GWF-4 Drilling and Installation Environment Plan

April 2026

Revision: 0

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Table of contents

1. Introduction 17
1.1 Overview 17
1.2 Purpose of the Environmental Plan 17
1.3 Environment Plan Summary 17
1.4 Structure of the Environment Plan 18
1.5 Description of the Titleholder 20
1.5.1 Details of Titleholder and nominated liaison person 20
1.5.1.1 Titleholder 20
1.5.1.2 Nominated liaison person 20
1.5.2 Arrangements for notifying change 20
1.6 Woodside Management System 21
1.6.1 Our Woodside Management System Purpose 21
1.6.2 Environment and Biodiversity Policy 23
1.7 Description of relevant requirements 23
1.7.1 *Offshore Petroleum and Greenhouse Gas Storage Act 2006* (Cth) (OPGGS Act) 23
1.7.2 *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) 24
1.7.2.1 Recovery plans and threat abatement plans 24
1.7.2.2 Australian Marine Parks 25
1.7.2.3 World Heritage Properties 26
2. EP process 28
2.1 Overview 28
2.2 Environment Plan process 28
2.2.1 Establish the context 30
2.2.2 Describe the activity 30
2.2.3 Describe the existing environment 30
2.2.4 Environmental legislation and other requirements 30
2.2.5 Impact and risk management 30
2.2.5.1 Impact and risk identification and analysis 30
2.2.5.2 Decision support framework 31
2.2.5.3 Decision support framework tools 32
2.2.5.4 Decision calibration 32
2.2.6 Control measures 33
2.2.7 Impact and risk classification 33
2.2.7.1 Impact classification 33
2.2.7.2 Risk classification 34
2.3 Impact and risk evaluation 35
2.3.1 Demonstration of ‘as low as reasonably practicable’ 35
2.3.2 Demonstration of acceptability 36
2.4 Recovery plan and threat abatement plan assessment 37
2.5 Environmental performance objectives/outcomes, standards and measurement criteria 37
2.6 Implement, monitor, review and report 38
2.7 Stakeholder consultation 38
3. Description of the activity 39
3.1 Overview 39

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3.2 Project overview 39
3.3 Concordance with OPP 41
3.4 Location 44
3.4.1 Activities Outside Permit titles 46
3.5 Operational Area 46
3.6 Timing 46
3.7 Drilling activities 47
3.7.1 Underwater acoustic positioning 47
3.7.2 Top-hole section drilling 47
3.7.3 Blow out preventer and marine riser installation 47
3.7.4 Bottom-hole section drilling 47
3.7.5 Drilling fluids 48
3.7.5.1 Water-based Mud (WBM) system 48
3.7.5.2 Non-Water-Based Mud (NWBM) system 48
3.7.5.3 Mud pits 49
3.7.5.4 Drill cuttings 49
3.7.6 Cementing Operations 49
3.7.6.1 Cement unit test 49
3.7.6.2 Foam wipers 50
3.7.7 Formation evaluation 50
3.7.8 Wellbore clean-out 50
3.7.9 Xmas tree installation 50
3.7.10 Well completion 50
3.7.11 Well flowback 51
3.8 Subsea installation and pre-commissioning activities 51
3.8.1 Existing Subsea Infrastructure 53
3.8.2 Underwater acoustic positioning 53
3.8.3 Subsea installation 53
3.8.3.1 Pre-lay survey 53
3.8.3.2 Sediment mobilisation and relocation 53
3.8.3.3 Installation of subsea structures 53
3.8.3.4 Flowline initiation / initiation anchor deployment 53
3.8.3.5 General flexible flowline and EHU installation 54
3.8.3.6 General HFL, EFL and jumper installation 54
3.8.3.7 Span/scouring rectification and stabilisation 54
3.8.3.8 Infrastructure Crossing Supports 55
3.8.4 Pre-commissioning 55
3.8.4.1 Flooding 55
3.8.4.2 Leak testing 56
3.8.4.3 Dewatering 56
3.8.4.4 Tie-in to GWF subsea infrastructure 56
3.8.4.5 Cold commissioning of subsea infrastructure 56
3.8.5 Wet storage of equipment 56
3.8.6 Site surveys 57
3.8.7 Subsea IMR 57
3.9 Project fluids 57
3.10 Contingent activities 57

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3.10.1 Respud 58
3.10.2 Sidetrack 58
3.10.3 Workover 58
3.10.4 Well intervention 58
3.10.5 Well suspension 58
3.10.6 Well abandonment 58
3.10.7 Sediment mobilisation and relocation 59
3.10.8 Venting 59
3.10.9 Emergency Disconnect Sequence 59
3.11 Vessels 59
3.11.1 MODU 60
3.11.2 IMMR vessels 60
3.11.3 Primary Installation vessel 61
3.11.4 Support vessels 61
3.11.4.1 Uncrewed Surface Vessel 61
3.11.5 Project vessel-based activities 62
3.11.5.1 Holding Station: Mooring Installation and Anchor Hold Testing/Soil Analysis 62
3.11.5.2 Holding Station: Rig Anchor Release MODU 62
3.11.5.3 Holding Station: Dynamic Positioning MODU 62
3.12 ROV 63
3.13 Helicopters 63
4. Description of the existing environment 64
4.1 Overview 64
4.2 Regional context 67
4.3 Matters of National Environmental Significance (EPBC ACT) 67
4.4 Physical environment 68
4.5 Habitats and biological communities 69
4.5.1 Offshore benthic habitats 71
4.5.1.1 Wilcox Shoal 74
4.5.1.2 Wilcox drill Centre and flowline route 74
4.5.1.3 Unnamed Shoal 74
4.5.1.4 Rankin bank 74
4.5.1.5 Glomar Shoal 75
4.6 Protected species 78
4.6.1 Fish, sharks and rays 78
4.6.1.1 Whale Shark 79
4.6.2 Marine reptiles 83
4.6.2.1 Flatback Turtle 83
4.6.3 Marine mammals 90
4.6.4 Seabirds and migratory shorebirds 94
4.6.4.1 Wedge-tailed shearwater 94
4.6.5 Seasonal sensitivities for protected species 102
4.7 Key ecological features (KEFs) 105
4.7.1 Ancient Coastline at 125 m Depth Contour 106
4.8 Protected places 106
4.8.1 Montebello Marine Park 108

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4.9 Socio-economic environment 109
4.9.1 Cultural values and heritage 109
4.9.1.1 Native Title 109
4.9.1.2 Coastally adjacent First Nations groups 109
4.9.1.3 Marine and National Parks 113
4.9.1.4 Indigenous protected areas 115
4.9.1.5 Sea Country values 115
4.9.1.6 Summary of cultural features and heritage values 162
4.9.1.7 Historic sites of significance 168
4.9.1.8 Historic underwater heritage 168
4.9.1.9 World, National and Commonwealth heritage listed places 168
4.9.2 Commercial Fisheries 169
4.9.3 Traditional and customary fishing 184
4.9.4 Tourism and recreation 184
4.9.5 Commercial shipping 184
4.9.6 Oil and gas facilities, infrastructure and other industries 186
4.9.7 Defence 187

5. Stakeholder consultation 189

5.1 Summary 189
5.2 Consultation – general context 190
5.3 Identification of relevant persons for consultation 193
5.3.1 Regulations 25(1)(a), (b) and (c) 193
5.3.2 Identification of relevant persons under Regulations 25(1)(a), (b) and (c) 194
5.3.3 Regulation 25(1)(d) 194
5.3.4 Identification of relevant persons under Regulation 25(1)(d) 196
5.3.5 Regulation 25(1)(e) 202
5.3.6 Identification of relevant persons under Regulation 25(1)(e) 202
5.3.7 Persons or organisations Woodside chooses to contact 202
5.3.8 Assessment of relevant persons for the proposed activity 202
5.4 Consultation material and timing 202
5.4.1 Sufficient information 203
5.4.2 Reasonable period for consultation 205
5.4.3 Discharge of Regulation 25 207
5.5 Context of consultation approach with Traditional Custodians 207
5.5.1 Approach to methodology − Woodside's interpretation of Tipakalippa Appeal 207
5.5.2 Consultation method 208
5.5.3 Identification of relevant persons 210
5.5.4 Opportunity to self-identify and identifying other individuals 211
5.5.5 Sufficient information 211
5.5.6 Reasonable period for consultation 212
5.5.7 Discharge of Regulation 25 212
5.6 Providing feedback and assessment of merit of objections or claims 212
5.7 Ongoing consultation 213

6. Environmental impact and risk assessment, performance outcomes, standards and measurements criteria 214

6.1 Overview 214

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6.2 Impacts and risks not deemed credible or outside the scope of this EP 218
6.2.1 Shallow/Near-shore Activities 218
6.2.2 Underwater Noise Emissions from Flaring, Helicopters and ROV 218
6.2.3 Loss of Containment from Abandoned Wellheads 218
6.3 Cumulative impacts 218
6.4 Indirect impacts from activities outside the Operational Area 218
6.5 Environmental performance outcomes, standards and measurement criteria 219
6.6 Presentation 219
6.7 Planned activities (routine and non-routine) 222
6.7.1 Physical Presence: Interaction with Other Marine Users 222
6.7.2 Physical Presence: Seabed Disturbance from Drilling Operations, Subsea Infrastructure, MODU Anchoring and ROV Operations 233
6.7.3 Routine Light Emissions: External Lighting on MODU and Project Vessels 245
6.7.4 Routine Acoustic Emissions: Generation of sound emissions from MODU and Project Vessels 255
6.7.5 Routine Emissions: Atmospheric and GHG emissions 271
6.7.6 Routine and Non-Routine Discharges: Hydrocarbons and Chemicals 281
6.7.7 Routine and Non-Routine Discharges: MODU and Project Vessels 289
6.7.8 Routine and Non-Routine Discharges: Drill Cuttings and Drilling Fluids 299
6.7.9 Routine and Non-Routine Discharges: Cement, Cementing Fluids, Subsea Well Fluids, Produced Water, Unused Bulk Product 318
6.8 Unplanned activities (accidents, incidents, emergency situations) 329
6.8.1 Quantitative spill risk assessment methodology 329
6.8.1.1 Worst case scenarios 329
6.8.1.2 Environment that May Be Affected and Hydrocarbon Contact Thresholds 330
6.8.1.3 Operational and scientific monitoring 333
6.8.1.4 Hydrocarbon Characteristics 333
6.8.2 Unplanned Hydrocarbon Release: Loss of Well Integrity 340
6.8.3 Unplanned Hydrocarbon Release: Vessel Collision 370
6.8.4 Unplanned Release: Hydrocarbon and Chemicals (Minor Loss of Containment) 387
6.8.5 Physical Presence (Unplanned): Interaction with Marine Fauna 399
6.8.6 Physical Prescence (Unplanned): Accidental Introduction and Establishment of Invasive Marine Species 407
6.8.7 Physical Presence (Unplanned): Seabed Disturbance from Dropped Objects and Loss of Station Keeping Leading to Anchor Drag 416
6.8.8 Physical Presence (Unplanned): Interaction with Live Infrastructure 424
6.8.9 Unplanned Release: Hazardous and Non-Hazardous Wastes 430
6.9 Recovery plan and threat abatement assessment 436
7. Implementation strategy 448
7.1 Overview 448
7.2 Systems, practices, and procedures 448
7.2.1 Assessment of project chemicals 448
7.2.1.1 Ecotoxicity 449
7.2.1.2 Biodegradation 449
7.2.1.3 Bioaccumulation 450
7.2.1.4 Alternatives 450
7.2.1.5 Decision 450

