commonwealth marine environment surrounding the Recherche Archipelago	South-west
Commonwealth marine environment within and adjacent to Geographe Bay	South-west
Commonwealth marine environment within and adjacent to the west coast inshore lagoons	South-west
Diamantina Fracture Zone	South-west
Naturaliste Plateau	South-west
Perth Canyon and adjacent shelf break, and other west coast canyons	South-west
Western demersal slope and associated fish communities	South-west
Western rock lobster	South-west

Biologically Important Areas [Resource Information]

Scientific Name	Behaviour	Presence
Seabirds		
Ardenna carneipes		
Flesh-footed Shearwater [82404]	Foraging	Known to occur

Scientific Name	Behaviour	Presence
Ardenna carneipes Flesh-footed Shearwater [82404]	Foraging	Known to occur
Ardenna pacifica Wedge-tailed Shearwater [84292]	Foraging	Known to occur
Ardenna pacifica Wedge-tailed Shearwater [84292]	Reproduction	Known to occur
Ardenna tenuirostris Short-tailed Shearwater [82652]	Foraging	Known to occur
Eudyptula minor Little Penguin [1085]	Foraging	Likely to occur
Hydroprogne caspia Caspian Tern [808]	Foraging	Known to occur
Larus pacificus Pacific Gull [811]	Foraging	Known to occur
Onychoprion anaethetus Bridled Tern [82845]	Foraging	Likely to occur
Onychoprion fuscatus Sooty Tern [90682]	Foraging	Known to occur
Pelagodroma marina White-faced Storm-petrel [1016]	Foraging	Known to occur
Phalacrocorax fuscescens Black-faced Cormorant [59660]	Foraging	Likely to occur
Pterodroma macroptera macroptera Great-winged Petrel (macroptera race) [1035]	Foraging	Known to occur
Pterodroma mollis Soft-plumaged Petrel [1036]	Foraging	Known to occur
Puffinus assimilis Little Shearwater [59363]	Foraging	Likely to occur
Sterna dougallii Roseate Tern [817]	Foraging	Known to occur

Scientific Name	Behaviour	Presence
[Sternula nereis](#) Fairy Tern [82949]	Foraging	Known to occur
[Thalassarche carteri](#) Indian Yellow-nosed Albatross [64464]	Foraging	Likely to occur
Seals		
[Neophoca cinerea](#) Australian Sea Lion [22]	Foraging	Likely to occur
Sharks		
[Carcharodon carcharias](#) White Shark [64470]	Foraging	Known to occur
Whales		
[Balaenoptera musculus](#) Blue and Pygmy Blue Whale [36]	Foraging	Known to occur
[Balaenoptera musculus brevicauda](#) Pygmy Blue Whale [81317]	Foraging	Likely to be present
[Balaenoptera musculus brevicauda](#) Pygmy Blue Whale [81317]	Migration	Known to occur
[Eubalaena australis](#) Southern Right Whale [40]	Migration	
[Eubalaena australis](#) Southern Right Whale [40]	Reproduction	
[Megaptera novaeangliae](#) Humpback Whale [38]	Migration	Known to occur
[Physeter macrocephalus](#) Sperm Whale [59]	Foraging	Known to occur

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data is available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance on the contents of this report.

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions when time permits.

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded breeding sites; and
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management, Northern Territory
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
Forestry Corporation, NSW
-Geoscience Australia
-CSIRO
-Australian Tropical Herbarium, Cairns
-eBird Australia
-Australian Government – Australian Antarctic Data Centre
-Museum and Art Gallery of the Northern Territory
-Australian Government National Environmental Science Program
-Australian Institute of Marine Science
-Reef Life Survey Australia
-American Museum of Natural History
-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
-Tasmanian Museum and Art Gallery, Hobart, Tasmania
-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact us page.

© Commonwealth of Australia
Department of Climate Change, Energy, the Environment and Water
GPO Box 3090
Canberra ACT 2601 Australia
+61 2 6274 1111

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 25-Jun-2026

Summary
Details
Matters of NES
Other Matters Protected by the EPBC Act
Extra Information
Caveat
Acknowledgements

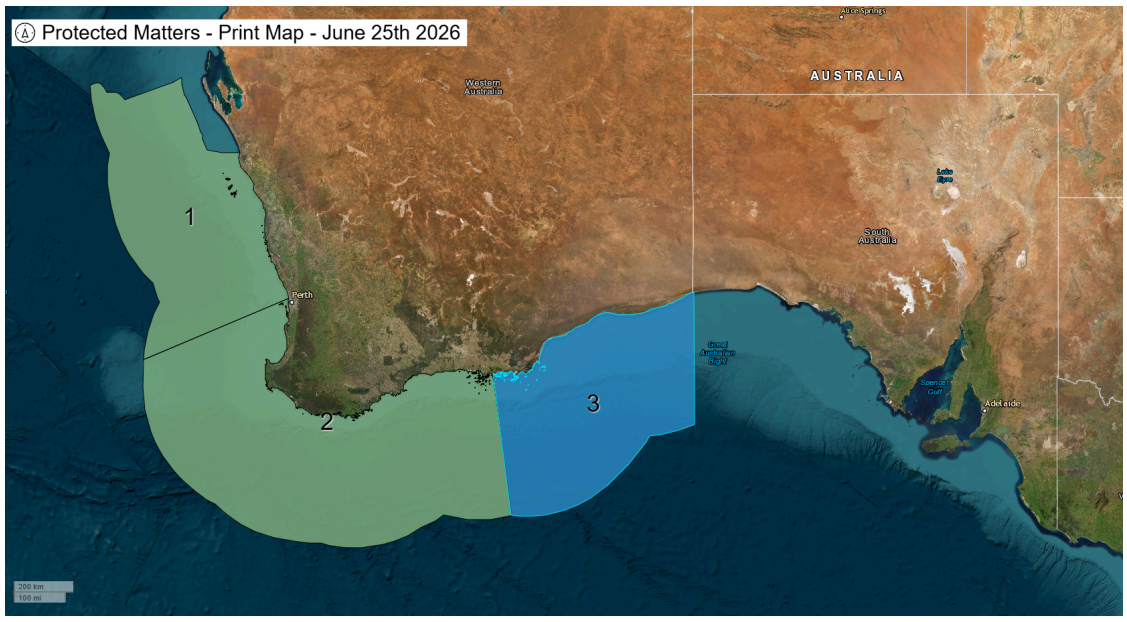


Figure 1: South West Marine Region - East (Part 3)

Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	None
National Heritage Places:	1
Wetlands of International Importance (Ramsar	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	3
Listed Threatened Ecological Communities:	2
Listed Threatened Species:	60
Listed Migratory Species:	70

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at https://www.dcceew.gov.au/parks-heritage/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	98
Whales and Other Cetaceans:	35
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	7
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have

State and Territory Reserves:	10
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	13
Key Ecological Features (Marine):	3
Biologically Important Areas:	18
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

National Heritage Places [Resource Information]

Name	State	Legal Status
Indigenous		
Cheetup Rock Shelter	WA	Listed place

Commonwealth Marine Area [Resource Information]

Approval is required for a proposed activity that is located within the Commonwealth Marine Area which has, will have, or is likely to have a significant impact on the environment. Approval may be required for a proposed action taken outside a Commonwealth Marine Area but which has, may have or is likely to have a significant impact on the environment in the Commonwealth Marine Area.

Feature Name
Commonwealth Marine Areas (EPBC Act)
Commonwealth Marine Areas (EPBC Act)
Commonwealth Marine Areas (EPBC Act)

Listed Threatened Ecological Communities [Resource Information]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.
Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.

Community Name	Threatened Category	Presence Text
Proteaceae Dominated Kwongkan Shrublands of the Southeast Coastal Floristic Province of Western Australia	Endangered	Community likely to occur within area
Subtropical and Temperate Coastal Saltmarsh	Vulnerable	Community likely to occur within area

Listed Threatened Species [Resource Information]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.
Number is the current name ID.

Scientific Name	Threatened Category	Presence Text
BIRD		
Aphelocephala leucopsis		
Southern Whiteface [529]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Ardenna grisea Sooty Shearwater [82651]	Vulnerable	Species or species habitat may occur within area
Arenaria interpres Ruddy Turnstone [872]	Vulnerable	Species or species habitat likely to occur within area
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat likely to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area
Calidris tenuirostris Great Knot [862]	Vulnerable	Species or species habitat likely to occur within area
Cereopsis novaehollandiae grisea Cape Barren Goose (south-western), Recherche Cape Barren Goose [25978]	Vulnerable	Breeding likely to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Species or species habitat likely to occur within area
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area

Scientific Name	Threatened Category	Presence Text
Diomedea dabbenena Tristan Albatross [66471]	Endangered	Species or species habitat likely to occur within area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Species or species habitat may occur within area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Species or species habitat may occur within area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area
Halobaena caerulea Blue Petrel [1059]	Vulnerable	Species or species habitat may occur within area
Leipoa ocellata Malleefowl [934]	Vulnerable	Species or species habitat likely to occur within area
Limosa lapponica menzbieri Northern Siberian Bar-tailed Godwit, Russkoye Bar-tailed Godwit [86432]	Endangered	Species or species habitat likely to occur within area
Limosa limosa Black-tailed Godwit [845]	Endangered	Species or species habitat likely to occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area

Scientific Name	Threatened Category	Presence Text
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Pachyptila turtur subantarctica Fairy Prion (southern) [64445]	Vulnerable	Species or species habitat likely to occur within area
Pezoporus flaviventris Western Ground Parrot, Kyloring [84650]	Critically Endangered	Species or species habitat likely to occur within area
Phoebetria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat likely to occur within area
Pluvialis squatarola Grey Plover [865]	Vulnerable	Species or species habitat likely to occur within area
Pterodroma mollis Soft-plumaged Petrel [1036]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Sternula nereis nereis Australian Fairy Tern [82950]	Vulnerable	Breeding likely to occur within area
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat likely to occur within area
Thalassarche cauta Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area

Scientific Name	Threatened Category	Presence Text
Thalassarche steadi		
White-capped Albatross [64462]	Vulnerable	Species or species habitat may occur within area
Tringa nebularia		
Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area
Xenus cinereus		
Terek Sandpiper [59300]	Vulnerable	Species or species habitat likely to occur within area
Zanda latirostris listed as Calyptorhynchus latirostris		
Carnaby's Black Cockatoo, Short-billed Black-cockatoo [87737]	Endangered	Species or species habitat likely to occur within area
FISH		
Hoplostethus atlanticus		
Orange Roughy, Deep-sea Perch, Red Roughy [68455]	Conservation Dependent	Species or species habitat likely to occur within area
Seriolella brama		
Blue Warehou [69374]	Conservation Dependent	Species or species habitat likely to occur within area
MAMMAL		
Balaenoptera borealis		
Sei Whale [34]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Balaenoptera musculus		
Blue Whale [36]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Balaenoptera physalus		
Fin Whale [37]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Dasyurus geoffroii		
Chuditch, Western Quoll [330]	Vulnerable	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
[Eubalaena australis](#) Southern Right Whale [40]	Endangered	Breeding likely to occur within area
[Neophoca cinerea](#) Australian Sea-lion, Australian Sea Lion [22]	Endangered	Breeding known to occur within area
[Petrogale lateralis hacketti](#) Recherche Rock-wallaby [66849]	Vulnerable	Species or species habitat likely to occur within area
[Petrogale lateralis lateralis](#) Black-flanked Rock-wallaby, Moororong, Black-footed Rock Wallaby [66647]	Endangered	Translocated population known to occur within area
PLANT		
[Adenanthos eyrei](#) Toolinna Adenanthos [7763]	Endangered	Species or species habitat likely to occur within area
[Anigozanthos bicolor subsp. minor](#) Little Kangaroo Paw, Two-coloured Kangaroo Paw, Small Two-colour Kangaroo Paw [21241]	Endangered	Species or species habitat likely to occur within area
[Eucalyptus insularis](#) Twin Peak Island Mallee [3057]	Endangered	Species or species habitat likely to occur within area
[Lambertia echinata subsp. echinata](#) Prickly Honeysuckle [56729]	Endangered	Species or species habitat likely to occur within area
[Ricinocarpos trichophorus](#) Barrens Wedding Bush [19931]	Endangered	Species or species habitat may occur within area
REPTILE		
[Caretta caretta](#) Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
[Chelonia mydas](#) Green Turtle [1765]	Vulnerable	Species or species habitat may occur within area
[Dermochelys coriacea](#) Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area

Scientific Name	Threatened Category	Presence Text
SHARK		
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Centrophorus uyato Little Gulper Shark [68446]	Conservation Dependent	Species or species habitat likely to occur within area
Galeorhinus galeus Tope, Flake, Oil Shark, School Shark [68453]	Conservation Dependent	Species or species habitat likely to occur within area
Rhincodon typus Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area

Listed Migratory Species		[Resource Information]
Scientific Name	Threatened Category	Presence Text
Migratory Marine Birds		
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardenna carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [82404]		Foraging, feeding or related behaviour likely to occur within area
Ardenna grisea Sooty Shearwater [82651]	Vulnerable	Species or species habitat may occur within area
Ardenna tenuirostris Short-tailed Shearwater [82652]		Breeding likely to occur within area
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea dabbenena Tristan Albatross [66471]	Endangered	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Species or species habitat may occur within area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Species or species habitat may occur within area
Hydroprogne caspia Caspian Tern [808]		Breeding likely to occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Onychoprion anaethetus Bridled Tern [82845]		Foraging, feeding or related behaviour likely to occur within area
Phoebetria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat likely to occur within area
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat likely to occur within area
Thalassarche cauta Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable	Species or species habitat may occur within area
Migratory Marine Species		
Balaenoptera bonaerensis Antarctic Minke Whale, Dark-shoulder Minke Whale [67812]		Species or species habitat likely to occur within area
Balaenoptera borealis Sei Whale [34]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Balaenoptera physalus Fin Whale [37]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Caperea marginata Pygmy Right Whale [39]		Foraging, feeding or related behaviour may occur within area
Carcharhinus longimanus Oceanic Whitetip Shark [84108]		Species or species habitat may occur within area
Carcharias taurus Grey Nurse Shark [64469]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Species or species habitat may occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Eubalaena australis as Balaena glacialis australis Southern Right Whale [40]	Endangered	Breeding likely to occur within area
Isurus oxyrinchus Shortfin Mako, Mako Shark [79073]		Species or species habitat likely to occur within area
Lagenorhynchus obscurus Dusky Dolphin [43]		Species or species habitat likely to occur within area
Lamna nasus Porbeagle, Mackerel Shark [83288]		Species or species habitat likely to occur within area
Megaptera novaeangliae Humpback Whale [38]		Species or species habitat likely to occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Physeter macrocephalus Sperm Whale [59]		Foraging, feeding or related behaviour known to occur within area