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7.2.2 Woodside invasive marine species risk assessment process 450
7.2.2.1 Objective and scope 450
7.2.2.2 Risk assessment process 451
7.2.3 Offshore Seabird Management Plan 454
7.2.4 Unexpected finds procedure 454
7.3 Roles and responsibilities 455
7.4 Training and competency 461
7.4.1 Overview 461
7.4.2 Inductions 461
7.4.3 Petroleum Activity-specific environmental awareness 461
7.5 Monitoring, auditing, and managing non-conformance and review 461
7.5.1 Monitoring 461
7.5.1.1 Offshore Seabird Management Plan 462
7.5.1.2 Cetacean Adaptive Management 463
7.5.2 Auditing 463
7.5.2.1 MODU activities 463
7.5.2.2 Subsea scope activities 464
7.5.2.3 Marine assurance 464
7.5.2.4 Vessel risk assessment 465
7.5.3 Management of non-conformance 466
7.5.4 Review 466
7.5.4.1 Management review 466
7.5.4.2 Learning and knowledge sharing 466
7.5.4.3 Review of impacts, risks and controls across the life of the EP 467
7.6 Management of knowledge 467
7.7 Management of Newly Identified Impacts and Risks 467
7.8 Management of change and revision 467
7.8.1 EP management of change 467
7.8.2 OPEP management of change 468
7.9 Record keeping 468
7.10 Ongoing consultation 468
7.11 Reporting 470
7.11.1 Routine reporting (internal) 471
7.11.1.1 Regular health, safety and environment meetings 471
7.11.1.2 Performance reporting 471
7.11.2 Routine reporting (external) 471
7.11.2.1 Start and end notifications of the Petroleum Activity 471
7.11.2.2 Environmental performance review and reporting 471
7.11.2.3 End of the Environmental Plan 472
7.11.3 Incident reporting (internal) 472
7.11.4 Incident reporting (external) – Reportable and recordable 472
7.11.4.1 Reportable incidents 472
7.11.4.2 Recordable incidents 473
7.11.4.3 Other external incident reporting requirements 473
7.12 Emergency preparedness and response 477
7.12.1 Overview 477
7.12.2 Emergency response training 477

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7.12.3 Emergency response preparation 478
7.12.4 Oil and other hazardous materials spill 479
7.12.5 Emergency and spill response 479
7.12.6 Emergency and spill response drills and exercises 479
7.12.7 Testing of hydrocarbon spill response arrangements 480
7.12.8 Testing of arrangements schedule 480
7.13 Cyclone and dangerous weather preparation 483
8. References 484
9. List of terms and acronyms 534
Appendix A Woodside environment and biodiversity, climate and risk management policies 537
Appendix B Relevant requirements 538
Appendix C Aboriginal cultural heritage search tool results 539
Appendix D EPBC Act Protected Matters Search Tool Results 540
Appendix E NOPSEMA Report Forms 541
Appendix F Stakeholder consultation 542
Appendix G Oil spill preparedness and response strategy selection and evaluation 543
Appendix H First strike plan 544

List of tables

Table 1-1: EP summary 17
Table 1-2: EP process phases, applicable Environment Regulations and relevant section of EP 18
Table 1-3: Conditions of Class Approval relevant to the Petroleum Activities 25
Table 1-4: Relevant management principles under Schedule 5 of the EPBC Act—Australian World Heritage management principles 26
Table 2-1: Woodside impact and impact risk matrix (environment and community and culture) consequence descriptions 34
Table 2-2: Woodside risk matrix likelihood levels 35
Table 2-3: Woodside risk matrix determination of risk rating 35
Table 2-4: Summary of Woodside's criteria for 'as low as reasonably practicable' demonstration 36
Table 2-5: Summary of Woodside's criteria for acceptability 37
Table 3-1: Petroleum Activity overview 40
Table 3-2: Concordance of activities described in the Goodwyn Area Infill Development OPP and those included in this EP 42
Table 3-3: Approximate location details for the Petroleum Activity including all relevant infrastructure 44
Table 3-4: Summary of the timing of the Petroleum Activity 46
Table 3-5: Proposed subsea installation component summary 52
Table 3-6: Commonwealth waters subsea infrastructure crossings 55
Table 3-7: Wet storage that may be required as part of the Petroleum Activity 56
Table 3-8: Typical MODU specification ranges 60
Table 3-9: Typical IMMR vessel 60
Table 3-10: Typical DP2 Class subsea installation vessel 61
Table 4-1: Hydrocarbon spill thresholds used to define EMBA for surface and in-water hydrocarbons 64
Table 4-2: Summary of relevant MNES identified by the EPBC Act Protected Matters Search Tool (PMST) as potentially occurring within the Operational Area and EMBA 68

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Table 4-3: Summary of physical characteristics within the Operational Area and EMBA 68
Table 4-4: Habitats and Communities within the EMBA 69
Table 4-5: Summary of benthic habitat and communities in the northern Montebello Marine Park 76
Table 4-6: Threatened and migratory fish, shark and ray species predicted to occur within the Operational Area and EMBA 80
Table 4-7: Fish, shark and ray BIAs within the Operational Area 81
Table 4-8: Threatened and migratory marine reptile species predicted to occur within the Operational Area and EMBA 84
Table 4-9: Marine turtle BIAs within the EMBA 85
Table 4-10: Internesting habitat critical to the survival of marine turtle species predicted to occur within the EMBA 87
Table 4-11: Threatened and migratory marine mammal species predicted to occur within the Operational Area and EMBA 91
Table 4-12: Marine mammal BIAs within the Operational Area and EMBA 92
Table 4-13: Habitat critical to the survival of marine mammal species predicted to occur within the EMBA .. 93
Table 4-14: Threatened and migratory seabird and migratory shorebird species predicted to occur within the Operational Area and EMBA 95
Table 4-15: Seabird and shorebird BIAs within the EMBA 100
Table 4-16: Key seasonal sensitivities for protected migratory species identified as occurring within the Operational Area 103
Table 4-17: KEFs within the Operational Area and EMBA 105
Table 4-18: Established protected places and other sensitive areas overlapping the Operational Area and EMBA 107
Table 4-19: Summary of Native Title Claims, Determinations and Indigenous Land Use Agreements which overlap or are coastally adjacent to the EMBA 110
Table 4-20: Summary of the Operational Area and EMBA overlap with Commonwealth and State Marine Park Management Plan areas 114
Table 4-21: Cultural features and heritage values identified in publicly available literature 116
Table 4-22: Summary of feedback received via consultation to inform Existing Environment Description .. 145
Table 4-23: Summary of cultural features and heritage values 163
Table 4-24: Underwater heritage sites within 50 km of the Operational Area 168
Table 4-25: World, National and Commonwealth heritage listed places within the EMBA 168
Table 4-26: Commonwealth and State commercial fishery management areas overlapping the Operational Area and EMBA 170
Table 4-27: Other oil and gas facilities, infrastructure and other industries within 50 km of the Operational Area 186
Table 5-1: Government department or agency categorisation 194
Table 5-2: Woodside's relevant persons identification methodology 195
Table 5-3: Categories of relevant persons 196
Table 5-4: Methodology for identifying relevant persons within the EMBA undertaken under Regulation 25(1)(d) – by category 197
Table 5-5: Typical forms of communications for categories of relevant persons 204
Table 6-1: Environmental impact analysis summary of planned and unplanned activities 215
Table 6-2: Estimated subsea infrastructure footprint and infrastructure disturbance area 235
Table 6-3: Mapped habitat types and the percentage of disturbance from the installation of the Wilcox flowline and umbilical (Worley 2025) 236
Table 6-4: Potential impact criteria for marine turtles to artificial light emissions 246
Table 6-5: Vessel source levels used in the acoustic modelling for the Petroleum Activity 256
Table 6-6: Summary of modelled scenarios (JASCO 2025) 256

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Table 6-7: Modelled scenario at Willcox for a construction vessel (source: Muellenmeister, et al, 2023).... 256
Table 6-8: Thresholds for PTS, TTS and behavioural response onset for low-frequency (LF),high- frequency (HF) and very high frequency (VHF) cetaceans for continuous noise. 259
Table 6-9: Modelled horizontal distances (R_{max}) from Yodel and Wilcox drill locations 259
Table 6-10: Modelled horizontal distances (R_{max}) from the construction vessel to reach noise effect criteria for cetaceans and marine turtles for continuous sound 260
Table 6-11: Thresholds for PTS, TTS and behavioural response onset for marine turtles for continuous noise 261
Table 6-12: Impact thresholds to fish, sharks and rays for continuous noise..... 262
Table 6-13: GHG emissions and sources associated with the Petroleum Activity 272
Table 6-14: Indicative drill cuttings and fluid volumes for a single well section..... 301
Table 6-15: Summary of modelling credible hydrocarbon release scenarios 330
Table 6-16: Summary of environmental impact thresholds applied to the quantitative hydrocarbon spill risk modelling results 331
Table 6-17: The Bonn Agreement oil appearance code..... 332
Table 6-18: Characteristics of the hydrocarbon types used for modelling and ecotoxicological studies 333
Table 6-19: Key receptor locations and sensitivities potentially contacted above impact thresholds by the loss of well containment scenario with summary hydrocarbon spill contact (table cell values correspond to highest probability of contact [%] from the two scenarios)..... 343
Table 6-20: Summary of credible hydrocarbon spill scenario as a result of vessel collision 371
Table 6-21: Probability of hydrocarbon spill contact above impact thresholds within the EMBA with key receptor locations and sensitivities for a Instantaneous release of marine diesel (table cell values correspond to highest probability of contact [%] from the two scenarios) 374
Table 6-22: Characteristics of the non water-based mud base oil 388
Table 6-23: Identification of applicability of recovery plan and threat abatement plan objectives and action areas 437
Table 6-24: Assessment against relevant actions of the Marine Turtle Recovery Plan..... 441
Table 6-25: Blue Whale Conservation Management Plan..... 444
Table 6-26: Assessment against relevant actions of the Grey Nurse Shark Recovery Plan..... 445
Table 6-27: Assessment against relevant actions of Sawfish and River Shark Recovery Plan 446
Table 6-28: Assessment against relevant Marine Debris Threat Abatement Plan..... 447
Table 7-1: Centre for Environment, Fisheries and Aquaculture Science's Offshore Chemical Notification Scheme grouping based on ecotoxicity results 449
Table 7-2: Key factors considered as a part of the risk assessment process for project vessels..... 452
Table 7-3: Key factors considered as a part of the risk assessment process for immersible equipment 453
Table 7-4: Roles and responsibilities 456
Table 7-5: Ongoing consultation engagements..... 469
Table 7-6: Routine external reporting requirements..... 472
Table 7-7: External incident reporting requirements 475
Table 7-8: Oil pollution preparedness and response overview 477
Table 7-9: Emergency response training requirements 478
Table 7-10: Testing of response capability..... 480
Table 9-1: List of terms and definitions..... 534

Figure 1-1: The Woodside Management System Structure 22
Figure 1-2: Our WMS information structure and document hierarchy..... 23
Figure 2-1: Environment Plan development process 29
Figure 2-2: Risk-related decision-making framework 31

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Figure 3-1: Generalised schematic of Greater Western Flank 4 Development 40
Figure 3-2: Location of the Petroleum Activity 45
Figure 4-1: Environment that may be affected by the Petroleum Activity 66
Figure 4-2: Location of the Operational Area and relevant marine bio-regions 67
Figure 4-3: Shoals and Reefs in the vicinity of the Operational Area 71
Figure 4-4: Mapped benthic habitat types along the proposed Wilcox flowline and at the Wilcox drill centre 72
Figure 4-5: Total area of mapped benthic communities in the vicinity of the Operational Area 73
Figure 4-6: Rankin bank benthic habitats 75
Figure 4-7: Benthic transect locations 78
Figure 4-8:Whale shark BIAs overlapping the EMBA and tagged whale shark satellite tracks 82
Figure 4-9: Marine turtles BIAs location relative to the Operational Area 88
Figure 4-10: Marine turtles' habitat critical to the survival of the species location relative to the Operational Area 89
Figure 4-11: Seabird BIAs overlapping the Operational Area and EMBA 101
Figure 4-12: KEFs overlapping the Operational Area 106
Figure 4-13: Protected areas overlapping the Operational Area and EMBA 108
Figure 4-14:Operational Area and socio-economic EMBA in relation to Native Title Claims, Determinations and Indigenous Land Use Agreements 110
Figure 4-15: State-managed fishery, Pilbara Line Fishery, with a potential for Interaction with the Petroleum Activity 181
Figure 4-16: State-managed fisheries with a potential for Interaction with the Petroleum Activity 182
Figure 4-17: Commonwealth managed fisheries with a potential for interaction with the Petroleum Activity 183
Figure 4-18: Vessel density map for the Operational Area and EMBA 185
Figure 4-19: Location of Petroleum activities, infrastructure and other industries in relation to the Operational Area 187
Figure 4-20: Defence areas in the vicinity of the Operational Area and EMBA 188
Figure 5-1: Overview of Woodside's methodology to identify relevant persons 190
Figure 5-2: Overview of Woodside's consultation approach 192
Figure 6-1: Predicted 95th percentile water column total suspended sediment concentrations under annualised enivornmetal conditions 304
Figure 6-2: Predicted 95th percentile sediment thickness under annualised environmental conditions 305
Figure 6-3: Management process for excess bulk product 321
Figure 6-4: Proportional mass balance plot representing the weathering of PYA-01 condensate spilled onto the water surface as a one-off release (50 m^3) and subject to a constant 5 kn (2.6 m/s) wind at 27 °C water temperature and 25 °C air temperature 335
Figure 6-5: Proportional mass balance plot representing the weathering of PYA-01 condensate spilled onto the water surface as a one-off release (50 m^3) and subject to variable wind at 27 °C water temperature and 25 °C air temperature 336
Figure 6-6: Proportional mass balance plot representing the weathering of Yodel 3 condensate spilled onto the water surface as a one-off release (50 m^3) and subject to a constant 5 kn (2.6 m/s) wind at 27 °C water temperature and 25 °C air temperature 337
Figure 6-7: Proportional mass balance plot representing the weathering of Yodel 3 condensate spilled onto the water surface as a one-off release (50 m^3) and subject to variable wind at 27 °C water temperature and 25 °C air temperature 338
Figure 6-8: Proportional mass balance plot representing the weathering of Marine diesel spilled onto the water surface as a one-off release (50 m^3) and subject to variable wind at 27 °C water temperature and 25 °C air temperature 339
Figure 7-1: Offshore Chemical Notification Scheme ranking 449
Figure 7-2: Schematic for Offshore Seabird Management Plan to manage seabird impacts to acceptable and as low as reasonably practicable levels 454