Scientific Name	Threatened Category	Presence Text
[Rhincodon typus](#) Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
Migratory Terrestrial Species		
[Motacilla cinerea](#) Grey Wagtail [642]		Species or species habitat may occur within area
[Motacilla flava](#) Yellow Wagtail [644]		Species or species habitat may occur within area
Migratory Wetlands Species		
[Actitis hypoleucos](#) Common Sandpiper [59309]		Species or species habitat likely to occur within area
[Arenaria interpres](#) Ruddy Turnstone [872]	Vulnerable	Species or species habitat likely to occur within area
[Calidris acuminata](#) Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area
[Calidris alba](#) Sanderling [875]		Species or species habitat likely to occur within area
[Calidris canutus](#) Red Knot, Knot [855]	Vulnerable	Species or species habitat may occur within area
[Calidris falcinellus as Limicola falcinellus](#) Broad-billed Sandpiper [91731]		Species or species habitat likely to occur within area
[Calidris ferruginea](#) Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area
[Calidris melanotos](#) Pectoral Sandpiper [858]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Calidris ruficollis Red-necked Stint [860]		Species or species habitat likely to occur within area
Calidris tenuirostris Great Knot [862]	Vulnerable	Species or species habitat likely to occur within area
Charadrius bicinctus Double-banded Plover [895]		Species or species habitat likely to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Species or species habitat likely to occur within area
Charadrius veredus Oriental Plover, Oriental Dotterel [882]		Species or species habitat likely to occur within area
Gallinago megala Swinhoe's Snipe [864]		Roosting likely to occur within area
Gallinago stenura Pin-tailed Snipe [841]		Roosting likely to occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat likely to occur within area
Limosa limosa Black-tailed Godwit [845]	Endangered	Species or species habitat likely to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Numenius minutus Little Curlew, Little Whimbrel [848]		Roosting likely to occur within area

Scientific Name	Threatened Category	Presence Text
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area
Phalaropus lobatus Red-necked Phalarope [838]		Species or species habitat likely to occur within area
Pluvialis fulva Pacific Golden Plover [25545]		Species or species habitat likely to occur within area
Pluvialis squatarola Grey Plover [865]	Vulnerable	Species or species habitat likely to occur within area
Thalasseus bergii Greater Crested Tern [83000]		Breeding likely to occur within area
Tringa brevipes Grey-tailed Tattler [851]		Species or species habitat likely to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area
Tringa stagnatilis Marsh Sandpiper, Little Greenshank [833]		Species or species habitat likely to occur within area
Xenus cinereus Terek Sandpiper [59300]	Vulnerable	Species or species habitat likely to occur within area

Other Matters Protected by the EPBC Act

Listed Marine Species		[Resource Information]
Scientific Name	Threatened Category	Presence Text
Bird		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area
Ardenna carneipes as Puffinus carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [82404]		Foraging, feeding or related behaviour likely to occur within area
Ardenna grisea as Puffinus griseus Sooty Shearwater [82651]	Vulnerable	Species or species habitat may occur within area
Ardenna tenuirostris as Puffinus tenuirostris Short-tailed Shearwater [82652]		Breeding likely to occur within area
Arenaria interpres Ruddy Turnstone [872]	Vulnerable	Species or species habitat likely to occur within area
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area
Calidris alba Sanderling [875]		Species or species habitat likely to occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat may occur within area overfly marine area
Calidris falcinellus as Limicola falcinellus Broad-billed Sandpiper [91731]		Species or species habitat likely to occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area overfly marine area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area
Calidris ruficollis Red-necked Stint [860]		Species or species habitat likely to occur within area overfly marine area
Calidris tenuirostris Great Knot [862]	Vulnerable	Species or species habitat likely to occur within area overfly marine area
Cereopsis novaehollandiae grisea Cape Barren Goose (south-western), Recherche Cape Barren Goose [25978]	Vulnerable	Breeding likely to occur within area overfly marine area
Chalcites osculans as Chrysococcyx osculans Black-eared Cuckoo [83425]		Species or species habitat likely to occur within area overfly marine area
Charadrius bicinctus Double-banded Plover [895]		Species or species habitat likely to occur within area overfly marine area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Species or species habitat likely to occur within area
Charadrius ruficapillus Red-capped Plover [881]		Species or species habitat likely to occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Charadrius veredus Oriental Plover, Oriental Dotterel [882]		Species or species habitat likely to occur within area overfly marine area
Chroicocephalus novaehollandiae as Larus novaehollandiae Silver Gull [82326]		Breeding likely to occur within area
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea dabbenena Tristan Albatross [66471]	Endangered	Species or species habitat likely to occur within area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Species or species habitat may occur within area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Species or species habitat may occur within area
Eudyptula minor Little Penguin [1085]		Breeding likely to occur within area
Gallinago megala Swinhoe's Snipe [864]		Roosting likely to occur within area overfly marine area
Gallinago stenura Pin-tailed Snipe [841]		Roosting likely to occur within area overfly marine area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
[Halobaena caerulea](#) Blue Petrel [1059]	Vulnerable	Species or species habitat may occur within area
[Himantopus himantopus](#) Pied Stilt, Black-winged Stilt [870]		Species or species habitat likely to occur within area overfly marine area
[Hydroprogne caspia as Sterna caspia](#) Caspian Tern [808]		Breeding likely to occur within area
[Larus pacificus](#) Pacific Gull [811]		Breeding likely to occur within area
[Limosa lapponica](#) Bar-tailed Godwit [844]		Species or species habitat likely to occur within area
[Limosa limosa](#) Black-tailed Godwit [845]	Endangered	Species or species habitat likely to occur within area overfly marine area
[Macronectes giganteus](#) Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
[Macronectes halli](#) Northern Giant Petrel [1061]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
[Merops ornatus](#) Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area
[Motacilla cinerea](#) Grey Wagtail [642]		Species or species habitat may occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area overfly marine area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Numenius minutus Little Curlew, Little Whimbrel [848]		Roosting likely to occur within area overfly marine area
Onychoprion anaethetus as Sterna anaethetus Bridled Tern [82845]		Foraging, feeding or related behaviour likely to occur within area
Onychoprion fuscatus as Sterna fuscata Sooty Tern [90682]		Breeding likely to occur within area
Pachyptila turtur Fairy Prion [1066]		Species or species habitat likely to occur within area
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area
Pelagodroma marina White-faced Storm-Petrel [1016]		Breeding likely to occur within area
Phalacrocorax fuscescens Black-faced Cormorant [59660]		Breeding likely to occur within area
Phalaropus lobatus Red-necked Phalarope [838]		Species or species habitat likely to occur within area
Phoebetria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Pluvialis fulva Pacific Golden Plover [25545]		Species or species habitat likely to occur within area
Pluvialis squatarola Grey Plover [865]	Vulnerable	Species or species habitat likely to occur within area overfly marine area
Pterodroma macroptera Great-winged Petrel [1035]		Foraging, feeding or related behaviour known to occur within area
Pterodroma mollis Soft-plumaged Petrel [1036]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Puffinus assimilis Little Shearwater [59363]		Foraging, feeding or related behaviour known to occur within area
Recurvirostra novaehollandiae Red-necked Avocet [871]		Roosting likely to occur within area overfly marine area
Stercorarius antarcticus as Catharacta skua Brown Skua [85039]		Species or species habitat may occur within area
Sternula nereis as Sterna nereis Fairy Tern [82949]		Breeding likely to occur within area
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat likely to occur within area
Thalassarche cauta Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area

Scientific Name	Threatened Category	Presence Text
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable	Species or species habitat may occur within area
Thalasseus bergii as Sterna bergii Greater Crested Tern [83000]		Breeding likely to occur within area
Thinornis cucullatus as Thinornis rubricollis Hooded Plover, Hooded Dotterel [87735]		Species or species habitat likely to occur within area overfly marine area
Tringa brevipes as Heteroscelus brevipes Grey-tailed Tattler [851]		Species or species habitat likely to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area overfly marine area
Tringa stagnatilis Marsh Sandpiper, Little Greenshank [833]		Species or species habitat likely to occur within area overfly marine area
Xenus cinereus Terek Sandpiper [59300]	Vulnerable	Species or species habitat likely to occur within area overfly marine area
Fish		
Campichthys galei Gale's Pipefish [66191]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Heraldia nocturna Upside-down Pipefish, Eastern Upside-down Pipefish, Eastern Upside-down Pipefish [66227]		Species or species habitat may occur within area
Hippocampus breviceps Short-head Seahorse, Short-snouted Seahorse [66235]		Species or species habitat may occur within area
Histiogamphelus cristatus Rhino Pipefish, Macleay's Crested Pipefish, Ring-back Pipefish [66243]		Species or species habitat may occur within area
Idiotropiscis australe as Acentronura australe Southern Pygmy Pipehorse [74958]		Species or species habitat may occur within area
Leptoichthys fistularius Brushtail Pipefish [66248]		Species or species habitat may occur within area
Lissocampus caudalis Australian Smooth Pipefish, Smooth Pipefish [66249]		Species or species habitat may occur within area
Lissocampus runa Javelin Pipefish [66251]		Species or species habitat may occur within area
Maroubra perserrata Sawtooth Pipefish [66252]		Species or species habitat may occur within area
Nannocampus subosseus Bonyhead Pipefish, Bony-headed Pipefish [66264]		Species or species habitat may occur within area
Notiocampus ruber Red Pipefish [66265]		Species or species habitat may occur within area
Phycodurus eques Leafy Seadragon [66267]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Phyllopteryx taeniolatus Common Seadragon, Weedy Seadragon [66268]		Species or species habitat may occur within area
Pugnaso curtirostris Pugnose Pipefish, Pug-nosed Pipefish [66269]		Species or species habitat may occur within area
Solegnathus lettiensis Gunther's Pipehorse, Indonesian Pipefish [66273]		Species or species habitat may occur within area
Stigmatopora argus Spotted Pipefish, Gulf Pipefish, Peacock Pipefish [66276]		Species or species habitat may occur within area
Stigmatopora nigra Widebody Pipefish, Wide-bodied Pipefish, Black Pipefish [66277]		Species or species habitat may occur within area
Urocampus carinirostris Hairy Pipefish [66282]		Species or species habitat may occur within area
Vanacampus margaritifer Mother-of-pearl Pipefish [66283]		Species or species habitat may occur within area
Vanacampus phillipi Port Phillip Pipefish [66284]		Species or species habitat may occur within area
Vanacampus poecilolaemus Longsnout Pipefish, Australian Long-snout Pipefish, Long-snouted Pipefish [66285]		Species or species habitat may occur within area
Mammal		
Arctocephalus forsteri Long-nosed Fur-seal, New Zealand Fur-seal [20]		Breeding likely to occur within area
Neophoca cinerea Australian Sea-lion, Australian Sea Lion [22]	Endangered	Breeding known to occur within area
Reptile		

Scientific Name	Threatened Category	Presence Text
Caretta caretta Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Species or species habitat may occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area

Whales and Other Cetaceans		[Resource Information]
Current Scientific Name	Status	Type of Presence
Mammal		
Balaenoptera acutorostrata Minke Whale [33]		Species or species habitat may occur within area
Balaenoptera bonaerensis Antarctic Minke Whale, Dark-shoulder Minke Whale [67812]		Species or species habitat likely to occur within area
Balaenoptera borealis Sei Whale [34]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Balaenoptera physalus Fin Whale [37]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Berardius arnuxii Arnoux's Beaked Whale [70]		Species or species habitat may occur within area

Current Scientific Name	Status	Type of Presence
[Caperea marginata](#) Pygmy Right Whale [39]		Foraging, feeding or related behaviour may occur within area
[Delphinus delphis](#) Common Dolphin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area
[Eubalaena australis](#) Southern Right Whale [40]	Endangered	Breeding likely to occur within area
[Feresa attenuata](#) Pygmy Killer Whale [61]		Species or species habitat may occur within area
[Globicephala macrorhynchus](#) Short-finned Pilot Whale [62]		Species or species habitat may occur within area
[Globicephala melas](#) Long-finned Pilot Whale [59282]		Species or species habitat may occur within area
[Grampus griseus](#) Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area
[Hyperoodon planifrons](#) Southern Bottlenose Whale [71]		Species or species habitat may occur within area
[Kogia breviceps](#) Pygmy Sperm Whale [57]		Species or species habitat may occur within area
[Kogia sima](#) Dwarf Sperm Whale [85043]		Species or species habitat may occur within area
[Lagenorhynchus obscurus](#) Dusky Dolphin [43]		Species or species habitat likely to occur within area

Current Scientific Name	Status	Type of Presence
Lissodelphis peronii Southern Right Whale Dolphin [44]		Species or species habitat may occur within area
Megaptera novaeangliae Humpback Whale [38]		Species or species habitat likely to occur within area
Mesoplodon bowdoini Andrew's Beaked Whale [73]		Species or species habitat may occur within area
Mesoplodon densirostris Blainville's Beaked Whale, Dense-beaked Whale [74]		Species or species habitat may occur within area
Mesoplodon ginkgodens Gingko-toothed Beaked Whale, Gingko-toothed Whale, Gingko Beaked Whale [59564]		Species or species habitat may occur within area
Mesoplodon grayi Gray's Beaked Whale, Scamperdown Whale [75]		Species or species habitat may occur within area
Mesoplodon hectori Hector's Beaked Whale [76]		Species or species habitat may occur within area
Mesoplodon layardii Strap-toothed Beaked Whale, Strap-toothed Whale, Layard's Beaked Whale [25556]		Species or species habitat may occur within area
Mesoplodon mirus True's Beaked Whale [54]		Species or species habitat may occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Peponocephala electra Melon-headed Whale [47]		Species or species habitat may occur within area

Current Scientific Name	Status	Type of Presence
Physeter macrocephalus Sperm Whale [59]		Foraging, feeding or related behaviour known to occur within area
Pseudorca crassidens False Killer Whale [48]		Species or species habitat likely to occur within area
Tasmacetus shepherdi Shepherd's Beaked Whale, Tasman Beaked Whale [55]		Species or species habitat may occur within area
Tursiops aduncus Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat likely to occur within area
Tursiops truncatus s. str. Bottlenose Dolphin [68417]		Species or species habitat may occur within area
Ziphius cavirostris Cuvier's Beaked Whale, Goose-beaked Whale [56]		Species or species habitat may occur within area

Australian Marine Parks	[Resource Information]
Park Name	Zone & IUCN Categories
Eastern Recherche	National Park Zone (IUCN II)
Eastern Recherche	National Park Zone (IUCN II)
Twilight	National Park Zone (IUCN II)
Eastern Recherche	Special Purpose Zone (IUCN VI)
Great Australian Bight	Special Purpose Zone (Mining Exclusion) (IUCN VI)
Twilight	Special Purpose Zone (Mining Exclusion) (IUCN VI)
Twilight	Special Purpose Zone (Mining Exclusion) (IUCN VI)

Extra Information

State and Territory Reserves		[Resource Information]
Protected Area Name	Reserve Type	State
Alexander	Nature Reserve	WA
Cape Arid	National Park	WA
Cape Le Grand	National Park	WA
Eucla	National Park	WA
Far West Coast	Marine Park	SA
Great Australian Bight	Marine National Park	SA
Nullarbor	Wilderness Protection Area	SA
Nuytsland	Nature Reserve	WA
Recherche Archipelago	Nature Reserve	WA
Unnamed WA27087	Nature Reserve	WA

EPBC Act Referrals			[Resource Information]
Title of referral	Reference	Referral Outcome	Assessment Status
BightSPAN 2D Marine Seismic Survey	2009/4750		Completed
SMAP telecommunications submarine cable installation	2024/09989		Completed
Western Green Energy Hub	2024/10049		Assessment
Not controlled action			
Bight Basin Geological Survey	2006/3137	Not Controlled Action	Completed
Expedition 369-Australian Cretaceous Climate and Tectonics, Australian EEZ waters	2017/7891	Not Controlled Action	Completed
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed
INDIGO Central Submarine Telecommunications Cable	2017/8127	Not Controlled Action	Completed
Seismic Survey, Bremer Basin, Mentelle Basin and Zeewyck Sub-	2004/1700	Not Controlled Action	Completed

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action			
basin			
Not controlled action (particular manner)			
Grand Southern Margin 2D Marine Seismic Survey	2008/4599	Not Controlled Action (Particular Manner)	Post-Approval
INDIGO Marine Cable Route Survey (INDIGO)	2017/7996	Not Controlled Action (Particular Manner)	Post-Approval
Referral decision			
BightSPAN 2D Marine Seismic Survey	2009/4695	Referral Decision	Completed
Eldrad MC3D Seismic Survey, Bight Basin	2014/7128	Referral Decision	Completed
Grand Southern Margin 2D Marine Seismic Survey	2008/4573	Referral Decision	Completed

Key Ecological Features [Resource Information]

Key Ecological Features are the parts of the marine ecosystem that are considered to be important for the biodiversity or ecosystem functioning and integrity of the Commonwealth Marine Area.

Name	Region
Albany Canyons group and adjacent shelf break	South-west
Ancient coastline at 90-120m depth	South-west
Commonwealth marine environment surrounding the Recherche Archipelago	South-west

Biologically Important Areas [Resource Information]

Scientific Name	Behaviour	Presence
Seabirds		
Ardenna carneipes Flesh-footed Shearwater [82404]	Foraging	Known to occur
Ardenna pacifica Wedge-tailed Shearwater [84292]	Reproduction	Known to occur
Ardenna tenuirostris Short-tailed Shearwater [82652]	Foraging	Known to occur
Eudyptula minor Little Penguin [1085]	Foraging	Likely to occur

Scientific Name	Behaviour	Presence
Hydroprogne caspia Caspian Tern [808]	Foraging	Known to occur
Larus pacificus Pacific Gull [811]	Foraging	Known to occur
Onychoprion anaethetus Bridled Tern [82845]	Foraging	Likely to occur
Pelagodroma marina White-faced Storm-petrel [1016]	Foraging	Known to occur
Phalacrocorax fuscescens Black-faced Cormorant [59660]	Foraging	Likely to occur
Pterodroma macroptera macroptera Great-winged Petrel (macroptera race) [1035]	Foraging	Known to occur
Puffinus assimilis Little Shearwater [59363]	Foraging	Likely to occur
Sternula nereis Fairy Tern [82949]	Foraging	Known to occur
Seals		
Neophoca cinerea Australian Sea Lion [22]	Foraging	Likely to occur
Sharks		
Carcharodon carcharias White Shark [64470]	Foraging	Known to occur
Whales		
Balaenoptera musculus brevicauda Pygmy Blue Whale [81317]	Foraging	Likely to be present
Eubalaena australis Southern Right Whale [40]	Migration	
Eubalaena australis Southern Right Whale [40]	Reproduction	
Physeter macrocephalus Sperm Whale [59]	Foraging	Known to occur

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data is available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance on the contents of this report.

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions when time permits.

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded breeding sites; and
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management, Northern Territory
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
Forestry Corporation, NSW
-Geoscience Australia
-CSIRO
-Australian Tropical Herbarium, Cairns
-eBird Australia
-Australian Government – Australian Antarctic Data Centre
-Museum and Art Gallery of the Northern Territory
-Australian Government National Environmental Science Program
-Australian Institute of Marine Science
-Reef Life Survey Australia
-American Museum of Natural History
-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
-Tasmanian Museum and Art Gallery, Hobart, Tasmania
-Other groups and individuals

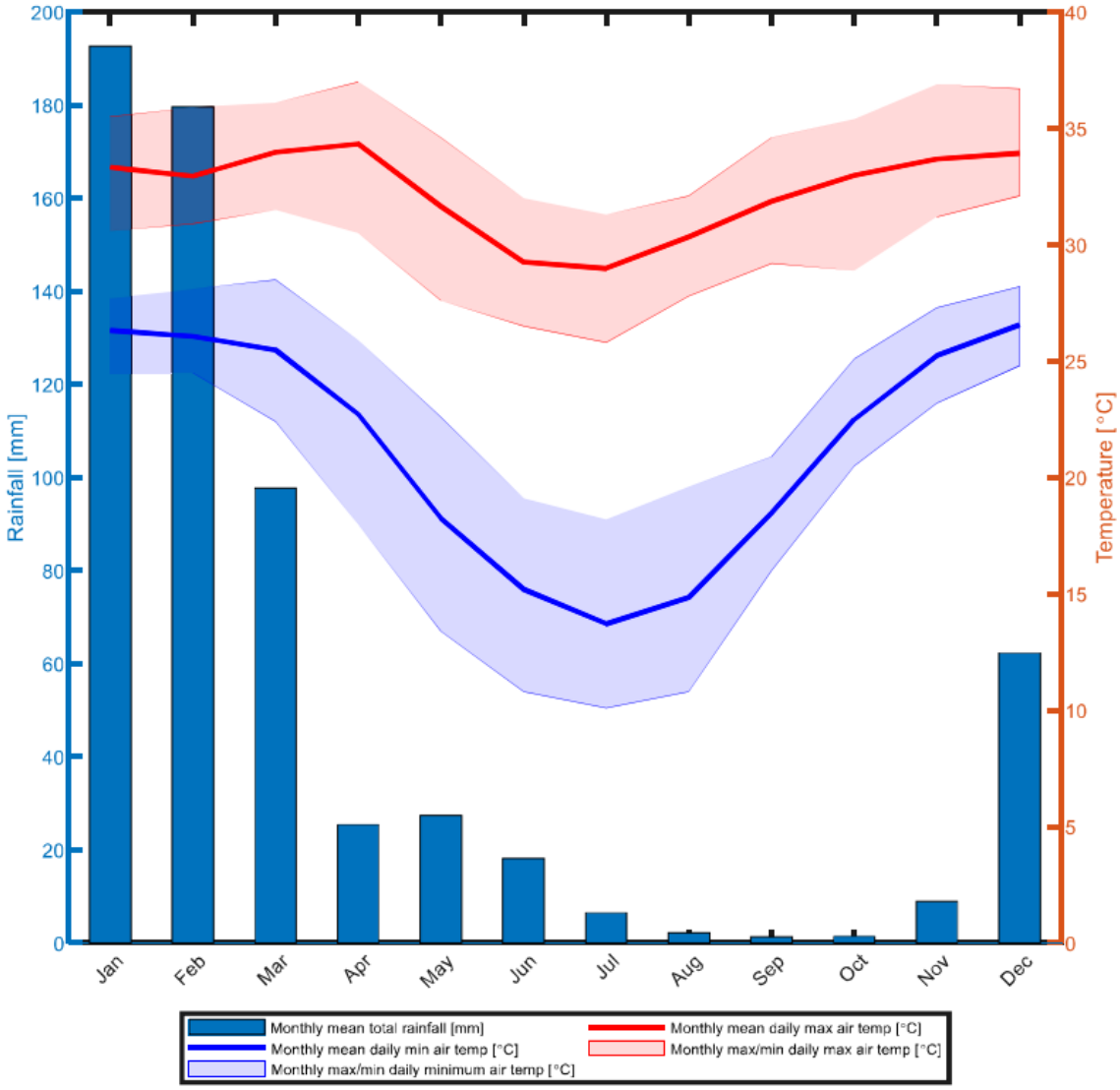
The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact us page.

© Commonwealth of Australia
Department of Climate Change, Energy, the Environment and Water
GPO Box 3090
Canberra ACT 2601 Australia
+61 2 6274 1111

APPENDIX B SUPPORTING FIGURES FOR SECTION 2.3 METEOROLOGY AND OCEANOGRAPHY

Browse



Bars show the monthly average total rainfall values, and thick blue and red lines denote monthly average daily minimum and maximum air temperatures, respectively. Shaded blue and red areas denote monthly recorded extremes of daily minimum and maximum air temperature, respectively.

Figure 1: Monthly average total rainfall (mm) and air temperature (°C), calculated based on observations at the Broome Airport weather station from 1939-2020 (Bureau of Meteorology, 2020)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

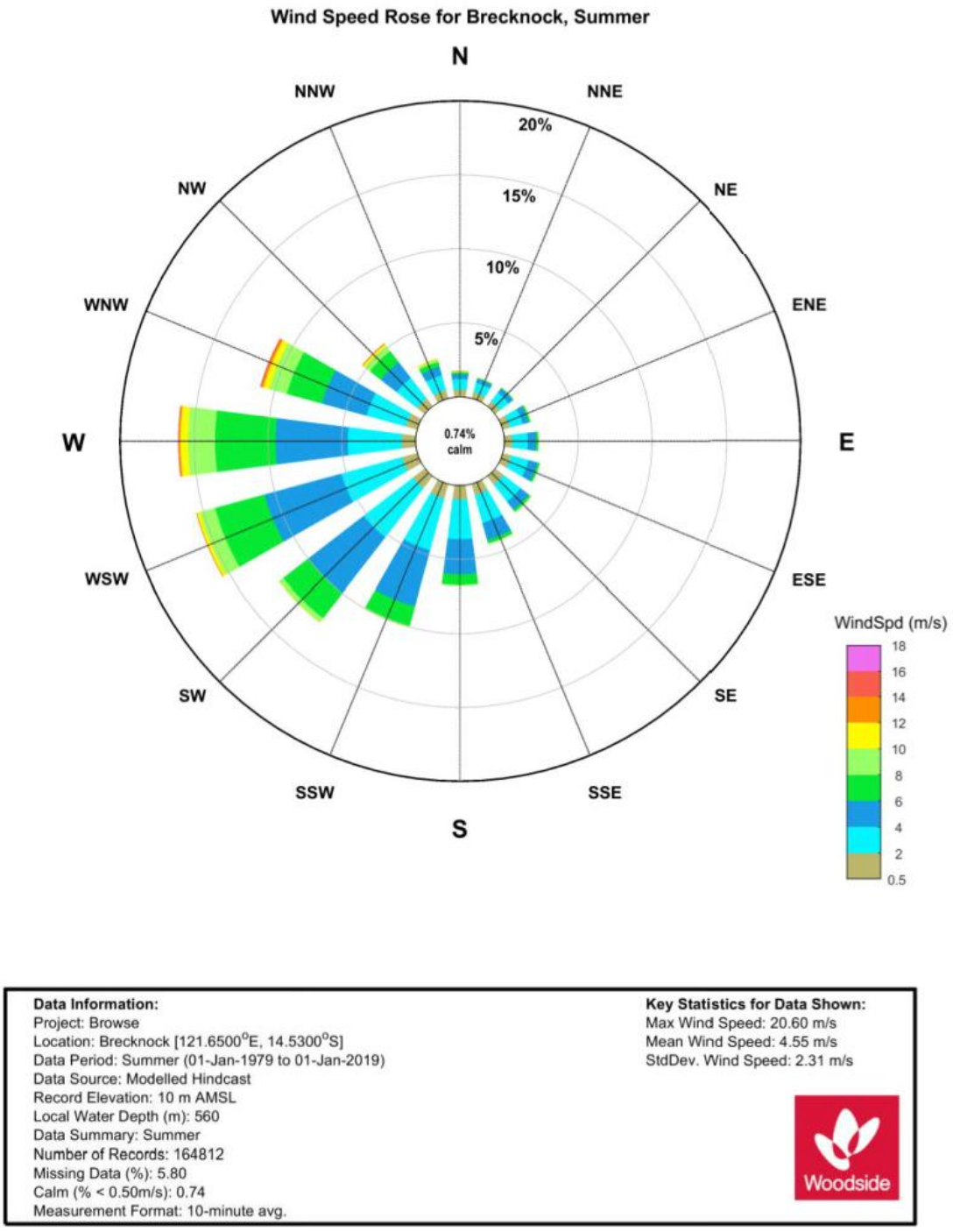


Figure 2: Summer distributions of 10-minute average wind speeds by 22.5° directional sectors at the Brecknock site (Metocean Solutions Ltd, 2019)

Note, tropical cyclone events were not included in this distribution. Winds at Brecknock in summer are predominantly from the west-northwest to southwest due to the North West Monsoon (Woodside, 2019).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