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Figure 7-3: Schematic for SBMP to manage seabird impacts to ALARP and acceptable 462
Figure 7-4: Indicative 3-yearly testing of arrangements schedule 481

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1. INTRODUCTION

1.1 Overview

On behalf of the North West Shelf Joint Venture (NWSJV), Woodside Energy Limited (Woodside), as Titleholder under the Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023 (Commonwealth) (referred to as the Environment Regulations), proposes to undertake the following activities within Permit Areas WA-5-L, WA- 24 L, WA-7-R, WA-57-L:

- drilling and completions
- subsea installation and pre-commissioning

These activities will hereafter be collectively referred to as the Petroleum Activity and form the scope of this EP (EP). A detailed description of the activities is provided 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).

The Petroleum activity as defined in this EP is a part of the Goodwyn Area Infill Development Offshore Project Proposal (OPP) accepted by NOPSEMA on 27 August 2025.

1.2 Purpose of the Environmental 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* [EPBC Act]).

1.3 Environment Plan Summary

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

Table 1-1: EP summary

EP summary material requirement	Relevant section of this EP containing EP summary material
The location of the activity	**Section 3.4**
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 7.5**
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 1.5.2**

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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: EP process phases, applicable Environment Regulations and relevant section of EP

Criteria for acceptance	Content requirements/relevant regulations	Elements	Section of EP
Regulation 34(a): Is appropriate for the nature and scale of the activity	Regulation 21: • Environmental assessment Regulation 22: • Implementation strategy for the EP Regulation 24: • Other information in the EP	The principle of 'nature and scale' is applicable throughout the EP	Section 2 Section 3 Section 4 Section 5 Section 6 Section 7
Regulation 34(b): Demonstrates that the environmental impacts and risks of the activity will be reduced to ALARP Regulation 34(c): Demonstrates that the environmental impacts and risks of the activity will be of an acceptable level	Regulations 21(1)–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 Regulations 24(a)–24(c): • A statement of the titleholder's corporate environmental policy • A report on all consultations between the titleholder and any relevant person	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 Section 7
Regulation 34(d): Provides for appropriate Environmental Performance Outcomes, environmental performance standards and measurement criteria	Regulation 21(7): • Environmental Performance Outcomes and standards	Environmental Performance Outcomes (EPOs) Environmental performance standards (EPSs) Measurement criteria (MCs)	Section 6
Regulation 34(e): Includes an appropriate implementation strategy and monitoring, recording and reporting arrangements	Regulation 22: • Implementation strategy for the EP	Implementation strategy, including: Environmental Management System (EMS) Performance monitoring Oil Pollution Emergency Plan (OPEP – per Appendix G) and scientific monitoring Ongoing consultation	Section 7 Appendix G

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Criteria for acceptance	Content requirements/relevant regulations	Elements	Section of EP
Regulation 34(f): Does not involve the activity or part of the activity, other than arrangements for environmental monitoring or for responding to an emergency, being undertaken in any part of a declared World Heritage property within the meaning of the EPBC Act.	Regulations 21(1)–21(3): • 21(1) Description of the activity • 21(2) Description of the environment • 21(3) Without limiting Regulation 21(2)(b), relevant values and sensitivities may include any of the following: – (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 within the meaning of that Act; – (d) the presence of a listed threatened species or listed threatened ecological community within the meaning of that Act; – (e) the presence of a listed migratory species within the meaning of that Act; – (f) any values and sensitivities that exist in, or in relation to, part or all of: ▪ (i) a Commonwealth marine area within the meaning of that Act; or ▪ (ii) Commonwealth land within the meaning of that Act.	No activity, or part of the activity, undertaken in any part of a declared World Heritage property	Section 3 Section 4 Section 6
Regulation 34(g): (i) the titleholder has carried out the consultations required by Regulation 25 (ii) the measures (if any) that the titleholder has adopted, or proposes to adopt, because of the consultations are appropriate	Regulation 25: • Consultation with relevant authorities, persons and organisations, etc. Regulation 24(b): • A report on all consultations between the titleholder and any relevant person	Consultation undertaken in the preparation of this EP.	Section 5

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Criteria for acceptance	Content requirements/relevant regulations	Elements	Section of EP
Regulation 34(h): Complies with the Act and the regulations	Regulation 21(4)(a): • Describe the requirements, including legislative requirements, that apply to activity and are relevant to the environmental management of the activity Regulation 23: • Details of the Titleholder and liaison person Regulation 24(a): • A statement of the titleholder's corporate environmental policy Regulation 24(c): • Details of all reportable incidents in relation to the proposed activity	All contents of the EP must comply with the OPGGS Act and the Environment Regulations	Section 1.5 Section 7.11 Appendix A Appendix B

1.5 Description of the Titleholder

Woodside is the Titleholder for this activity, on behalf of the North West Shelf Joint Venture (NWSJV) comprising Woodside Energy Ltd, BP Developments Australia Pty Ltd, Woodside Energy (North West Shelf) Pty Ltd, Chevron Australia Pty Ltd, Japan Australia LNG (MIMI) Pty Ltd, CNOOC NWS Private Ltd, and Shell Developments (Australia) Pty Ltd.

1.5.1 Details of Titleholder and nominated liaison person

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

1.5.1.1 Titleholder

Woodside Energy Limited

11 Mount Street

Perth, Western Australia

T: 08 9348 4000

ACN: 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, then NOPSEMA will be notified in writing within 2 weeks or as soon as practicable.

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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 Our 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 for value delivery from the defined business area. A process must reflect relevant corporate drivers and may have associated tools that support its implementation. 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 sub-category is included in the Enable Value Chain category. Given this, there is interdependence between processes across these activities.

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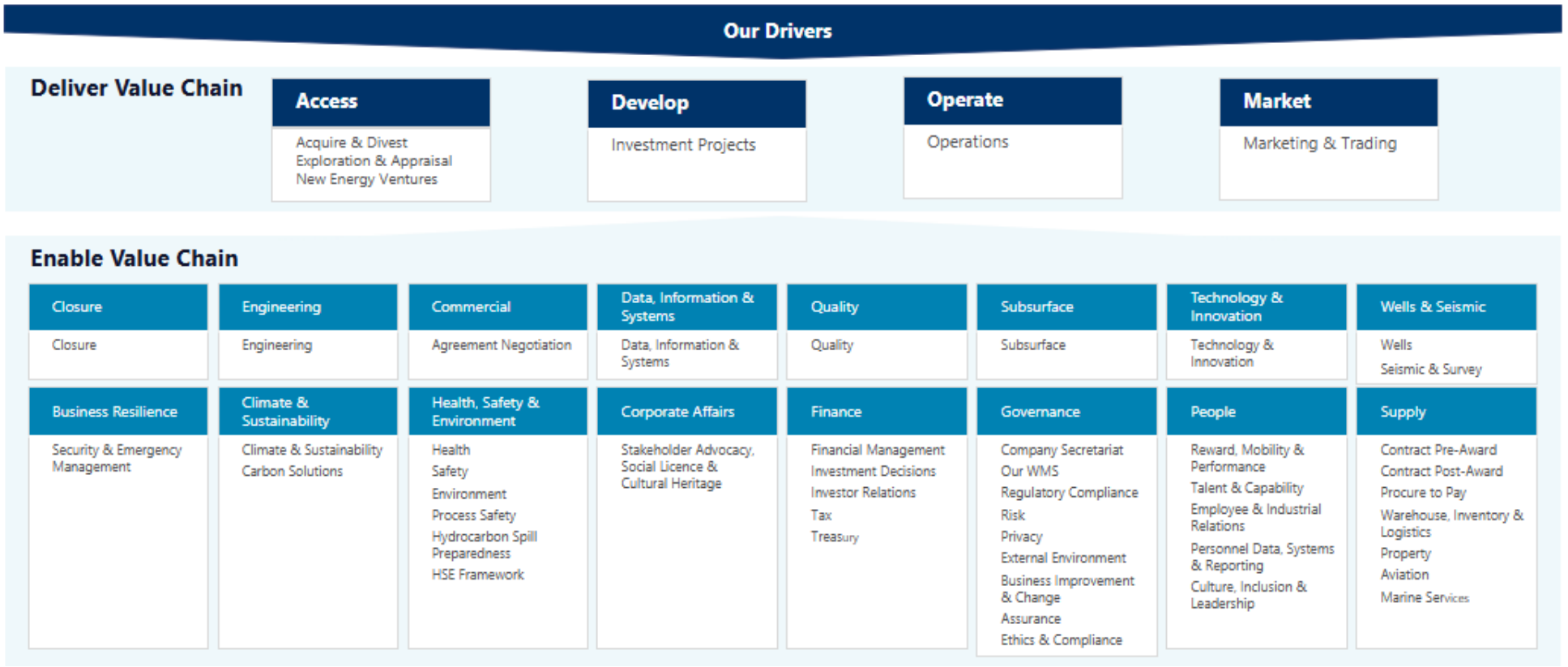


Figure 1-1: The Woodside Management System Structure

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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.

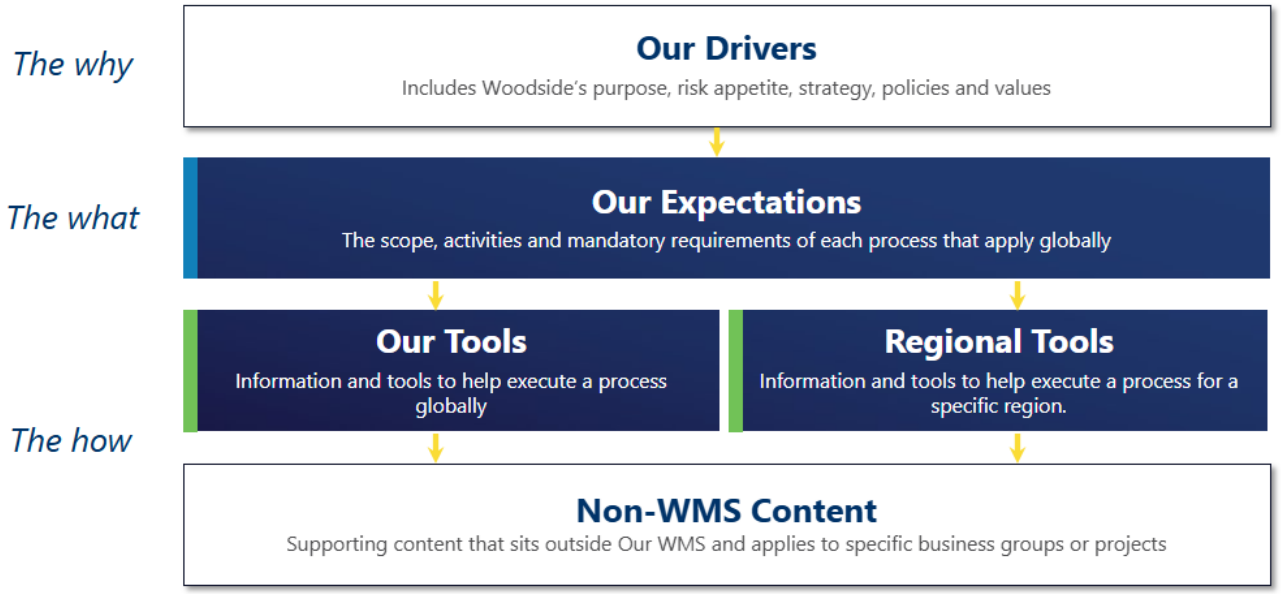


Figure 1-2: Our WMS information structure and document hierarchy

1.6.2 Environment and Biodiversity Policy

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

Please note that the Environment and Biodiversity Policy is reviewed regularly and is updated as required. The Environment and Biodiversity 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 Regulation 21(4) of the Environment Regulations, a description of requirements, including legislative requirements, that apply to the activity and relevant to managing the risks and impacts of the Petroleum Activity are detailed in Appendix B and summarised in the following paragraphs.