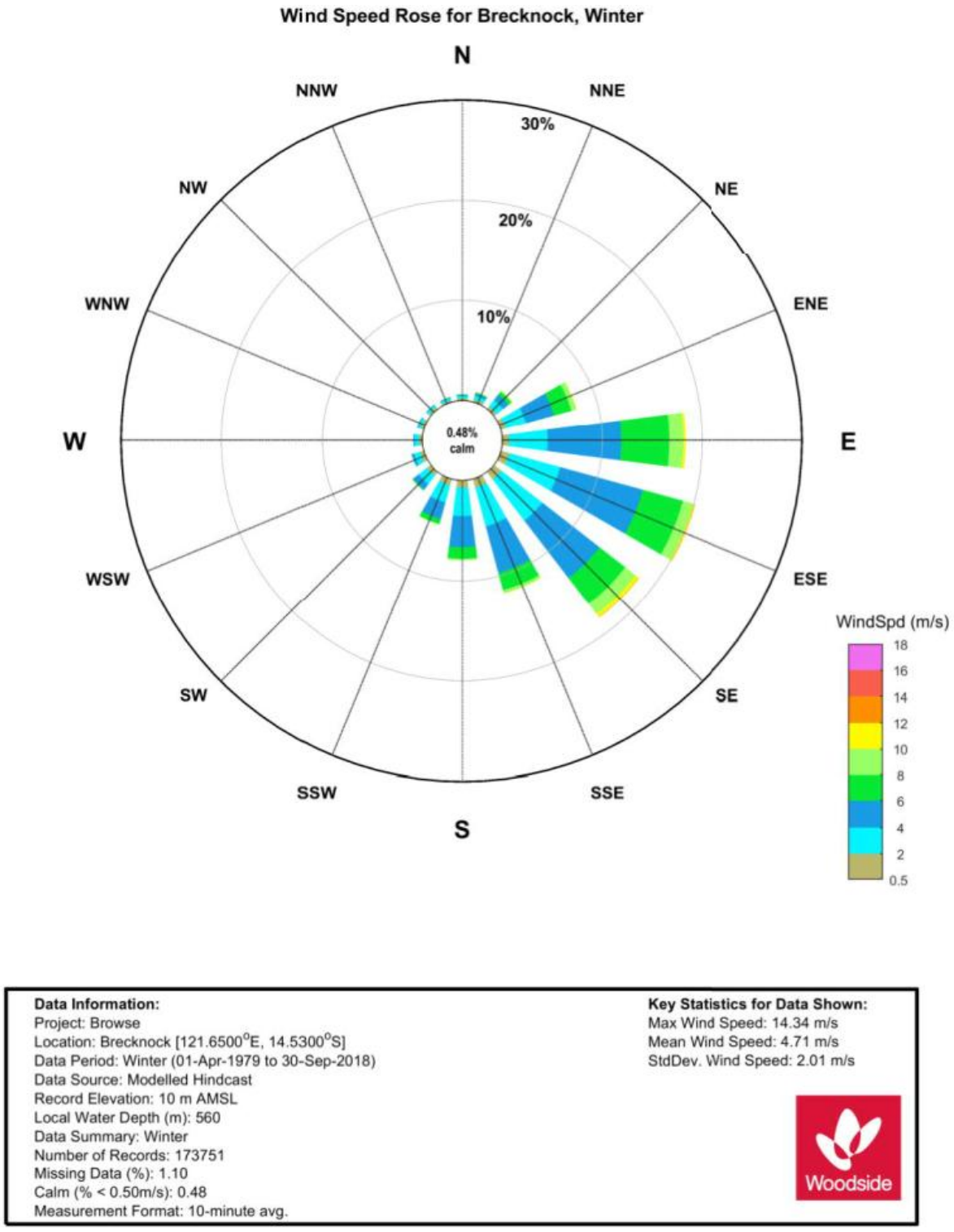


Figure 3: Winter distributions of 10-minute average wind speeds by 22.5° directional sectors at the Brecknock site (Metocean Solutions Ltd 2019)

Note, tropical cyclone events were not included in this distribution. Winds at Brecknock in winter are predominantly from the east to southeast due to the South East Trade Winds coming from the Australian mainland (Woodside, 2019).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

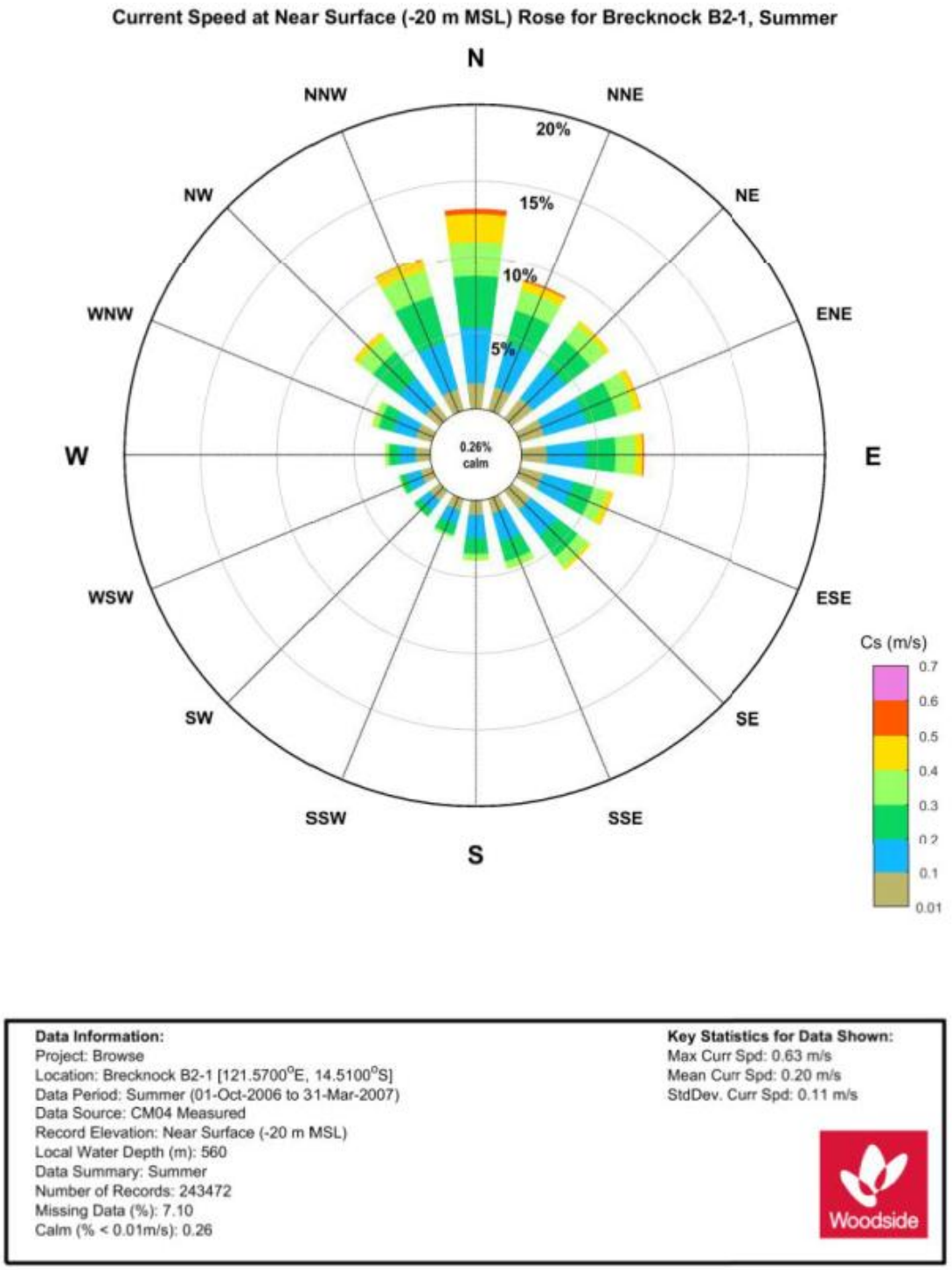


Figure 4: Summer (Nov to Apr) near-surface combined frequency of one-minute mean current speed and direction (towards) measured at Brecknock B2-1 location (cyclones removed) (RPS Metocean Ltd, 2008)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

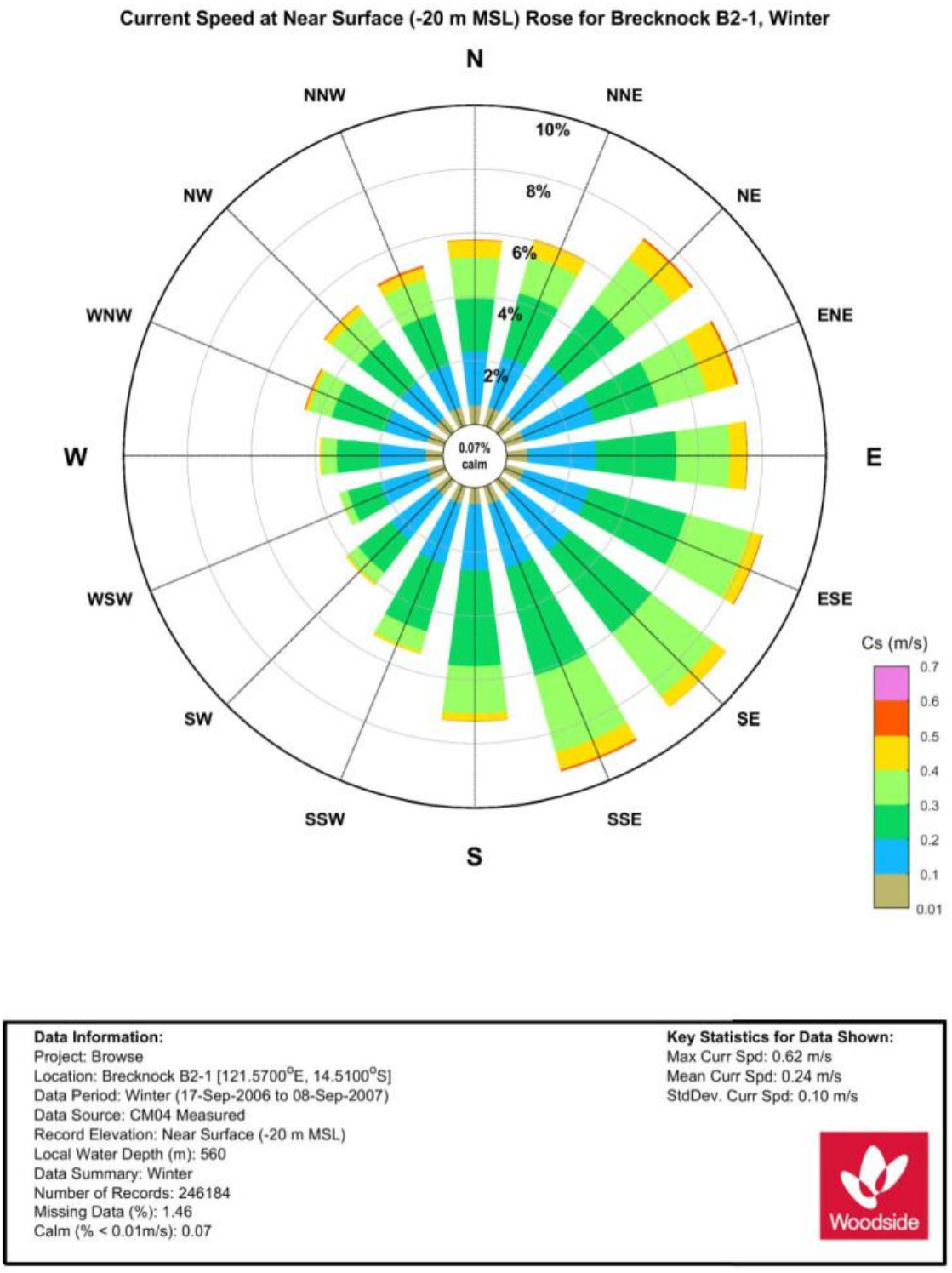


Figure 5: Winter (May to Sep) near-surface combined frequency of one-minute mean current speed and direction (towards) measured at Brecknock B2-1 location (cyclones removed) (RPS Metocean Ltd, 2008)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

North West Shelf/Scarborough

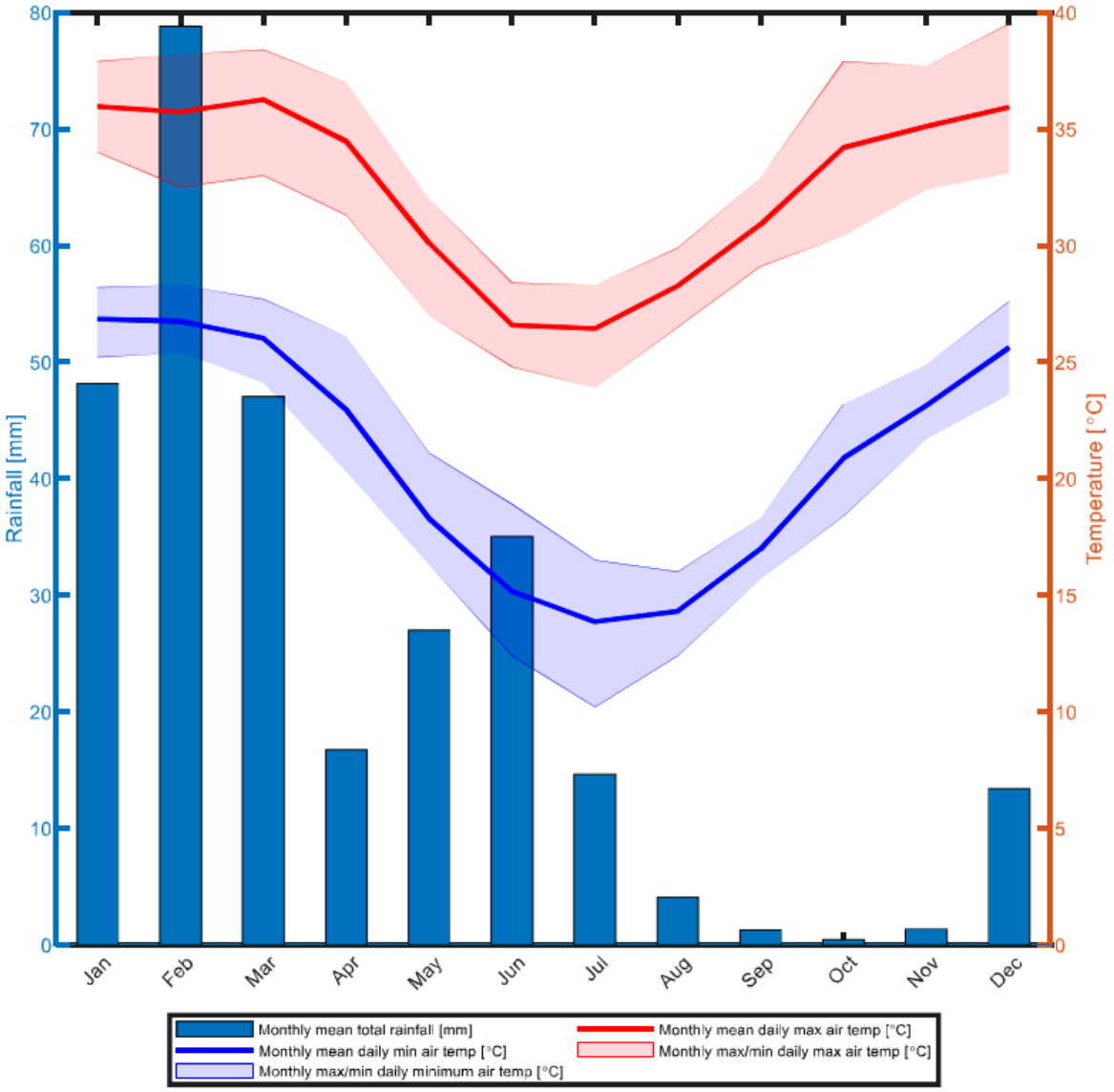


Figure 1: Monthly average total rainfall (mm) and air temperature (°C), calculated based on observations at the Karratha Aero weather station from 1972 to 2020 and 1993 to 2020, respectively (Bureau of Meteorology, 2020)