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

The OPGGS Act legislates offshore petroleum activities beyond 3 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; and
- by which the environmental impacts and risks of the activity will be of an acceptable level.

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

Woodside submitted the Goodwyn Area Infill Development OPP to NOPSEMA for assessment in February 2024 and NOPSEMA accepted the Goodwyn Area Infill Development OPP in August 2025. This OPP provided the detail and evaluation of potential impacts and risks from the key components of the Goodwyn Area Infill Development. These key components include:

- drilling and completions
  - geotechnical sampling (if required to inform MODU mooring)
  - drilling operations (for up to 8 production wells)
  - formation evaluation
  - well completion
  - well unloading
- subsea installation and pre-commissioning
  - installing Xmas trees, flowlines, electrohydraulic umbilicals, and other infield infrastructure
  - pre-commissioning
- start-up and operations
  - initial start-up of wells and subsea infrastructure
  - subsea IMMR
- decommissioning
  - plugging and abandoning wells
  - removing property
- field support
  - operating MODUs, vessels, helicopters, and ROVs

In accordance with Regulation 56 of the Environment Regulations, references to the Goodwyn Area Infill Development OPP have been made throughout this EP. The approved Goodwyn Area Infill OPP is available on the NOPSEMA website: Goodwyn Area Infill Development Offshore Project Proposal >> NOPSEMA website.

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 which aims to ensure that actions taken are on (or impacting upon) Commonwealth 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.

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.’*

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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.

An assessment of the Petroleum Activity against all relevant recovery plans and threat abatement plans is contained in Section 6.9.

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 these habitats. The Director of National Parks (DNP) 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

Specific zones within AMPs have been allocated conservation objectives based on the Australian International Union for Conservation of Nature (IUCN) reserve management principles outlined in Schedule 8 of the EPBC Regulations 2000. The principles for each zone determine what activities are acceptable within a protected area under the EPBC Act. Section 4 provides a description of the AMPs that are overlapped by the Operational Area and environment that may be affected (EMBA) and the relevant zones that the Petroleum Activity is likely to interact with.

The proposed Petroleum activity may include works in the Montebello Marine Park Multiple Use Zone. In accordance with the North-west Marine Parks Network Management Plan (DNP, 2018a), offshore petroleum activities and oil spill response are permittable subject to approval in Multiple Use Zone (IUCN category VI) and Special Purpose Zone Trawl (IUCN category VI).

The DNP has issued class approvals that allow for petroleum activities in designated IUCN Category VI marine park zones. These approvals outline the specific zones where such activities are permitted and include various conditions. For the Petroleum Activity the conditions of the Class Approval that are considered relevant are detailed in Table 1-3.

Table 1-3: Conditions of Class Approval relevant to the Petroleum Activities

Number	Condition	Relevant section of EP
1	The Approved Actions must be conducted in accordance with: (a) an Environment Plan accepted under the Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009; - (b) the EPBC Act; (c) the EPBC Regulations (d) the North-west Network Management Plan; (e) any prohibitions, restrictions or determinations made under the EPBC Regulations by the Director of National Parks; and (f) all other applicable Commonwealth and state laws (to the extent those laws are capable of operating concurrently with the laws and instruments described in paragraphs (a) to (e)).	Conditions 1a, b, c and f are met by the submitted EP. Condition 1d - the impacts on the marine park values have been considered in Section 6. Condition 1e - consultation has been undertaken with the Director of National Parks and no prohibitions, restrictions or determinations have been made (see Section 5 of this EP)
2	If requested by the Director of National Parks, an Approved Person must notify the Director prior to	Section 7.10 of this EP describes requirements to notify the DNP prior to activities within the Montebello Multiple Use Zone.

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Number	Condition	Relevant section of EP
	conducting Approved Actions within Approved Zones.	
3	If requested by the Director of National Parks, an Approved Person must provide the Director with information relating to undertaking the Approved Actions (or gathered while undertaking the Approved Actions), that is relevant to the Director's management of the Approved Zones.	If requested by the Director of National Parks, information relating to undertaking the Approved Actions (or gathered while undertaking the Approved Actions), that is relevant to the Director's management of the Approved Zones will be provided.

1.7.2.3 World Heritage Properties

Australian World Heritage Properties (WHP) are listed as MNES under the EPBC Act and are required to be assessed accordingly in EPs.

Schedule 5 of the EPBC Act establishes the Australian World Heritage management principles, which are designed to ensure that WHPs within Australia are managed in a way that maintains their values. Table 1-4 outlines the principles that are relevant to assessing impacts from the Petroleum Activity on WHPs within the EMBA, which are identified in Section 4 of this EP.

Table 1-4: Relevant management principles under Schedule 5 of the EPBC Act—Australian World Heritage management principles.

Number	Principle	Relevant section of the EP
3	**Environmental impact assessment and approval** 3.01 This principle applies to the assessment of an action that is likely to have a significant impact on the World Heritage values of a property (whether the action is to occur inside the property or not).	3.01 and 3.02: Three WHP are relevant to the Petroleum Activity (Murujuga Cultural Landscape, Shark Bay and Ningaloo Coast). The Petroleum Activity does not involve an action that is likely to have a significant impact on the World Heritage values of the WHP identified above. This EP includes an assessment of risks and impacts to WHP outlined in Section 6 These principles are met by the submitted EP.
	3.02 Before the action is taken, the likely impact of the action on the World Heritage values of the property should be assessed under a statutory environmental impact assessment and approval process.	
	3.03 The assessment process should: (a) identify the World Heritage values of the property that are likely to be affected by the action; and (b) examine how the World Heritage values of the property might be affected; and (c) provide for adequate opportunity for public consultation.	3.03 (a) and (b): World Heritage values are identified in Section 4.9.1.9 of this EP. 3.03 (b): The World Heritage values that may be affected are considered in an assessment of impacts and risks for the Petroleum activity in Section 6 of this EP, specifically: - Unplanned risks applicable to WHP are assessed in Section 6.8 of this EP 3.03 (c): Relevant persons consultation and feedback received in relation to impacts and risks to WHP is included in Section 5 of this EP Woodside also facilitates ongoing consultation for the duration of the EP approval and life of the EP, as outlined in Section 7.10, Ongoing Consultation. These principles are met by the submitted EP.
	3.04 An action should not be approved if it would be inconsistent with the protection, conservation, presentation or transmission to future generations of the World Heritage values of the property.	3.04, 3.05 and 3.06:

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Number	Principle	Relevant section of the EP
	3.05 Approval of the action should be subject to conditions that are necessary to ensure protection, conservation, presentation or transmission to future generations of the World Heritage values of the property.	Relevant management plans give effect to the duties and obligations of Australia under the World Heritage Convention and facilitate the protection, conservation, presentation or transmission to future generations of the World Heritage values of the properties. For consideration of the protection, conservation, presentation or transmission to future generations of the World Heritage values of the properties, refer to: • Unplanned risks applicable to WHP are assessed in Section 6.8 of this EP These principles are met by acceptance and implementation of the EP.
	3.06 The action should be monitored by the authority responsible for giving the approval (or another appropriate authority) and, if necessary, enforcement action should be taken to ensure compliance with the conditions of the approval.	

Note: Sections 1 – General Principles and 2 – Management Planning of Schedule 5 are not considered relevant to the scope of this EP and, therefore, have not been included.

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2. EP 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 activity.

2.2 Environment Plan process

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

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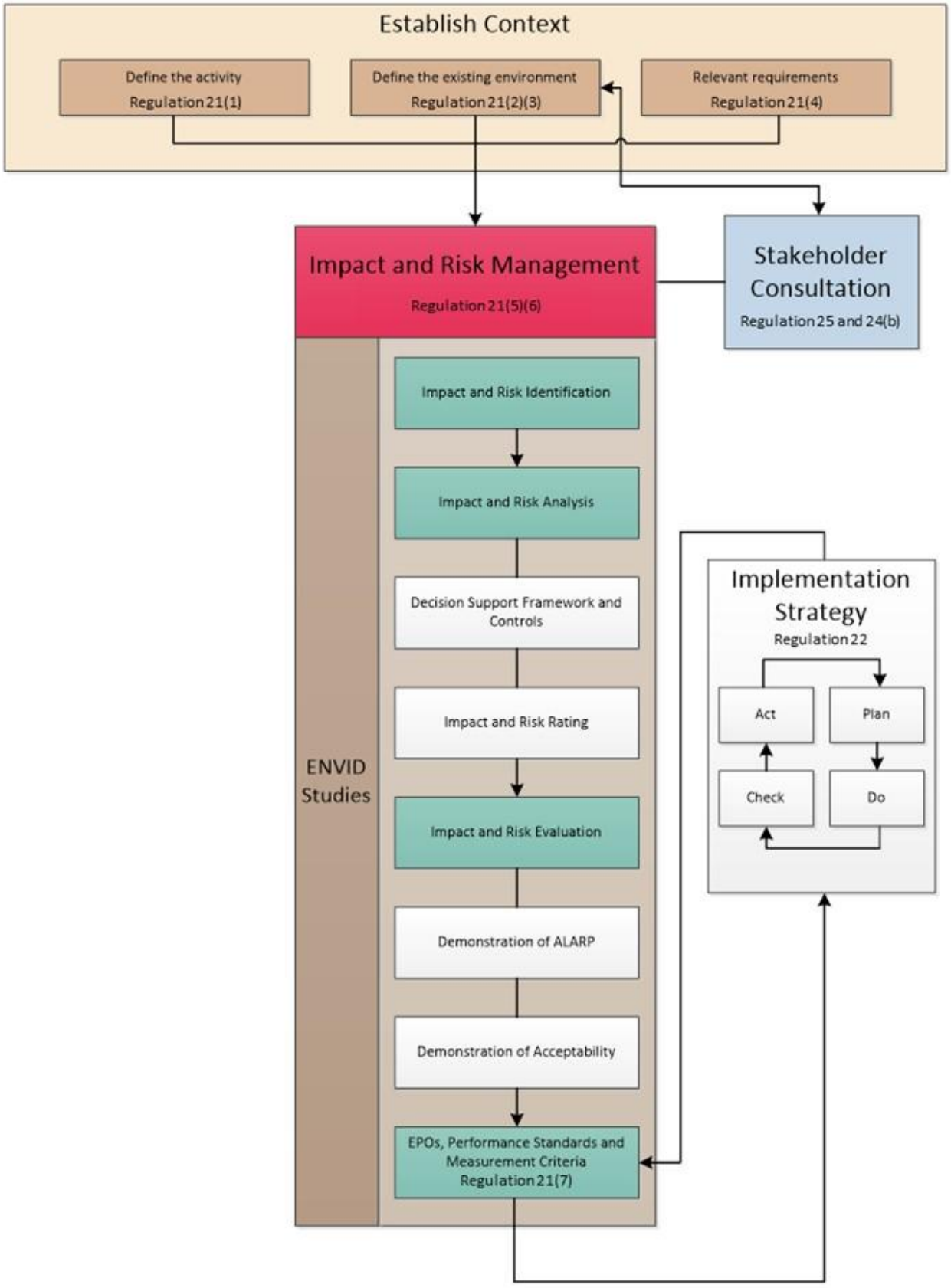


Figure 2-1: Environment Plan development process

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2.2.1 Establish the context

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

2.2.2 Describe the activity

Describing the activity involves evaluating whether the activity meets the definition of a 'Petroleum Activity' as defined in the Environment Regulations. The EP describes the activity, including:

- 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 activity and proposed timetables for undertaking the activity
- additional information relevant to considering 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.