Bars show the monthly average total rainfall values, and thick blue and red lines denote monthly average daily minimum and maximum air temperatures, respectively. Shaded blue and red areas denote monthly recorded extremes of daily minimum and maximum air temperature, respectively.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

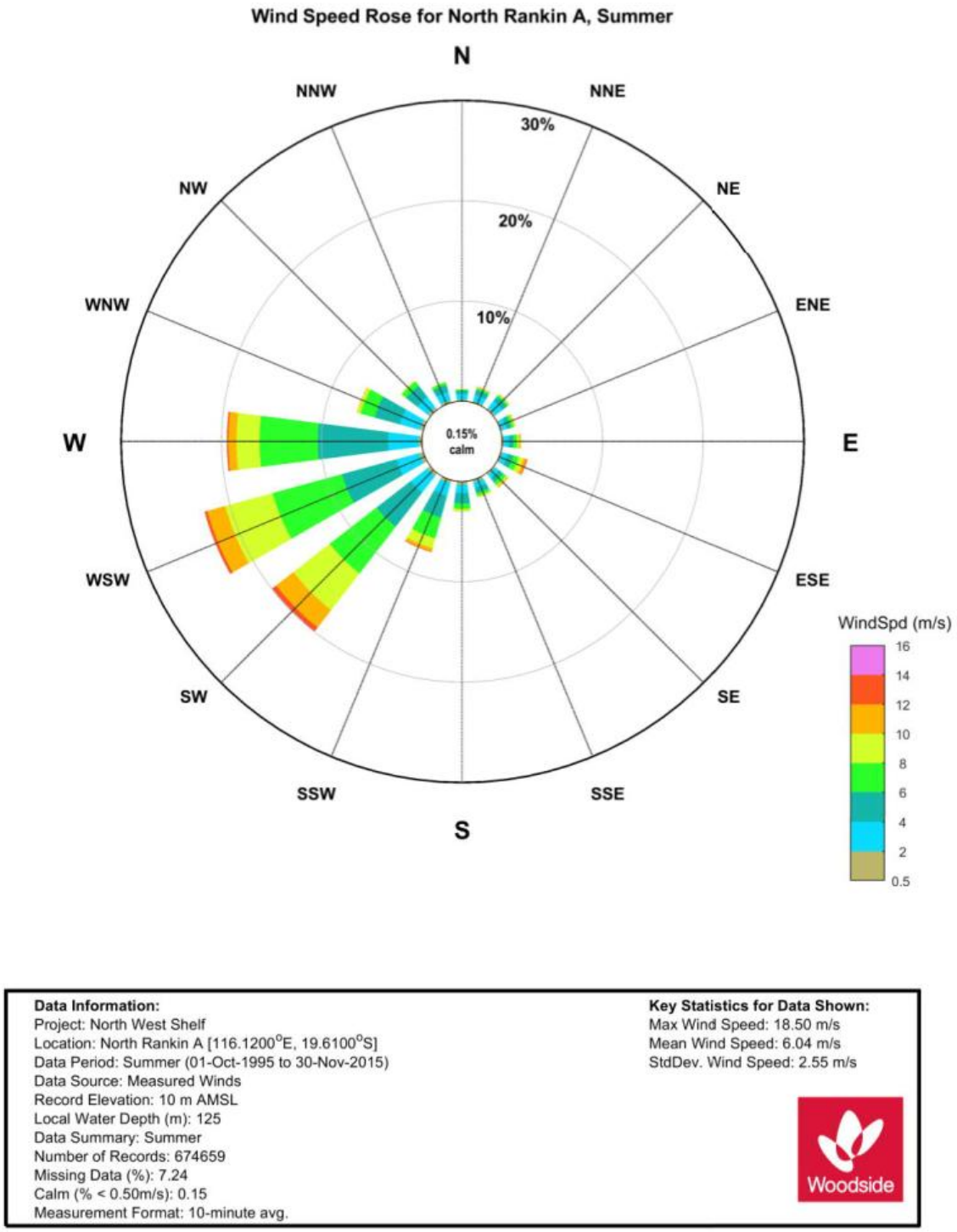
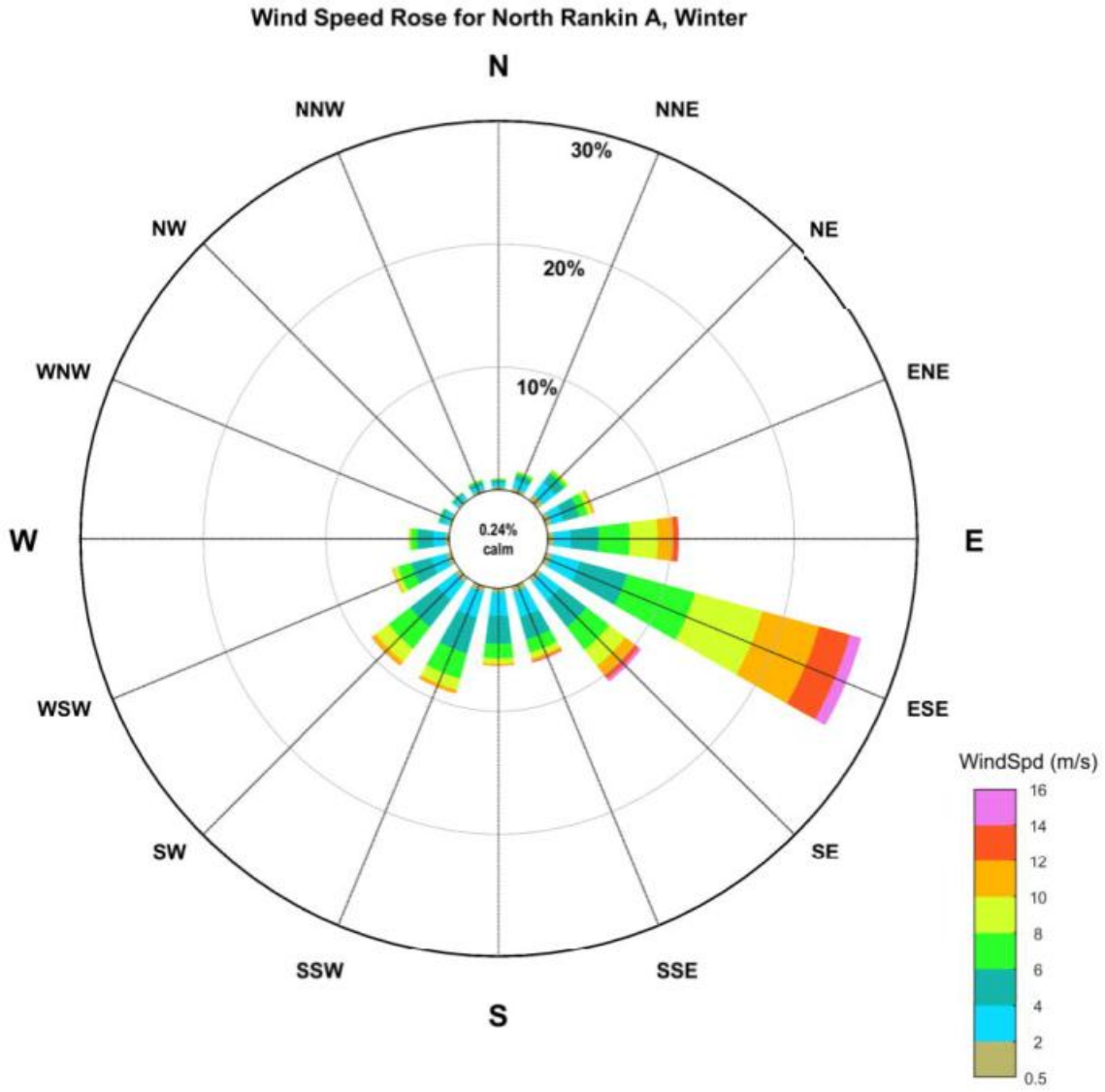


Figure 2: Summer distributions of 10-minute average wind speeds by 22.5° directional sectors at the North Rankin A site (Woodside, 2015)

Note tropical cyclone events were not included in this distribution. Winds at North Rankin A in summer are characterised by west to southwest driven by the North West Monsoon (RPS, 2016).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.



Data Information:
Project: North West Shelf
Location: North Rankin A [116.1200°E, 19.6100°S]
Data Period: Winter (22-Jun-1995 to 30-Sep-2015)
Data Source: Measured Winds
Record Elevation: 10 m AMSL
Local Water Depth (m): 125
Data Summary: Winter
Number of Records: 673213
Missing Data (%): 4.43
Calm (% < 0.50m/s): 0.24
Measurement Format: 10-minute avg.

Key Statistics for Data Shown:
Max Wind Speed: 24.23 m/s
Mean Wind Speed: 6.25 m/s
StdDev. Wind Speed: 3.16 m/s

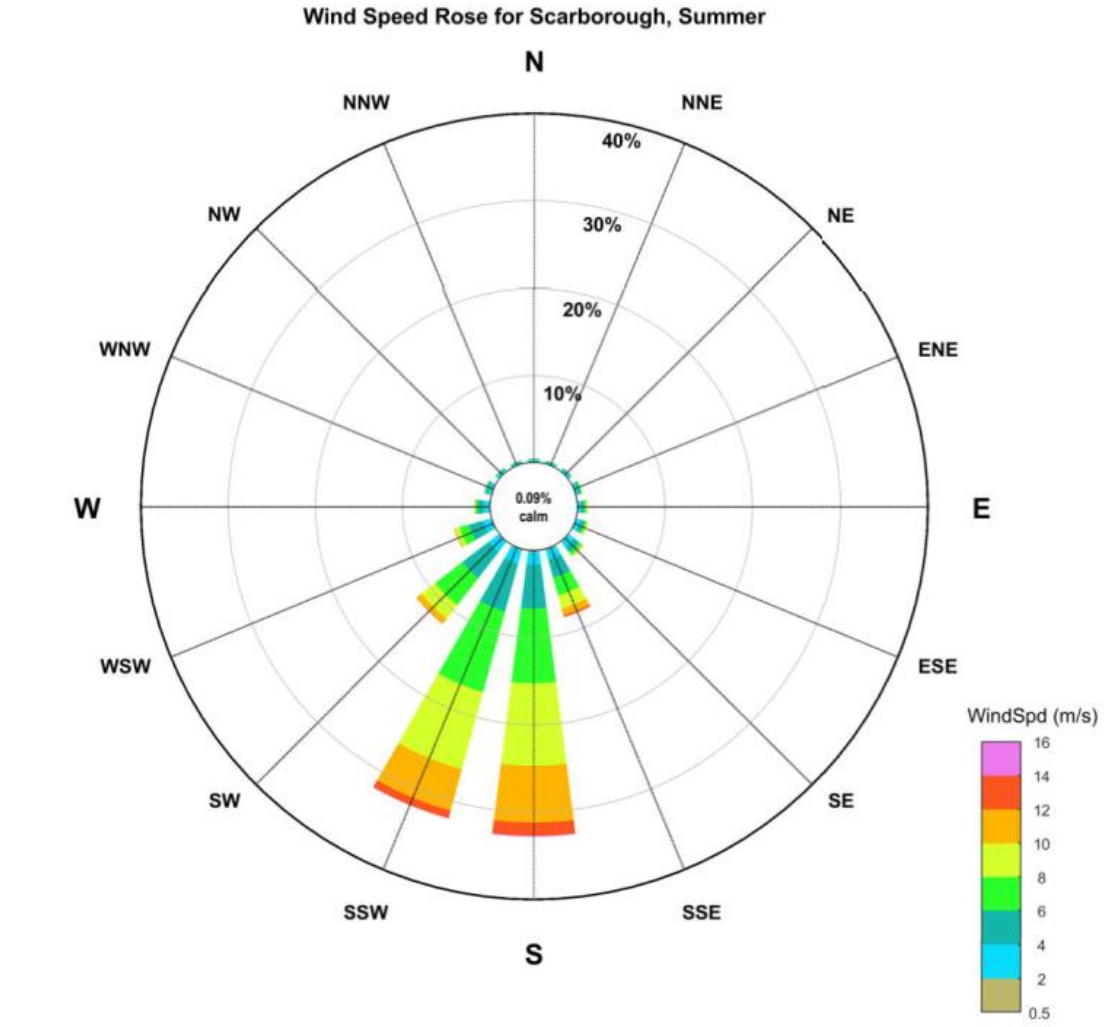
Woodside

Figure 3: Winter distributions of 10-minute average wind speeds by 22.5° directional sectors at the North Rankin A site (Woodside, 2015)

Note, tropical cyclone events were not included in this distribution. Winds at North Rankin in winter are predominantly influenced by the South East Trade Winds over Australia (RPS, 2016).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Scarborough



Data Information:
Project: North West Shelf
Location: Scarborough [113.2000°E, 19.8800°S]
Data Period: Summer (01-Jan-1979 to 01-Jan-2011)
Data Source: CSFR
Record Elevation: 10 m AMSL
Local Water Depth (m): 950
Data Summary: Summer
Number of Records: 129521
Missing Data (%): 7.46
Calm (% < 0.50m/s): 0.09
Measurement Format: 10-minute avg.