2.2.3 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 4to the extent required to assess impacts and risks to environmental receptors from the Petroleum Activity.

The values and sensitivities relevant to the Petroleum Activity are fully described within the Master Existing Environment document. In accordance with Regulation 56(1) of the Environment Regulations, references to the Master Existing Environment within this EP refer to Appendix C of the accepted Julimar Operations EP, which is available on NOPSEMA's website using the following link: https://docs.nopsema.gov.au/A1225379.

2.2.4 Environmental legislation and other requirements

Legislation and other requirements that apply to the Petroleum Activity are presented in Section 1.7 and Appendix B. These requirements have been considered when developing this EP.

2.2.5 Impact and risk management

2.2.5.1 Impact and risk identification and analysis

The first step in managing impacts and risks is to identify all credible sources of environmental impacts and risks, including 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, that have the potential for inherent changes to the environment, are termed environmental 'impacts'
- unplanned events, including potential emergency and accidental events, that 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 ENVID 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 them. The ENVID also helped to identify relevant stakeholders to consult when developing this EP

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(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).

2.2.5.2 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). The decision support framework is applied to confirm:

- 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 risk rating (i.e. 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.

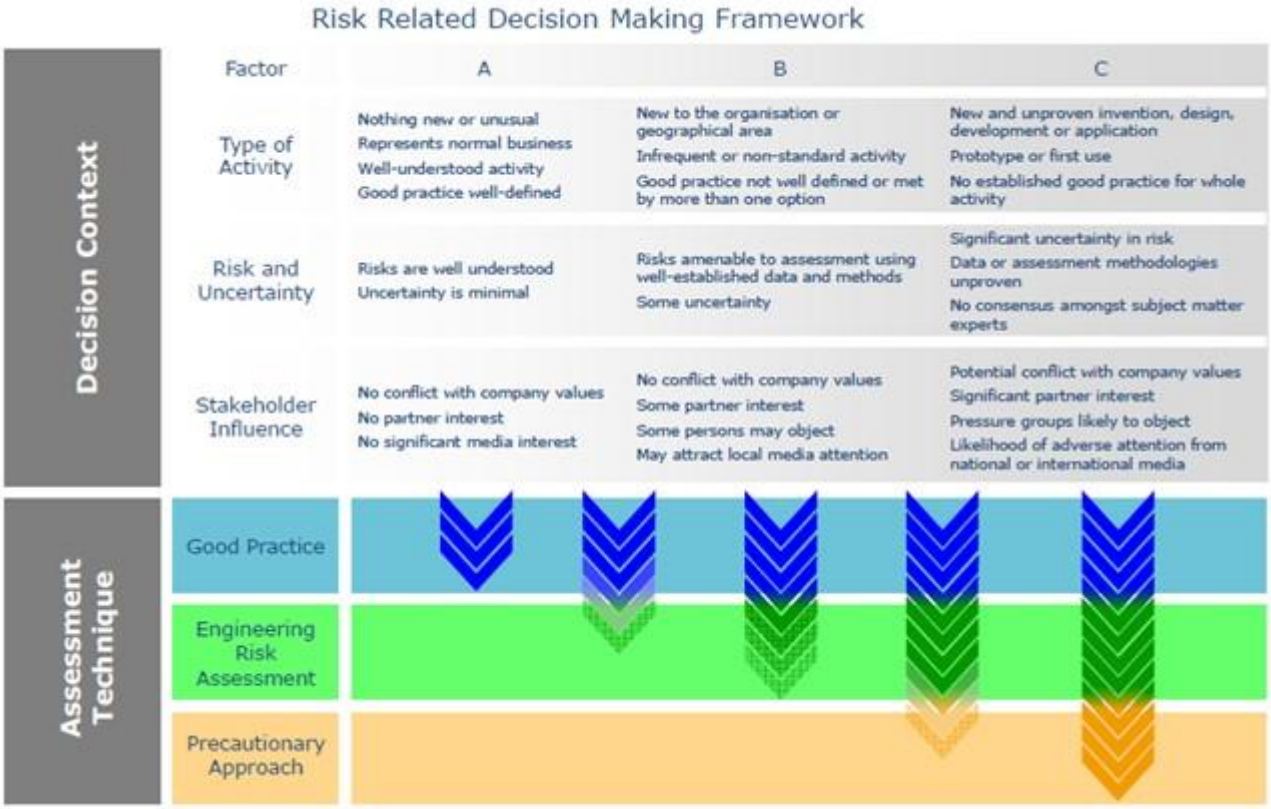


Figure 2-2: Risk-related decision-making framework

Source: Oil and Gas UK (Guidance on Risk-Related Decision-Making 2014)

2.2.5.2.1 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.

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2.2.5.2.2 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.

2.2.5.2.3 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.

2.2.5.3 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.
- **Good industry practice (GP):** identifies further engineering control standards and guidelines Woodside may apply above that required 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.

2.2.5.4 Decision calibration

To determine that 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.

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2.2.6 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:
  - prevention: design measures that reduce the likelihood of a hazardous event occurring
  - detection: design measures that facilitate early detection of a hazardous event
  - control: design measures that limit the extent/escalation potential of a hazardous event
  - mitigation: design measures that protect the environment if a hazardous event occurs
  - 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
- emergency response and contingency planning, including methods to enable recovery from the impact of an event (e.g. protection barriers deployed near the sensitive receptor).

2.2.7 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 classifying impacts and risks is described in the next subsections.

2.2.7.1 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 2.2.7.1.1.

2.2.7.1.1 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 or 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.

2.2.7.1.2 Consequence level descriptions

Table 2-1 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

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

[2] References to significance in Section 2.2.7, for the purposes of describing the Woodside Environment Risk and Impact Rating Tool, use significance as defined in the Woodside Environment Risk and Impact Rating Tool.

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receptors have the potential to be impacted, the worst-case consequence level is carried into the final impact and risk assessment and evaluation.

Table 2-1: Woodside impact and impact risk matrix (environment and community and culture) consequence descriptions

Environment	Community and culture	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 or 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 or 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 or 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 or 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 or items of cultural significance.	**No Lasting Effect**	***F***

2.2.7.2 Risk classification

The risk rating process assigns a level of risk to each risk event, measured in terms of consequence (Section 2.2.7.1.1) and likelihood (Section 2.2.7.2.1). 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 2-3).

2.2.7.2.1 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 2-2).

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Table 2-2: 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 in the location or activity
Likelihood level	***0***	***1***	***2***	***3***	***4***	***5***

2.2.7.2.2 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 2-3. This 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 2.3).

Table 2-3: 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 HSE impacts are intolerable – action required.

2.3 Impact and risk evaluation

In accordance with Regulations 34(a), 34(b), 34(c) and 21(5)(b), 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.

2.3.1 Demonstration of ‘as low as reasonably practicable’

The descriptions in Table 2-4 articulate how Woodside demonstrates that each impact and risk identified within this EP are ALARP.

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Table 2-4: 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 (D, E or F)***	***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 • 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 good industry practice 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.		

2.3.2 Demonstration of acceptability

Acceptability of the Goodwyn Area Infill Development, including the Petroleum Activities described in this EP, was demonstrated in the Goodwyn Area Infill Development OPP (A1806RH000003, Rev 7) as required by Environment Regulation 13 (4) (d). The EPOs set in the Goodwyn Area Infill Development OPP demonstrate that the environment impacts and risks of the project will be managed to an acceptable level.

In this EP Woodside has demonstrated that the level of acceptability determined in the Goodwyn Area Infill Development OPP has been met through the following criteria:

- Adoption of relevant Goodwyn Area Infill Development OPP EPOs and controls
- Adoption of EP specific controls where required
- Impact consequence levels and risk rating are equal to or less than the acceptable level defined in the Goodwyn Area Infill Development OPP (A1806RH000003, Rev 7; Section .7; Table 4-3) and are therefore consistent with the EPOs and managed to an acceptable level of impact or risk,

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

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Table 2-5: 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 (D, E or F)***	***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 2-4).		
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 of an 'acceptable' level 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 – 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 consider 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 to accept the risk, in accordance with Woodside's Risk Management Procedure. This includes due consideration of regulatory requirements.		

2.4 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 plans or threat abatement plans. This assessment follows the below process:

- Identify relevant listed threatened species and ecological communities.
- Identify relevant recovery plans and threat abatement plans.
- 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.
- 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.

2.5 Environmental performance objectives/outcomes, standards and measurement criteria

The Environment Regulations define EPOs to mean "a measurable level of performance required for the management of environmental aspects of the activity to ensure 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 in:

- legislation (such as the OPGGS Act)
- regulator guidance notes such as the Matters of National Environmental Significance – Significant impact guidelines (Department of the Environment, Water, Heritage and the Arts 2013), or
- specific agreements with other relevant persons (e.g. 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

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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.

2.6 Implement, monitor, review and report

An implementation strategy for the Petroleum Activity describes the specific measures and arrangements to be implemented for the duration of the program. 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 activity.

The implementation strategy is presented in Section 0.

2.7 Stakeholder consultation

Woodside undertakes consultation when preparing EPs. The consultation, along with the process for ongoing engagement and consultation throughout the activity, is presented in Section 5. The full text from correspondence is provided in Appendix F

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3. DESCRIPTION OF THE ACTIVITY

3.1 Overview

This section has been prepared in accordance with Regulation 21(1) of the Environment Regulations and describes the activities to be undertaken as part of the Petroleum Activity under this EP.

3.2 Project overview

The GWF4 Project (Petroleum Activity) consists of a subsea tie-back to existing GWF subsea infrastructure to develop incremental volumes of gas and condensate to partially fill ullage at the GWA facility. The development consists of five wells: WCA01, WCA02, ESA01, YDA01 and TPA04 tied-in via existing manifolds (Figure 3-1).

- WCA01 and WCA02 will be connected to a new manifold using flexible jumpers. The manifold will then be connected to the existing GWF infrastructure via an ~ 25 km, 11-inch flexible flowline.
- YDA01 will be connected through a new manifold (EYA) using a 3 km long, 10-inch flexible flowline. The manifold will then be connected to the existing KDA manifold via a 3 km, 10-inch flexible flowline
- ESA01 will be connected through an 8-inch flexible jumper to the new EYA manifold
- TPA04 will be connected to the existing TPA manifold using an 8-inch flexible jumper

Wells will be drilled, completed and unloaded[3] using a hybrid (DP/moored) semi-submersible mobile offshore drilling unit (MODU). Typically, two or three support vessels will support the MODU during drilling activities, with at least one vessel in the vicinity to complete standby duties, if required. Supply vessels will frequent the MODU at regular intervals throughout operations.

Installation of the subsea infrastructure, including flowlines, umbilicals, manifolds, FLETs, mattresses, flying leads and pre-commissioning are undertaken using a primary installation vessel (PIV) (Refer to Section 3.11.3). Vessel activities are further described in Section 3.11.

An overview of the Petroleum Activity is provided in Table 3-1 and its location is provided in Figure 3-2.

[3] *Note that YDA01, ESA01 and TPA04 will be unloaded back to the GWA facility*

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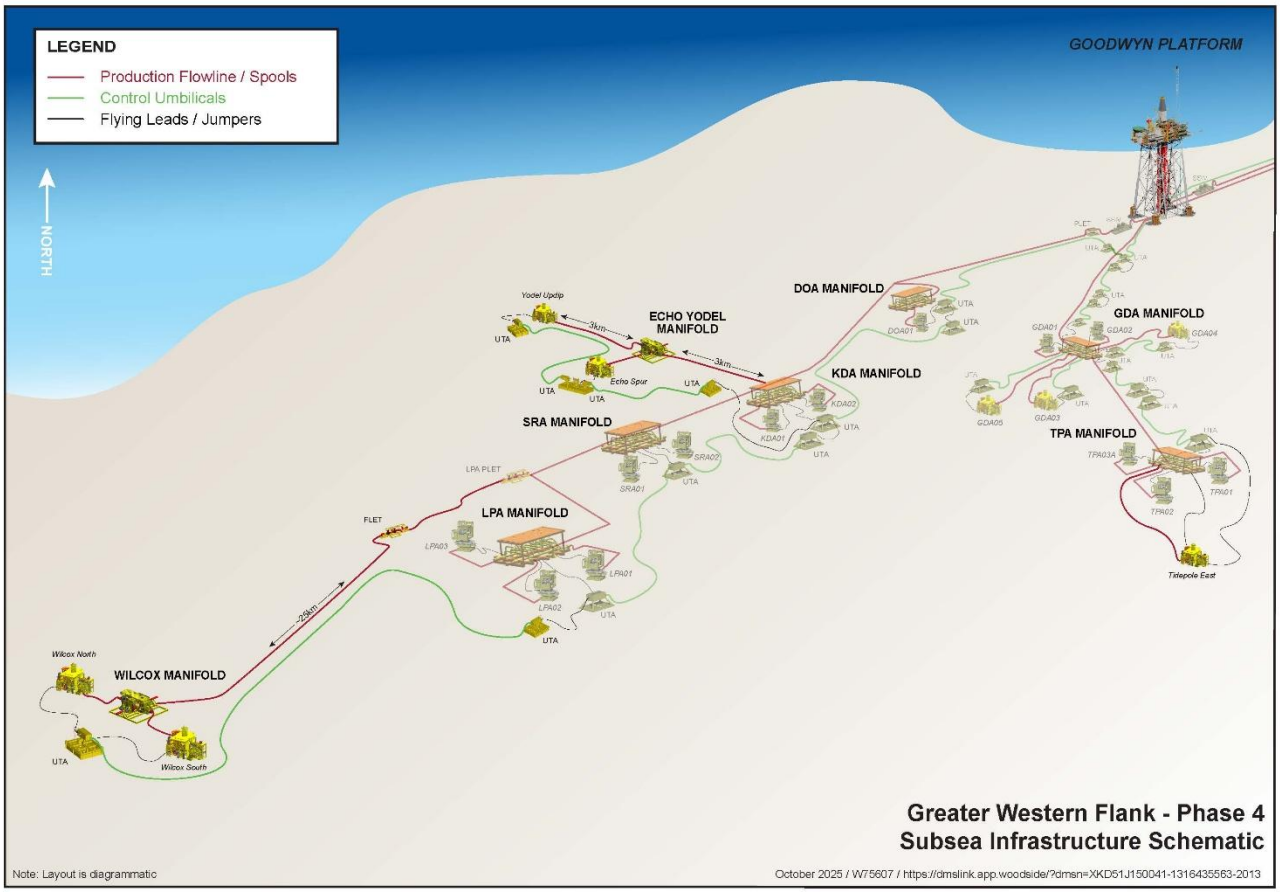


Figure 3-1: Generalised schematic of Greater Western Flank 4 Development

Table 3-1: Petroleum Activity overview

Item	Description
Permit Titles	WA-7-R, WA-57-L, WA-24-L, WA-5-L
Location	~140 km north-west of Karratha, WA
Water depth	~55 – 135 m for areas of proposed subsea infrastructure ~40 – 150 m in the Operational Area
Number of wells	Wilcox: two production wells (WCA01 and WCA02) Nearfield infill: three production wells (ESA01, YDA01 and TPA04)
Subsea infrastructure	Wilcox: • Xmas trees and wellheads, flowlines, electro-hydraulic umbilicals (EHUs), manifolds, flowline end termination (FLET), umbilical termination assemblies (UTAs), electrical flying leads (EFLs), hydraulic flying leads (HFLs), flexible pipe jumpers, subsea intensifiers Nearfield Infill: • Xmas trees and wellheads, flowlines, electro-hydraulic umbilicals (EHUs), manifolds, umbilical termination assemblies (UTAs), electrical flying leads (EFLs), hydraulic flying leads (HFLs), flexible pipe jumpers
MODU	Hybrid (moored and DP) MODU will be used

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Item	Description
Vessels	• PIV for installing the subsea infrastructure • inspection, monitoring, maintenance and repair (IMMR) vessel for Xmas tree installation, isolation testing, IMMR or contingent activities • support vessels including barge(s), heavy lift vessel(s) (HLVs), multi-service construction vessel(s), anchor handling vessel(s) and general supply/support vessels (including uncrewed surface vessels and PSVs).
Key activities	• mooring installation for the MODU (including piling) • development drilling and completions • pre and post- lay survey activities • installation of subsea infrastructure • IMMR • tie-in to existing subsea infrastructure • pre-commissioning testing.

3.3 Concordance with OPP

The Goodwyn Area Infill Development OPP describes the scope of the project and its component activities, at a level comprehensive enough to facilitate thorough evaluation of environmental impacts and risks and appropriate setting of EPOs. However, in accordance with NOPSEMA guidance, it is acknowledged that an OPP is prepared at an early stage in project development, before detailed planning of component activities has occurred. More detailed descriptions of the component activities are therefore expected in the subsequent EPs.

Refinement or modifications to methods or timing for individual project activities may occur after an OPP acceptance and before the submission of EPs. These refinements or modifications to the accepted project cannot be new activities and cannot significantly change the overall environmental impacts and risks of the project as described in the accepted OPP. Table 3-2 shows which scopes from the Goodwyn Area Infill Development OPP may have progressed in level of definition since the Goodwyn Area Infill Development OPP was authored, and as a result, may have changed.

Section 5 of the Goodwyn Area Infill Development OPP (A1806RH000003, Rev 7) provides a detailed description of the development.

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Table 3-2: Concordance of activities described in the Goodwyn Area Infill Development OPP and those included in this EP

Goodwyn OPP Section	Scope or overview of the Activity	Relevance to this EP	Refinement or modification to methods	Refinement or modification to timing	Is this a new activity	Significance of change
Section 5.3 Drilling and Completions	Potential volume of drill cuttings were estimated in Goodwyn Area Infill Development OPP and used to undertake dispersion modelling. The estimated volumes of drill cuttings discharged from a typical well are in the order of ~108 m³ at the seabed, and ~474 m³ from the surface. While the estimated volumes of fluids (and solids) discharged from a typical well are in the order of ~7,057 bbl (~89.7 m³ solids) at the seabed, and ~30,461 bbl (~387.5 m³ solids) from the surface In addition, assumptions were made when modelling the discharge, such as a discharge location ~20 m below the surface.	Further planning and well design has progressed since the Goodwyn Area Infill Development OPP which has resulted in revised cutting and drilling fluid volumes The estimated volumes of drill cuttings discharged from a typical well are now in the order of ~237 m³ at the seabed, and ~490 m³ from the surface. While the estimated volumes of fluids (and solids) discharged from a typical well are in the order of ~19,834 bbl (~218 m³ solids) at the seabed, and ~33,541 bbl (~869 m³ solids) from the surface. In addition, the assumption for the discharge point from the MODU is now ~5m below the surface.	Yes – additional definition in engineering	No	No	This change does not significantly alter the overall environmental impacts and risks of the project as described in the accepted Goodwyn Area Infill Development OPP. The overall impact consequence level for disturbance to benthic habitat from trunkline installation and associated activities is Minor (D) based on a minor impact to the most sensitive receptors (benthic communities, AMPs and KEFs) (Section 6.7.2).
Section 9.3.6 Unplanned Hydrocarbon Release: Gas and Condensate	A release of ~745,012 m³ of condensate over a 77-day period from a well in the Wilcox reservoir was selected as the worst-case credible spill scenario for the Goodwyn Area Infill Development in the OPP.	A review of well control loss of containment scenarios has been undertaken since the Goodwyn Area Infill Development OPP which resulted in the identification of two worst case scenarios in terms of volume and location: Scenario 1: a 70-day release of 707,729 m^3 of condensate from the Wilcox well. Scenario 2: a 76-day release of 993,860 m^3 of condensate from the Yodel Updip well	Yes – additional definition in engineering	No	No	This change does not significantly alter the overall environmental impacts and risks of the project as described in the accepted Goodwyn Area Infill OPP. The overall risk rating for an unplanned hydrocarbon release: of gas and condensate remains as Moderate (Section 6.8.2 of this EP).

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Goodwyn OPP Section	Scope or overview of the Activity	Relevance to this EP	Refinement or modification to methods	Refinement or modification to timing	Is this a new activity	Significance of change
		Modelling for the OPP in 2023 was based on a preliminary estimated relief well duration of 77 days resulting in a release of ~745,012 m^3. Contemporary studies estimate that a relief well could be executed within 70 days (including mobilisation of a MODU from South East Asia) releasing ~707,729 m^3. Given the decreased duration and volume, the existing modelling was deemed conservative and therefore additional modelling was not required. However contemporary studies also identified that the volume expected from Yodel Updip had increased to 993,860 m^3, this was based on updates to the subsurface model and an increase in the timing for a relief well, 18 days. Therefore additional modelling was undertaken for the Yodel Updip scenario. For this EP, the EMBA is the combined potential spatial extent of hydrocarbons at concentrations above ecological impact thresholds, in the event of a spill from both Scenario 1 and 2.				

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3.4 Location

The infrastructure associated with the Petroleum Activity is located in Commonwealth waters, ~140 km north-west of Karratha. The closest landfall to the Petroleum Activity is the Montebello islands ~35 km south. Approximate location details for the Petroleum Activity are provided in **Table 3-3**.

Table 3-3: Approximate location details for the Petroleum Activity including all relevant infrastructure

Infrastructure	Water depth (~m LAT)	Latitude (WGS84)	Longitude (WGS84)	Petroleum title(s)
New Wells and Manifolds				
WCA01 well	~73	19° 59’55.284”S	115° 29’55.973”E	WA-7-R
WCA02 well	~73	19° 59’53.658”S	115° 29’55.989”E	WA-7-R
YOD05 well	~131	19° 45’00.497”S	115° 43’49.734”E	WA-24-L
ESA01 well	~126	19° 45’15.456”S	115° 45’26.636”E	WA-24-L
TPA04 well	~112	19° 45’49.540”S	115° 53’26.051”E	WA-5-L
Wilcox manifold	~74	19°59'48.35"S	115°30'02.71"E	WA-7-R
Echo Yodel manifold	~128	19°45'16.62"S	115°45'30.89"E	WA-24-L
Existing Manifolds				
LPA manifold	~78	19°49'45.90"S	115°39'29.10"E	WA-57-L
KDA manifold	~123	19°45'28.12"S	115°47'07.62"E	WA-5-L
TPA manifold	~113	19°45'44.29"S	115°53'24.40"E	WA-5-L
Flowlines				
Wilcox (starting point)	~74	19°59'48.35"S	115°30'02.71"E	WA-7-R
Wilcox (end point)	~78	19°49'47.04"S	115°39'25.55"E	WA-57-L
Flowlines and flexibles	Flowlines / jumpers will connect wells to YOD and then to KDA and TPA. The exact location may vary during installation.			