Key Statistics for Data Shown:
Max Wind Speed: 16.75 m/s
Mean Wind Speed: 7.23 m/s
StdDev. Wind Speed: 2.64 m/s

Woodside

Figure 1: Summer distributions of wind speeds (10-minute at 10 m above sea level) by 22.5° directional sectors at the Scarborough site (Woodside, 2018)

Note, tropical cyclone events were not included in this distribution. Winds at Scarborough in summer are predominantly from the south to south-southwest due to a Pilbara Heat Low forming over the northwest coast of Western Australia [R8]. Southwest winds are also experienced at this site due to the monsoon trough.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

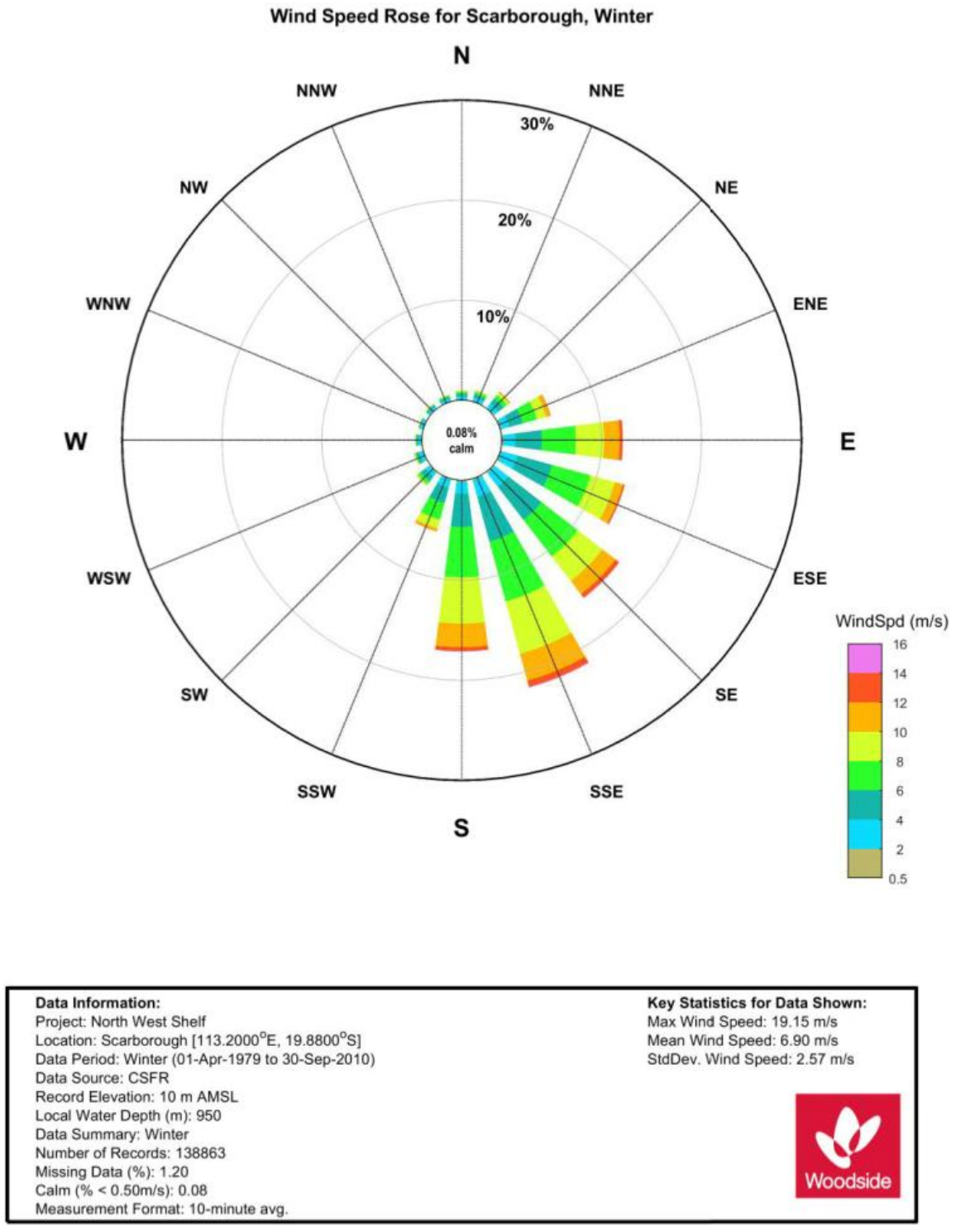


Figure 2: Winter distributions of wind speeds (10-minute at 10 m above sea level) by 22.5° directional sectors at the Scarborough site (Woodside, 2018)

Note, tropical cyclone events were not included in this distribution. Winds at Scarborough in winter are predominantly from the south to east driven by the South East Trade Winds over Australia (RPS, 2016).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

North West Shelf

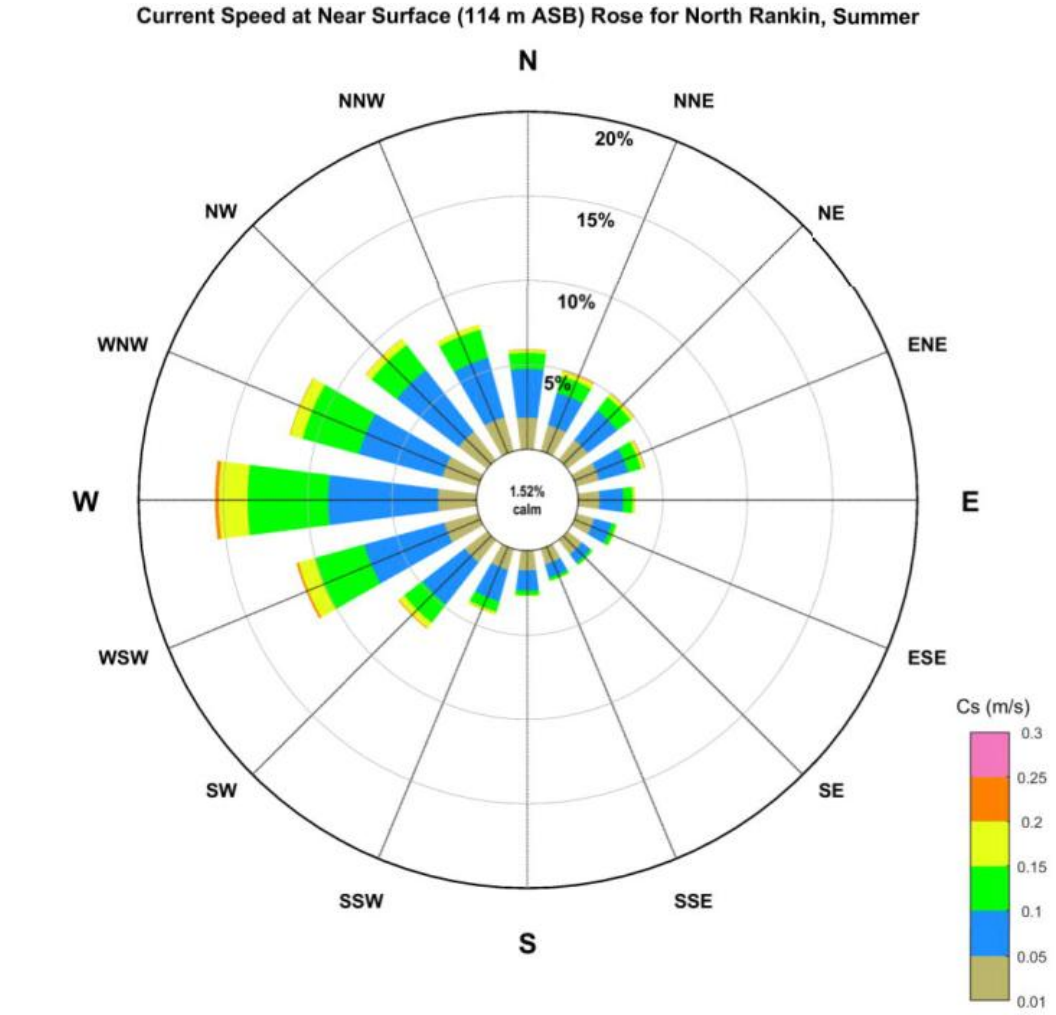


Figure 1: Summer (Nov to Apr) near surface combined frequency of one-minute mean current speed and direction (towards) measured at the North Rankin location (cyclones removed) (Woodside, 2011)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

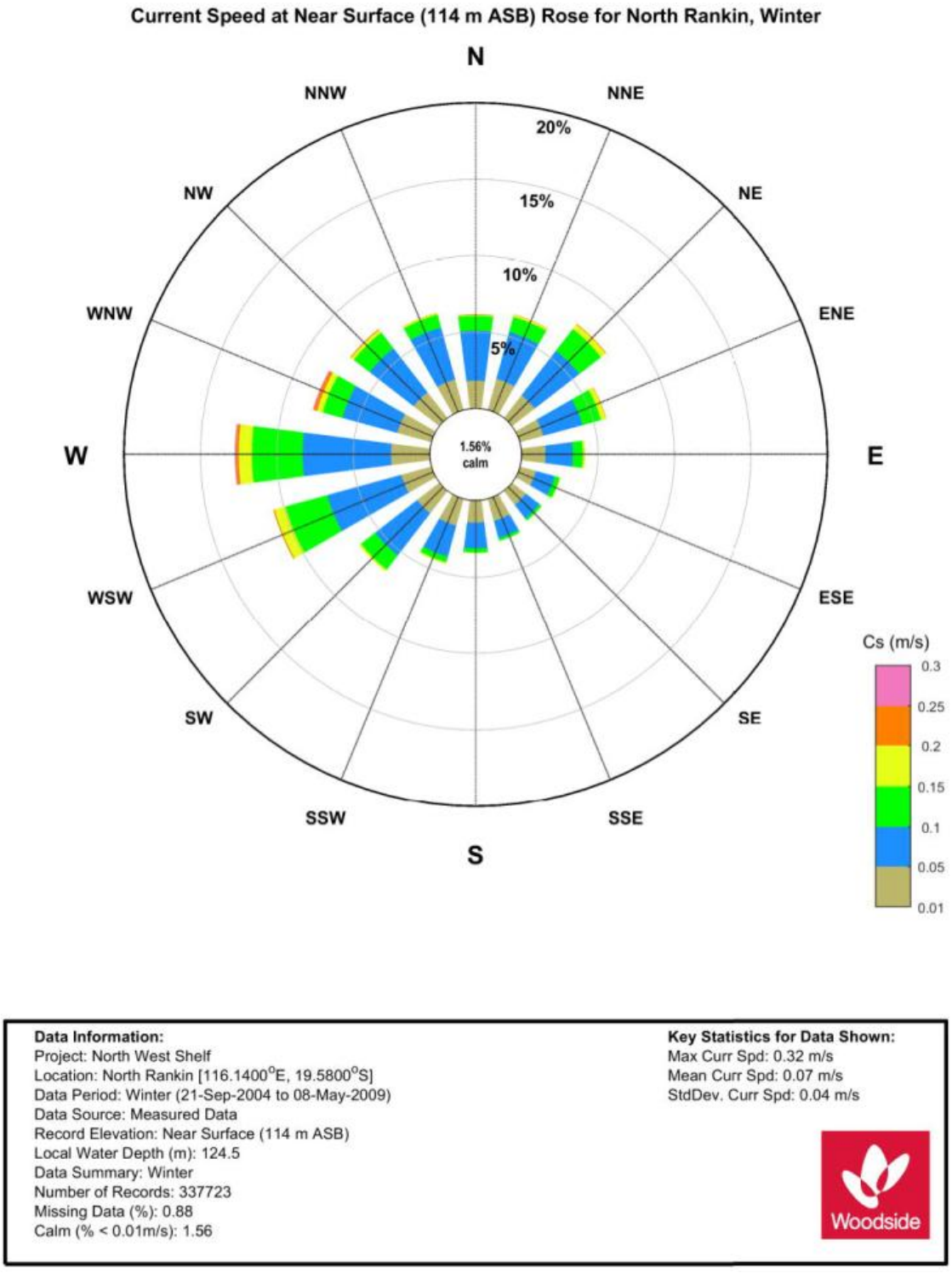


Figure 2: Winter (May to Sep) near surface combined frequency of one-minute mean current speed and direction (towards) measured at the North Rankin location (cyclones removed) (Woodside, 2011)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Scarborough

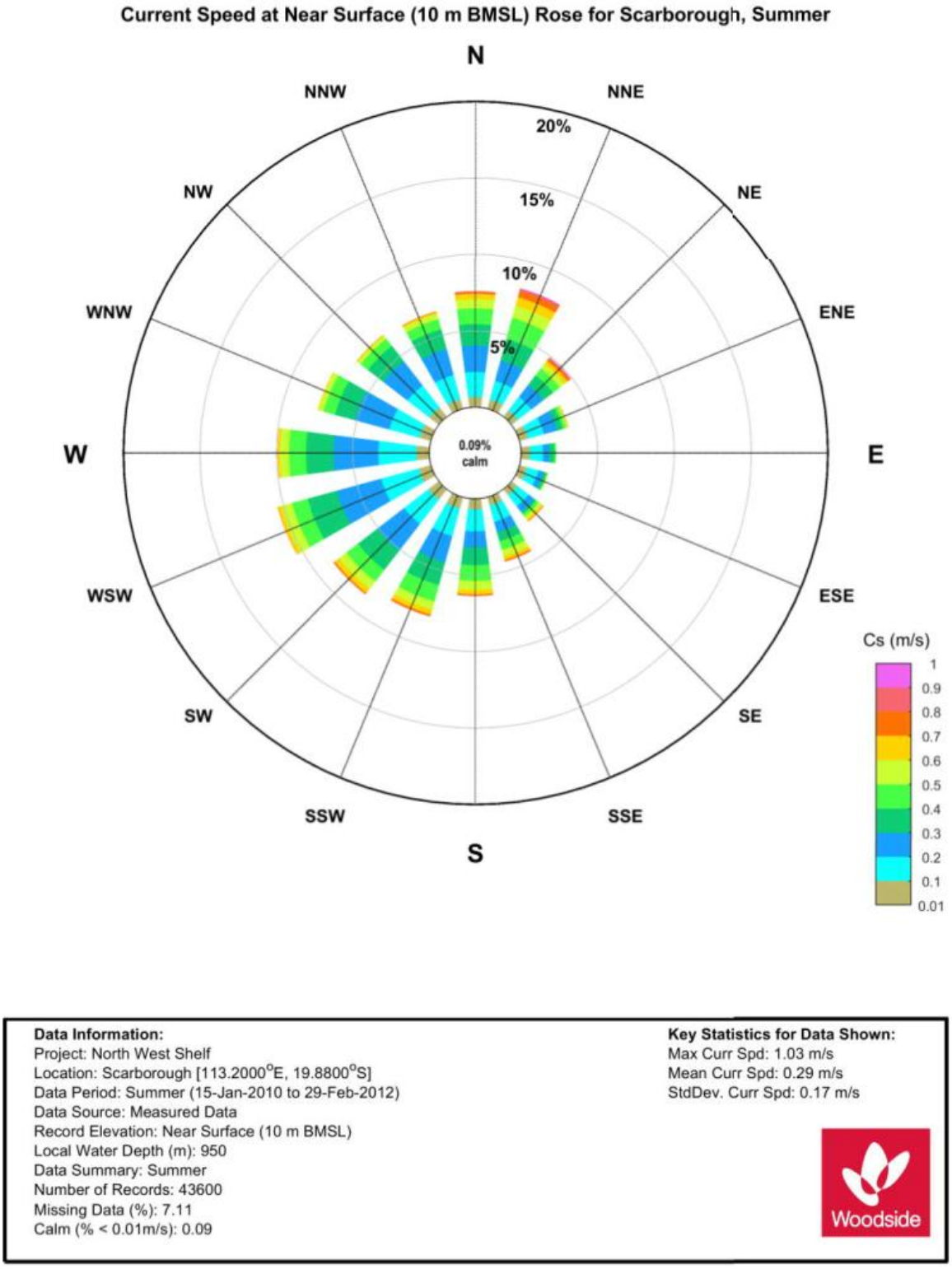


Figure 1: Summer (Nov to Apr) near-surface combined frequency of one-minute mean current speed and direction (towards) measured at the Scarborough location (cyclones removed) (Woodside, 2018)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

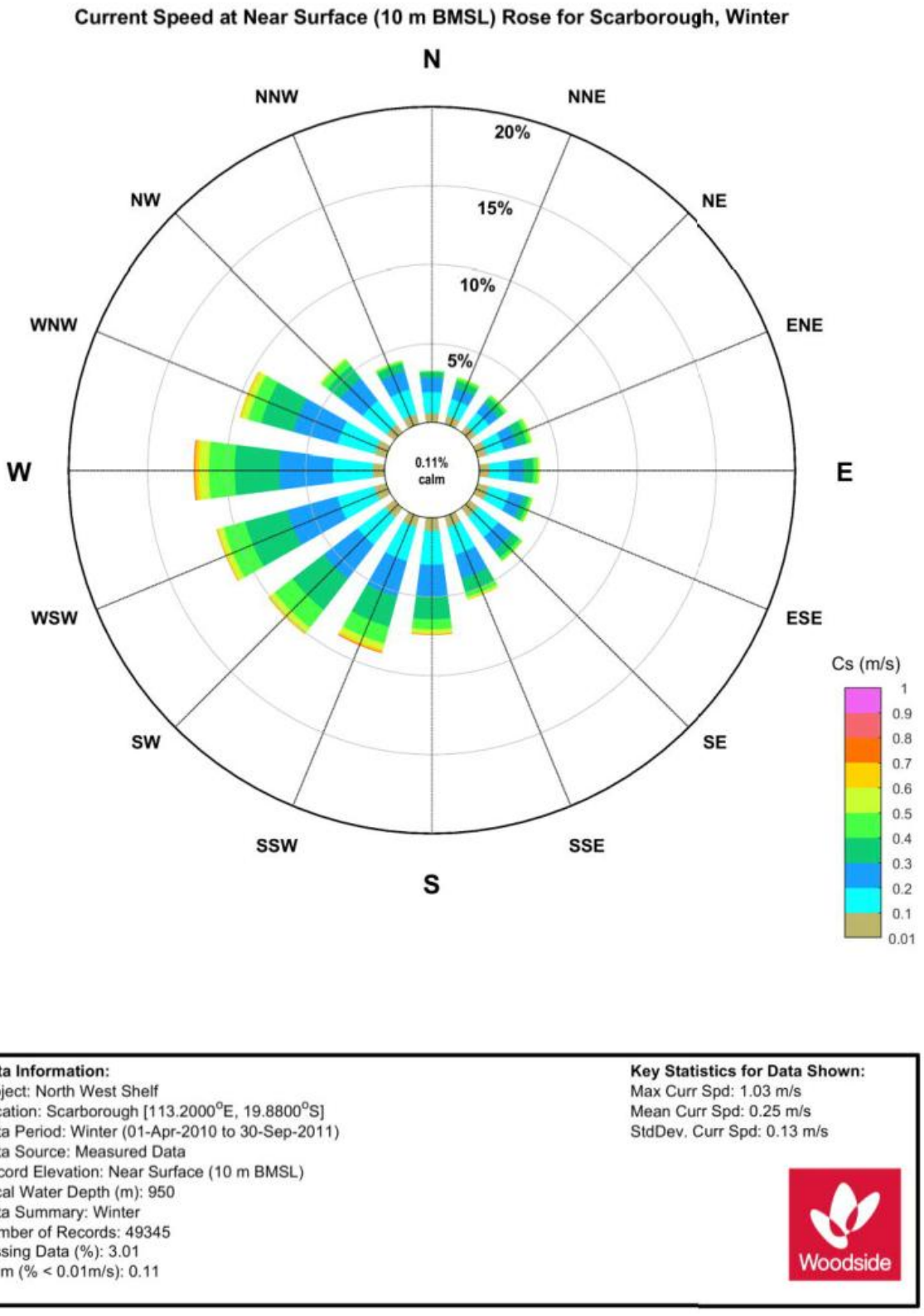


Figure 2: Winter (May to Sep) near-surface combined frequency of one-minute mean current speed and direction (towards) measured at the Scarborough location (cyclones removed) (Woodside, 2018)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

North West Cape

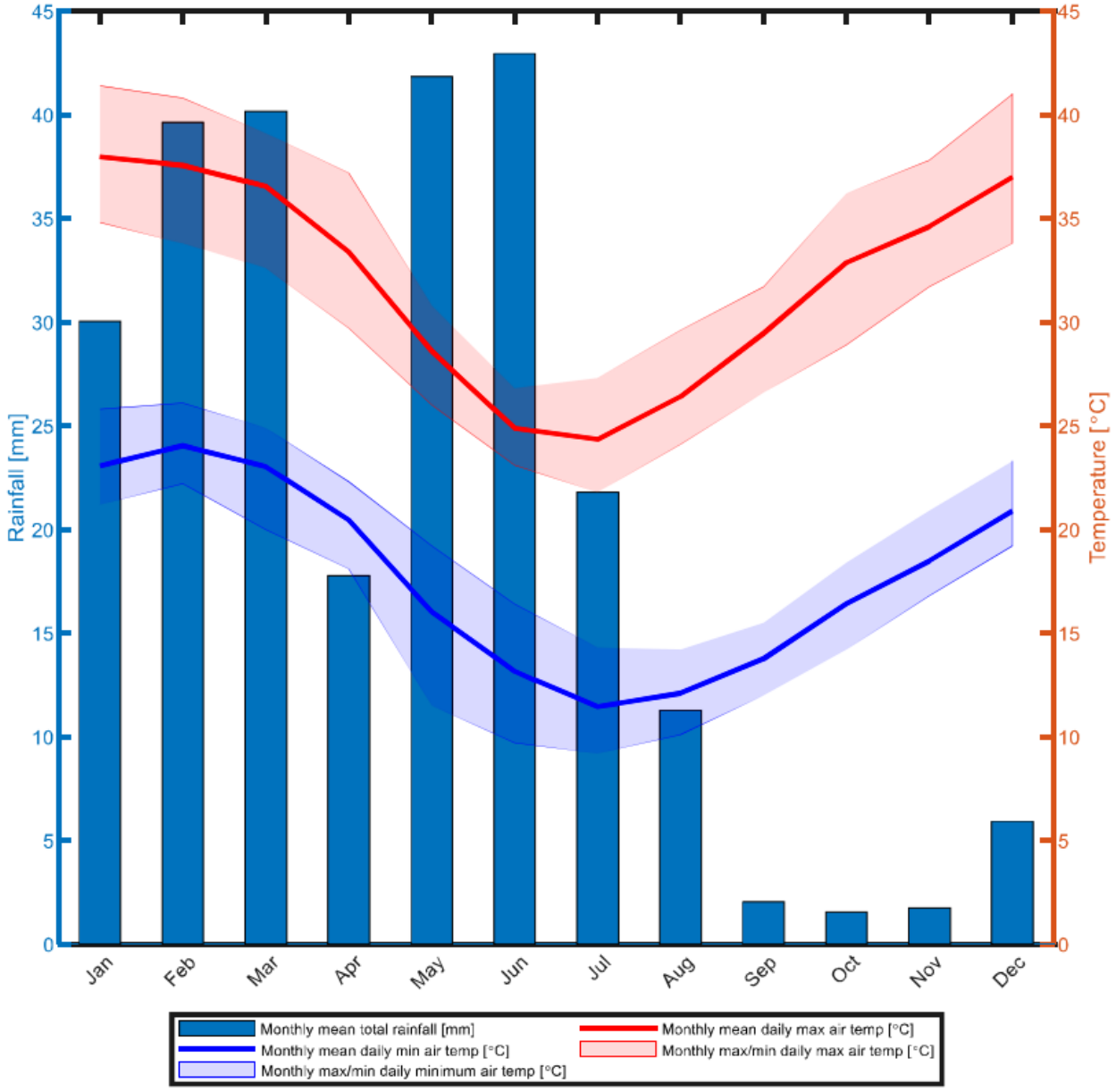
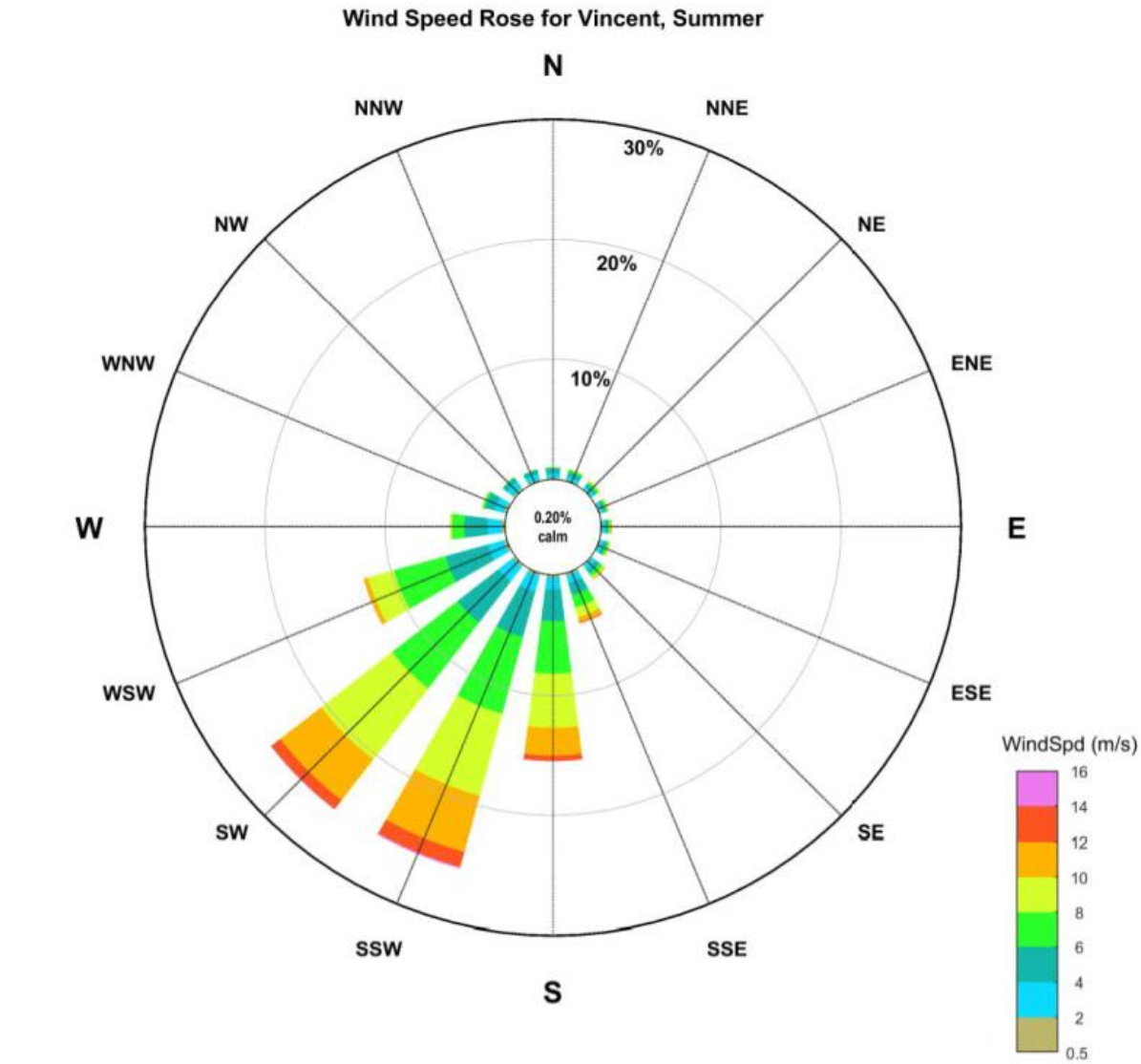


Figure 1: Monthly average total rainfall (mm) and air temperature (°C), calculated based on observations at the Learmonth Airport weather station from 1945 to 2020 and 1975 to 2020, respectively (Bureau of Meteorology, 2020)

Bars show the monthly average total rainfall values, and thick blue and red lines denote monthly average daily minimum and maximum air temperatures, respectively. Shaded blue and red areas denote monthly recorded extremes of daily minimum and maximum air temperature, respectively.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.



Data Information:
Project: North West Cape
Location: Vincent [114.0600°E, 21.4400°S]
Data Period: Summer (01-Jan-1979 to 01-Jan-2019)
Data Source: Modelled Hindcast
Record Elevation: 10 m AMSL
Local Water Depth (m): 350
Data Summary: Summer
Number of Records: 159379
Missing Data (%): 8.91
Calm (% < 0.50m/s): 0.20
Measurement Format: 10-minute avg.