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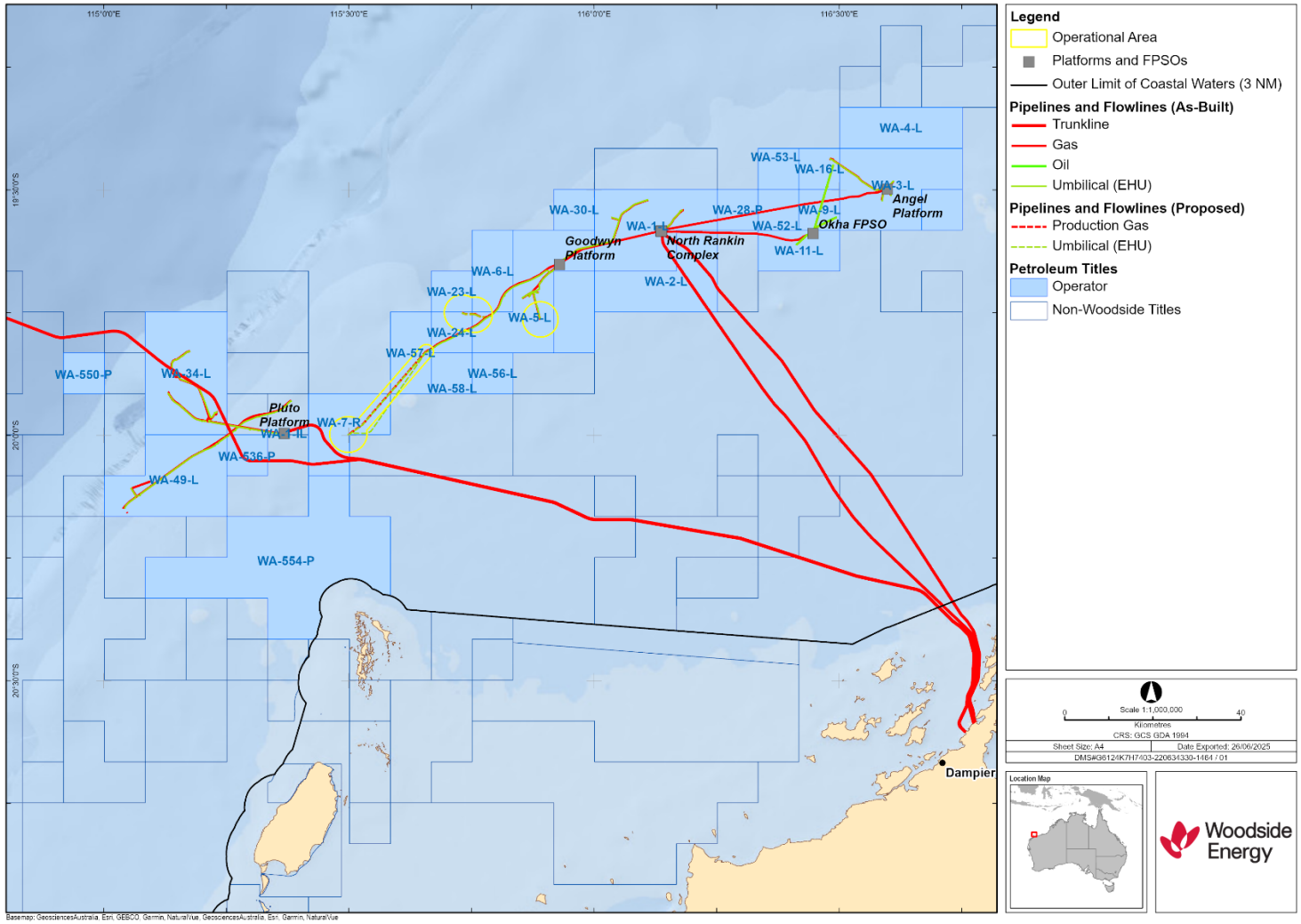


Figure 3-2: Location of the Petroleum Activity

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3.4.1 Activities Outside Permit titles

Woodside notes that the Operational Area may extend beyond the boundaries of the relevant Petroleum activity permit titles listed in Table 3-1. To the extent that mooring placement or subsea installation is carried out in parts of the Operational Area not included in the area of Woodside's existing permit titles, Woodside will obtain the relevant approval, permission, consent, authority or permit as required prior to undertaking any such activity, and will only carry out that activity in those areas in accordance with that approval, permission, consent, authority or permit. This EP considers potential impacts to environmental receptors and other marine users within the OA, including areas outside of the listed Petroleum activity permit titles.

3.5 Operational Area

The Operational Area (OA) defines the spatial boundary of the Petroleum activity, as described, risk assessed and managed by this EP, including vessel-related petroleum activities within the Operational Area The Operational Area applicable to the scope of this EP is shown in Figure 3-2 and includes:

- a radius of 4 km from each well to allow for MODU mooring
- 1.5 km radius (3.0 km corridor) around subsea installation locations in which subsea installation and pre-commissioning activities will occur, to allow for the movement and position of vessels.

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 OA, as described in this section.

3.6 Timing

As detailed in Table 3-4, the Petroleum Activity is currently anticipated to commence from Q3 2026 with anchor installation activities to support drilling. Drilling and completions activities are planned to commence in Q2 2027, taking up to ~90 days per well including mobilisation, demobilisation and contingency activities. Subsea installation activities are planned to commence H2 2027 and the initial campaign for nearfield infill will take ~3 months, with a second campaigned planned for Wilcox subsea installation activities in Q4 2027 that is anticipated to take ~4 months. IMMR activities can occur at any time during the Petroleum Activity. Timing and duration of all activities is subject to change due to project schedule requirements, MODU/vessel availability, unforeseen circumstances and weather. Therefore, contingency has been included to allow both drilling and subsea installation activities to continue into 2029.

When underway, activities will be 24 hours per day, seven days per week. Simultaneous Operations (SIMOPS) activities may occur (e.g. subsea installation nearby drilling activities and installation activities nearby live operating infrastructure).

The EP has risk-assessed drilling activities, installation of subsea infrastructure, IMMR and support operations throughout the year (all seasons) to provide operational flexibility for requirements and schedule changes and MODU/vessel availability.

Table 3-4: Summary of the timing of the Petroleum Activity

Activity	Approximate timing (and cumulative duration in the field)	General information
Drilling and completions	Q3 2026 to Q2 2028 (~90 days per well, up to a total of 450 days)	• activities will be undertaken in WA-5-L, WA-7-R, WA-24-L • the MODU and up to three support vessels will be in the Operational Area at any time
Subsea Installation	Nearfield Infill: H2 2027 to Q1 2028 ~3 months Wilcox: Q4 2027 to Q2 2028 ~6 months	• activities will be undertaken in WA-5-L, WA-7-R, WA-24-L, WA-57-L • up to three vessels (PIV, IMMR and/or support vessels) will be in the Operational Area at any time

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3.7 Drilling activities

3.7.1 Underwater acoustic positioning

Long base line (LBL) transponders are commonly used acoustic positioning methods and may be installed on the seabed as required by the MODU activities. The LBL array provides accurate positioning by measuring ranges to three or more transponders deployed at known locations on the seabed and structures.

A LBL array near each well may be in place for ~1–3 months. Acoustic transmissions are not continuous—they are short 'chirps' when active and do not emit any sound when on standby. If used, the LBL transponders are attached to clump weights and placed on the seabed. Both the transponders and clump weights are recovered after completion of MODU operations.

3.7.2 Top-hole section drilling

Drilling commences with the top-hole section of the well in this sequence:

1. the MODU arrives and establishes position over the well site
2. A pilot hole or holes may be drilled close to the intended well location:
   - Pilot holes are used when the geology and shallow hazards need to be confirmed or further understanding of the structural integrity of the rock is required.
   - Pilot holes are drilled riserless, as described below, generating additional cuttings and sweeps that may be deposited on the seabed
3. Top-hole sections are drilled riserless using seawater with pre-hydrated bentonite or guar gum, or similar sweeps or drilling fluids to circulate drill cuttings from the wellbore.
   - As a contingency, water-based muds (WBM) may be used (if required) based on shallow hazards
4. Once each top-hole section is drilled, steel casings are inserted into the wellbore to form the conductor, surface casings and wellheads; these casings are secured in place by pumping cement into the annulus above the casing shoe or to the surface (seabed), which may result in excess cement being discharged at the seabed.

Top-hole sections may be batch drilled, which involves drilling one (or more) hole sections for a group of wells before the subsequent sections are commenced. Cuttings generated during drilling of the top-hole sections are discharged at the seabed.

3.7.3 Blow out preventer and marine riser installation

After setting the surface casing, a marine riser and Blow out Preventer (BOP) are installed on the wellhead to physically connect the well and MODU. This creates a closed circulation system, where drilling fluids and drill cuttings can be circulated from the wellbore back to the MODU via the riser.

The BOP seals, controls, and monitors the well during drilling activities. The BOP components are operated using open hydraulic systems (using water-based BOP control fluids). Each time a pressure and function test schedule is undertaken approximately 3620 L of water-based fluid is released to the marine environment, of this approximately 4% is control fluid additive. BOP operation includes function and pressure testing approximately every 21 days, and a function test (approx. 2665 L) approximately every seven days, excluding the week a pressure test is conducted. BOP tethering may be required, where multiple gravity based anchors, typically 6 x 3 m, could be installed around a wellhead location to tether and tie down the BOP. The gravity based anchors would be removed following completion of the drilling activities.

3.7.4 Bottom-hole section drilling

Bottom-hole section drilling is executed after the marine riser and BOP have been installed. This drilling uses a closed circulation system to the planned wellbore total depth. Bottom-hole sections may be drilled using a combination of WBM and non-water based mud (NWBM), based on the technical requirements (Section 3.7.5.2).

Protective steel tubulars (casings and liners) are inserted as required. After installing a string of casings/liners and cementing them into the wellbore (Section 3.7.6), the casing/liner is pressure tested. Once

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the pressure testing is passed, drilling of the next section can resume with the riser in place to circulate drill cuttings and drilling fluids back to the MODU.

Cuttings in drilling fluids circulate back to the MODU and are separated from the drilling fluids by the solids control equipment (SCE). The SCE comprises shale shakers to remove coarse cuttings from the drilling fluid. After processing by the shale shakers, the recovered fluids from the cuttings may be directed to centrifuges, which are used to remove the finer solids. Water-based drill cuttings are typically discharged below the water line and the fluids are recirculated into the fluid system. If NWBM is required to drill a well section, the cuttings, which are separated from the NWBM via the shakers, will also pass through a cuttings dryer and associated SCE to reduce oil on cuttings.

3.7.5 Drilling fluids

Drilling fluids (also termed drilling muds) are used to lubricate the drill string and bit, maintain borehole stability and hydrostatic pressure, and aid in returning cuttings to surface. Drilling fluids comprise a base fluid, weighting agents, and chemical additives that are used to give the fluid the exact properties required to make drilling as efficient and safe as possible.

3.7.5.1 Water-based Mud (WBM) system

Typically, the top-hole sections will be drilled riserless using drilling fluid which is mainly comprised of water (salt or fresh), although some basic additives (such bentonite or guar gum) may be incorporated. All drilling fluid chemicals selected for use will be assessed under the Woodside Chemical Selection and Assessment Environment Guideline. The bottom-hole sections may be drilled using WBM in a closed circulation system which enables re-use of the WBM drilling fluids. WBMs contain a variety of chemicals, in addition to the water based fluid, to meet specific technical requirements (e.g. mud weight required to manage pressure or for borehole stability). WBM may not be able to be reused between drilling sections due to the drilling sequence, technical requirements of the mud (i.e. no tolerance for deterioration of mud during storage) and maintenance of productivity/injectivity. WBM drilling fluids that cannot be reused or are mixed in excess of required volumes, may be operationally discharged to the ocean under the MODU's Permit to Work (PTW) system at approximately 5 m below the waterline. Opportunities to reuse the WBM drilling fluids at the end of the Petroleum Activity are reviewed across current Woodside drilling activities.

3.7.5.2 Non-Water-Based Mud (NWBM) system

The decision to use NWBM drilling fluids for the bottom hole sections of a particular well is based on various technical factors relevant to wellbore conditions, such as: well temperature, well shape and depth, reactivity of the formation to water and well friction. The technical justification to use NWBM includes but is not limited to consideration of performance, environment, health, safety and waste management.

The use of NWBM drilling fluids is subject to a formal written technical justification. The main ingredient of NWBM is base oil and, similar to a WBM system, a range of standard solid and liquid additives may be added in the pits to alter specific mud properties for each section of the well. This depends on the conditions encountered while drilling. Where NWBM is used, the base oil will be a Group III synthetic oil (e.g. Saraline 185V), for all wells.

The NWBM drilling fluid will be primarily mixed onshore (new or re-use existing stock) and transferred to the MODU by a support vessel, where it is stored and maintained in the mud pits / reserve tanks. During drilling operations, the NWBM drilling fluid, like the WBM, is pumped by high pressure pumps down the drill string and out through the drill bit, returning via the annulus between the drill string and the casing back to the MODU via the riser.