Key Statistics for Data Shown:
Max Wind Speed: 18.86 m/s
Mean Wind Speed: 7.10 m/s
StdDev. Wind Speed: 2.75 m/s

Woodside

Figure 2: Summer distributions of wind speeds (10-minute at 10 m above sea level) by 22.5° directional sectors at the Vincent site (Vincent Metocean)

Note, tropical cyclone events were not included in this distribution. Winds at Vincent in summer are predominantly from the southwest to south-southwest in summer due to the presence of the Pilbara Heat Low (MetOcean, Engineers 2005)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

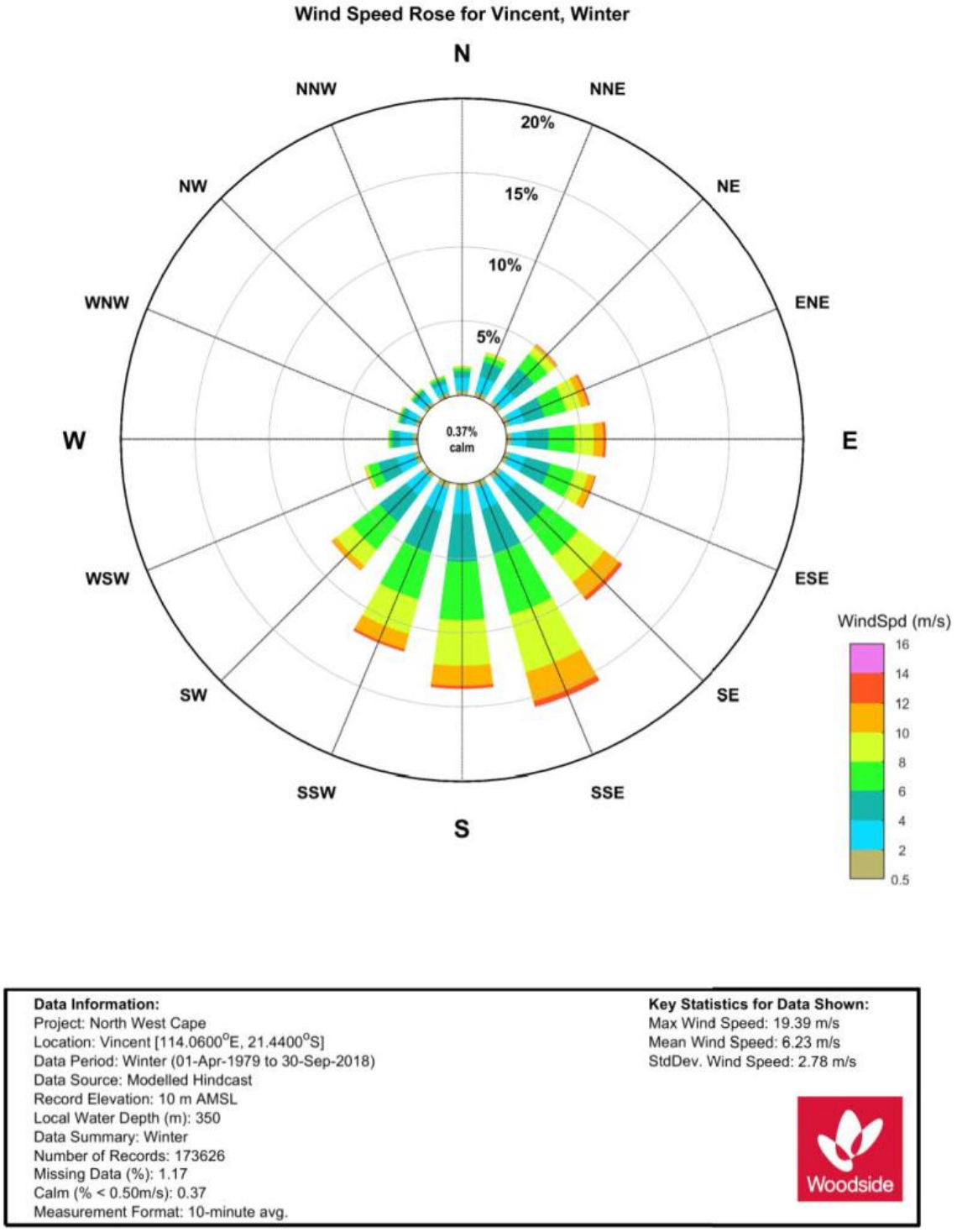


Figure 3: Winter distributions of wind speeds (10-minute at 10 m above sea level) 22.5° directional sectors at the Vincent site (Vincent Metocean)

Note, tropical cyclone events were not included in this distribution. In winter, winds at are predominantly from the south to southeast, associated with the South East Trades. Easterly gales are experienced at the Vincent location due to high pressure systems generating from the Great Australian Bight area to the site (MetOcean Engineers, 2005).

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

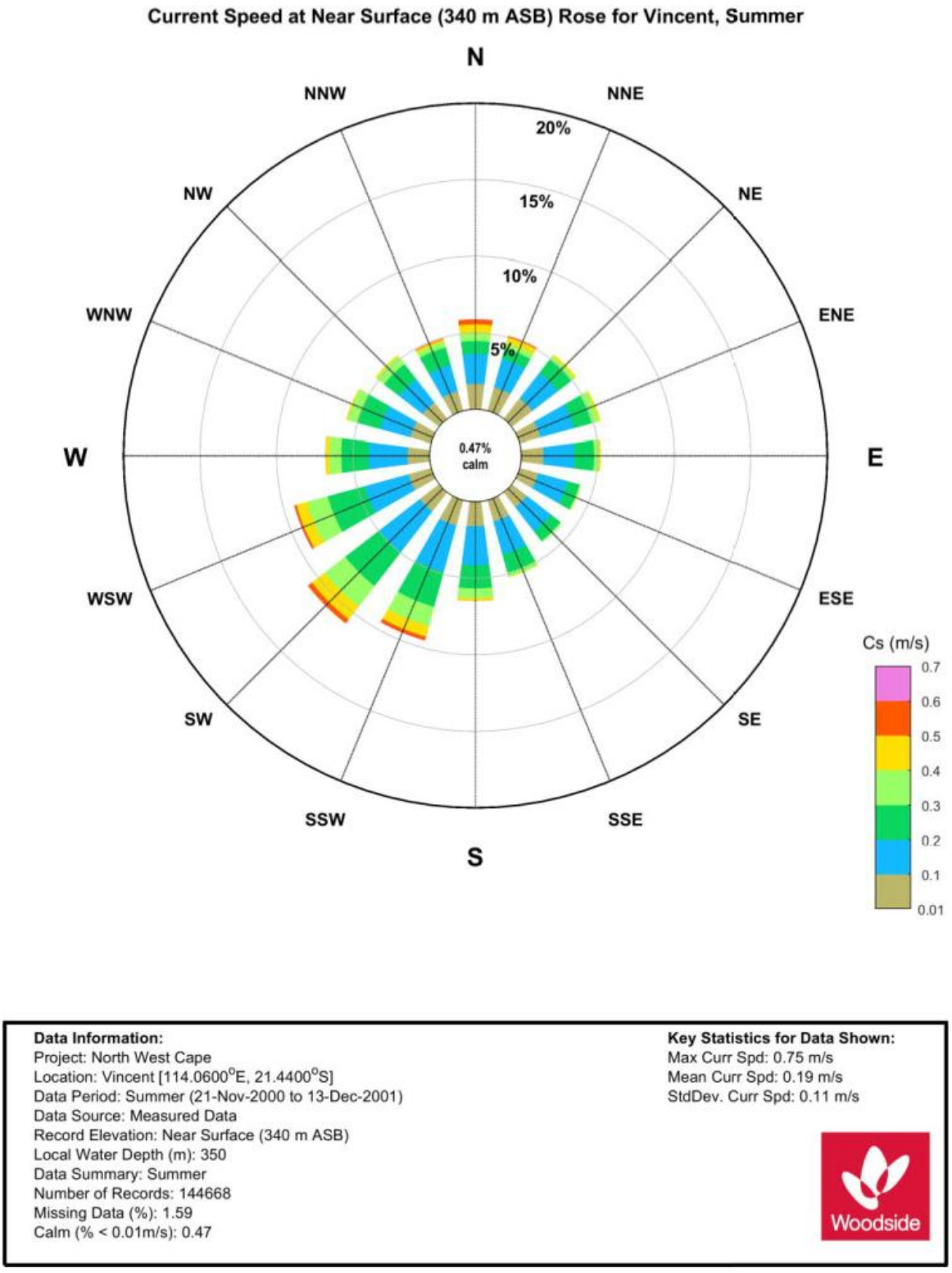


Figure 4: Summer (May to Sep) near-surface combined frequency of one-minute mean current speed and direction (towards) measured at the Vincent location (cyclones removed) (Woodside, 2016)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

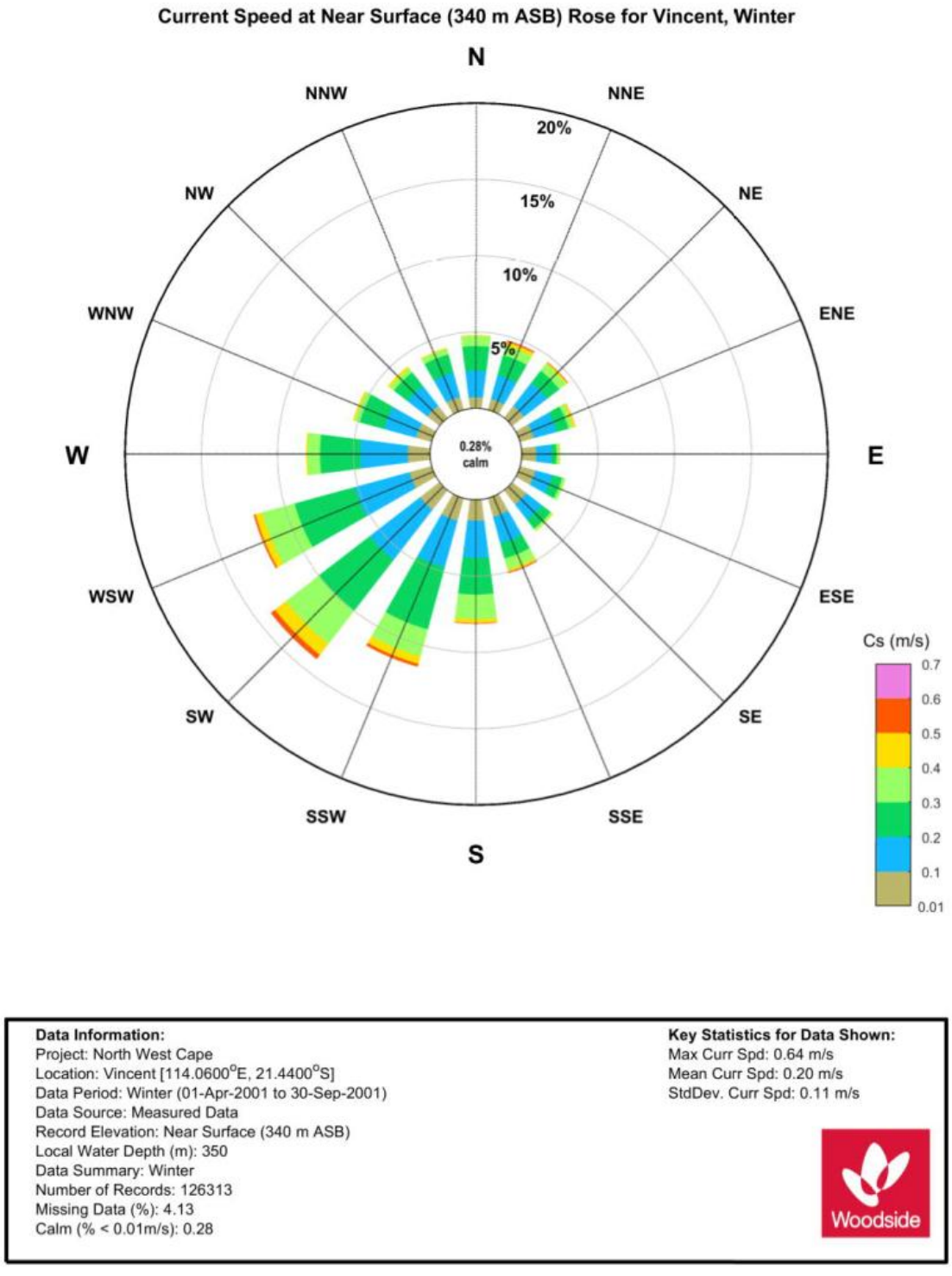


Figure 5: Winter (Nov to Apr) near-surface combined frequency of one-minute mean current speed and direction (towards) measured at the Vincent location (cyclones removed) (Woodside, 2016)

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

APPENDIX C SUMMARY OF SEABIRD PRESENCE UPDATES FOR 2026 REVIEW

Table 1 presents a list of the low occurrence threatened and migratory seabird and shorebird species as identified in the PMST that occur within the NWMR.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

Table 1: Low occurrence seabird and migratory shorebird species (threatened/migratory) identified by the EPBC Act PMST report as potentially occurring within the NWMR

Common name	Scientific name	EPBC Act (Commonwealth) (as per PMST report in Appendix A	2024 occurrence value	2026 occurrence value	Description of change
Abbott's booby	*Papasula abbotti*	Endangered	Low	Low	No observed changes between 2024 and 2026
Black-browed albatross	*Thalassarche melanophris*	Vulnerable Migratory	Low	Low	No observed changes between 2024 and 2026
Campbell albatross, Campbell black-browed albatross	*Thalassarche impavida*	Vulnerable Migratory	Low	Low	No observed changes between 2024 and 2026
Indian yellow-nosed albatross	*Thalassarche carteri*	Vulnerable Migratory	Low	Low	No observed changes between 2024 and 2026
Night parrot	*Pezoporus occidentalis*	Critically Endangered	Low	Low	No observed changes between 2024 and 2026
Northern giant petrel	*Macronectes halli*	Vulnerable Migratory	Low	Low	No observed changes between 2024 and 2026
Nunivak bar-tailed godwit, western Alaskan bar-tailed godwit	*Limosa lapponica baueri*	Endangered	Low	Low	No observed changes between 2024 and 2026
Princess parrot, Alexandra's parrot	*Polytelis alexandrae*	Vulnerable	Low	Low	No observed changes between 2024 and 2026
Red-rumped swallow	*Cecropis daurica*	Migratory	Low	Low	No observed changes between 2024 and 2026
Shy albatross	*Thalassarche cauta*	Endangered Migratory	Low	Low	No observed changes between 2024 and 2026
Southern giant-petrel, southern giant petrel	*Macronectes giganteus*	Endangered Migratory	Low	Low	No observed changes between 2024 and 2026
Wandering albatross	*Diomedea exulans*	Vulnerable Migratory	Low	Low	No observed changes between 2024 and 2026
White-capped albatross	*Thalassarche steadi*	Vulnerable Migratory	Low	Low	No observed changes between 2024 and 2026

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.

REFERENCES

AFMA, 2021. Southern Blue Fin Tuna. Accessed 3 June 2021 www.afma.gov.au/fisheries-management/species/southern-bluefin-tuna.

MetOcean Engineers, 2005. Vincent Development Metocean Criteria Report No. R1276.

Metocean Solutions Ltd, 2019. West Shelf wave hindcast: Description and validation of SWAN ST6 Wave Model, DRIMS 1401150817.

RPS, 2016. Metocean Criteria Guidelines for Modu Mooring on Australia's North West Shelf, DRIMS 1400522719.

RPS Metocean Pty Ltd, 2008. Browse LNG Development – Offshore Metocean Measurement Programme: September 2006 to February 2008 Final Data Report. JB0020RT0019.

Vincent Metocean 40-Year Non-Cyclonic Metocean Database for Design Studies, CRN: VAOOOORT1400067309.

Woodside, 2011. Greater Western Flank Detailed Metocean Design Criteria, Rev 2. CRN: A3000RG5492827.

Woodside, 2016. Vincent Basic Design Data Specification sheet Metocean CRN: VA0000RT1400067309.

Woodside, 2015. Winds Measured at North Rankin A 1995–2015.

Woodside, 2018. Scarborough Development – Non-Cyclonic and Operational Metocean Design Criteria Spreadsheet, Revision A, CRN: SA0009CT1400722569.

Woodside, 2019. Browse Development – Metocean Design Basis. CRN:JJ0013ST1400274448.

This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.