The used NWBM pumped back to the MODU contains drill cuttings and is pumped to the SCE, where the drill cuttings are removed before being pumped back to the pits ready for re-use. The technical properties of the NWBM drilling fluids are maintained/altered (e.g. to increase weight) using additives as required when in the mud pits.

The NWBM drilling fluids that cannot be re-used (i.e. do not meet required drilling fluid properties or are mixed in excess of required volumes) are recovered from the mud pits and returned to the shore base for onshore processing, recycling and/or disposal. The mud pits and associated equipment/infrastructure are cleaned when NWBM is no longer required, with wash water treated onboard through SCE prior to discharge

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with mud pit washings or returned to shore for disposal if discharge criteria cannot be achieved (refer Section 3.7.5.3).

3.7.5.3 Mud pits

There are typically a number of mud pits (tanks) on the MODU that provide a capacity to mix, maintain and store fluids required for drilling activities. The mud pits form part of the drilling fluid circulating system. As described above the mud pits are cleaned out when changing between drilling fluids and / or between different well sections. In addition, the mud pits and associated equipment/infrastructure are cleaned out at the end of drilling and completions operations. Mud pit wash residue is operationally discharged with less than 1% oil contamination by volume. Mud pit residue over 1% oil by volume is sent to shore for disposal.

3.7.5.4 Drill cuttings

Drill cuttings generated from the well are expected to range from very fine to very coarse (less than 1 cm) particle/sediment sizes. Cuttings generated during drilling of the top-hole sections are discharged at the seabed.

The bottom hole sections will be drilled with a marine riser that enables cuttings and drilling fluid to be circulated back to the MODU, where the cuttings are separated from the drilling fluids by the SCE. The SCE may comprise of, but is not limited to, shale shakers, cuttings dryers and centrifuges. The SCE uses shale shakers to remove coarse cuttings from the drilling mud. After being processed by the shale shakers, the recovered mud from the cuttings may be directed to centrifuges, which are used to remove fine solids (4.5 to 6 µm). The cuttings are usually discharged below the water line and the mud is recirculated into the fluid system.

If NWBM is required to drill a well section, the cuttings which are separated from the NWBM via the shakers will also pass through a cuttings dryer and associated SCE, to reduce the average oil on cuttings for the entire well (only sections using NWBM) to 6.9% weight/weight (wt/wt) or less on wet cuttings, prior to discharge.

Estimated volumes of drill cuttings that may be discharged during the Petroleum activity is presented in Section 6.7.8

3.7.6 Cementing Operations

In addition to cementing casing and liners into the place, cementing operations are also undertaken to:

- provide annular isolation between hole sections and structural support of the casing/liner as required
- sealing lost circulation zones
- set a plug in an existing well to side-track
- plug a well so it can be suspended/abandoned.

Support vessels transport cement, barite, and bentonite (as dry bulk) to the MODU. Cement is mixed as required by the cementing unit on the MODU and pumped by high-pressure pumps to the surface cementing head then directed down the well. During the cement jobs, some cement bulk could be discharged to the environment during the process of pumping cement downhole. In addition, contaminated liquid cement that cannot be used down hole cannot be returned to shore for disposal, as it may solidify in storage tanks. Cement will be mixed and pumped as required from a small mixing tank on the cement unit. This limits the volume of excess or contaminated cement that could potentially require discharge into the ocean.

Small amounts of dry cement may be vented and blown overboard during the pneumatic transfer process between support vessels and the MODU. After well operations are completed, excess cement, barite, and bentonite (dry bulk) are either held on board or may be discharged to the marine environment (refer to Section 6.7.9).

3.7.6.1 Cement unit test

The MODU may be required to perform a cement unit test, or ‘dummy cement job’ to test the functionality of the cement unit and the MODU’s bulk cement delivery system prior to performing an actual cement job. This operation is usually performed after a MODU has been out of operation for an amount of time (warm-stack),

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or when equipment or materials need to be tested, if maintenance on the cement unit has been carried out, or if it is the first time a MODU is being used in-country and commissioning of the cement unit system is required.

A 'dummy cement job' involves mixing a sacrificial cement slurry at surface; the slurry is discharged through the usual cement unit discharge line (below the water line) or through drill pipe below sea level. The slurry is usually a mix of cement and mix water and cementing chemicals or chemical additives.

3.7.6.2 Foam wipers

As part of each cement job, foam wiper balls may be used for fluid separation between the cement slurry and displacement fluid and to mechanically clean the interior of the landing string or work string. These foam wiper balls are typically made of natural rubber or urethane.

During the top hole sections that will be drilled riserless and placement of an environmental cement plug in the event of non-routine activities (e.g. well abandonment in a dry hole scenario), the foam wiper balls will be discharged to sea from the drill string a few meters above the seabed. It is expected that up to three foam wiper balls will be used per well during top hole drilling and up to three foam wipers balls used during non-routine activities.

3.7.7 Formation evaluation

Formation evaluation interprets a combination of measurements taken inside a wellbore to detect and quantify hydrocarbon presence in the rock adjacent to the well once total depth is reached. Formation Evaluation While Drilling (FEWD) is the process by which the presence and quantity of hydrocarbon in a reservoir is measured according to its response to radioactive and electrical input. FEWD may include extracting small cores, wireline logging, full diameter cores and other downhole technologies, as required. FEWD tools will be incorporated into the drill string during development drilling; these tools may include gamma ray, directional deep resistivity, callipers, density-neutron, sonic and formation pressure measurement tools. Some FEWD tools contain radioactive sources; however, no radioactive material will be released to the environment. Generally, radiation fields are not detectable outside the tool if it is not energised; therefore, radiation does not present an environmental risk.

3.7.8 Wellbore clean-out

During drilling, wells are often displaced from one fluid system to another. A chemical cleanout fluids train will be circulated between the two fluids, then seawater or brine will be circulated until operational cleanliness specifications are met. Brine and seawater will be discharged during and/or after this operation. If clean-up brine is contaminated with base oil, it will be captured and stored on the MODU and discharged if oil concentration is < 1% by volume or returned to shore if discharge requirements cannot be met. Displacement pills and clean out trains are typically between 5 m^3 and 100 m^3, depending on application.

3.7.9 Xmas tree installation

Before the upper completion is installed into the wells, the Xmas tree will be installed from either an IMMR vessel or directly from the MODU. Due to the subsea well layout, if installation is planned to occur from the IMMR vessel, the MODU will be required to reposition away from the drill centre to allow the IMMR vessel to install the Xmas tree. Once the Xmas tree has been installed, it will be pressure tested to confirm integrity before the MODU BOP is reconnected to continue with drilling and completions activities.

The Xmas tree will be installed with a preservation mixture in the production and annulus bore. There will be a small discharge of preservation fluid associated with testing and connecting the subsea system (~100 to 150 L per well).

3.7.10 Well completion

Well completion activities to be undertaken after wellbore clean-out will include:

- installing lower completion equipment such as sand screens, reservoir isolation valve and gravel pack packer assembly

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- gravel packing the open hole, which involves circulation of a water based gravel pack gel carrying gravel/proppant into the open hole outside of the sand screens until the annular void is fully packed with gravel/proppant
- displacing a filtercake breaker fluid inside the sand screens after the gravel pack operation is completed, which contains chemicals such as acids or chelants designed to remove the filtercake from the inside of the open hole and improve well productivity
- installing upper completion equipment such as production packer, downhole gauge, downhole safety valve and tubing hanger
- base oil may be circulated into the tubing prior to setting of the production packer to allow the well to become underbalanced to the reservoir to allow the well to flow
- installing crown plugs in the tubing hanger (may be pre-installed in the tubing hanger)
- pressure testing plugs and Xmas tree valves to verify as suspension barriers
- opening the reservoir isolation valve
- shutting in the Xmas tree
- removing the BOP.

Following well completion activities, the wells may be left with subsea equipment (such as Xmas trees) installed, awaiting tie-back to the existing GWF infrastructure. All subsea equipment will contain preservation fluids to prevent corrosion and any other deterioration of the equipment before production flows commence. These preservation fluids will be produced to the production facility upon well startup.

3.7.11 Well flowback

Woodside may conduct well testing or well unloading activities after the production wells are drilled. Well testing and unloading tasks may include:

- reservoir gas flaring
- reservoir gas venting.

The nearfield wells (YDA01, ESA01, TPA04) are planned to be unloaded to host (i.e. the GWA platform) and will be managed in accordance with the NOPSEMA-accepted GWA Facility Operations EP. The Wilcox wells (WCA01, WCA02) are planned to be unloaded to the MODU, as described below.

Initial unloading of the well displaces the completion/suspension fluids, and these are captured in surge tanks. The base oil will be flared and the brine/produced water can be filtered (if required) prior to discharge. After the completion/suspension fluids are unloaded, the gas stream is sent to flare via the production separator. After the objectives of the well testing and flowback are achieved, the flow is stopped and the well will be suspended. Additional filter cake breaker chemicals may be bullheaded into the well after the well unload to further improve well productivity.

During well unloading to the MODU, completion and reservoir fluids may be flared or discharged to the environment via the temporary production system.

- the temporary production system water filtration treatment package may be used to treat produced/reservoir water before discharge. Prior to discharging, the fluids are cycled through an oil bond filtration system.
- gas, condensate, base oil, and methanol in the wellbore will be flared and efficiently burned. The flare may be extinguished due to water ingress, lack of pilot (propane), weather impact, or equipment failure resulting in cold venting of gas from the flare and/or discharge of small volumes of liquid hydrocarbon droplets for several minutes.

3.8 Subsea installation and pre-commissioning activities

The subsea installation scope of work will include installing and pre-commissioning the infrastructure identified in Table 3-5 Installation vessels will be used to install the subsea infrastructure. The installation vessel will operate in DP throughout the campaign. These vessels will typically be equipped with appropriate

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equipment (e.g. cranes, submersible ROVs, etc.) which will aid in the installation, hook-up, and pre-commissioning processes.

During hook-up and pre-commissioning of the new and existing facilities there is potential for discharges associated with the testing and connection activities of the subsea systems. These discharges include:

- discharge of small volumes of flowline contents (inhibited seawater, MEG) during tie-in
- initial dissolving of chemical sticks prior to connectors being closed
- isolation testing resulting in small volumes of hydrocarbon gas being discharged.

Wet storage of infrastructure items may be required during installation (Refer to Section 3.8.4.4). During the wet storing period, the internal volumes of subsea equipment will be preserved and protected with inhibition fluids.

Once the subsea infrastructure is installed it will be tied into existing GWF subsea infrastructure.

The subsea installation scope of work is summarised in Table 3-5.

Table 3-5: Proposed subsea installation component summary

Description	Detail	Dimensions (~L × W × H)
Wilcox		
Wells	Two Xmas tree	4 x 6 x 4 m
Subsea flowlines	11”ID flexible flowline between Wilcox manifold and Wilcox FLET 8” flexible jumper between wells and Wilcox manifold x2 10” flexible jumper between Wilcox FLET and LPA PLET	~25 km ~300m ~220 m
Subsea control	Umbilicals with UTA (with UTAs) associated with production flowlines Various EFLs Various HFLs	See above Up to ~100 m in length Up to ~ 100m in length
Subsea structures	WCA manifold Wilcox PLET UTA / mudmats x 2 EDU / mudmats x 2	13 x 12 x 6 m 13 x 12 x 6 m 4.9 x 3.7 x 1.5 m (typical) 4.9 x 3.7 x 1.5 m (typical)
Mattresses	Various flowline and umbilical stabilisation Infrastructure crossings	6.0 x 3.0 x 0.3 m
Nearfield Infill		
Wells	Xmas tree x3	4 x 6 x 4 m
Subsea flowlines	10” flexible flowline from Yodel Updip well to EYA manifold 10” flexible flowline from EYA manifold to KDA manifold 8” flexible jumper from Echo spur to EYA manifold 8” flexible jumper to TPA manifold	3.25km 3.1 km 200 m 300 m
Subsea control	Umbilicals with UTA (with UTAs) associated with production flowlines Various EFLs Various HFLs	See above Up to ~200 m in length Up to ~ 250m in length
Subsea structures	EYA manifold UTA / mudmats x 4, EDU / mudmats x 3	13 x 12 x 6 m 4.9 x 3.7 x 1.5 m (typical) 4.9 x 3.7 x 1.5 m (typical)
Mattresses	Various flowline and umbilical stabilisation	6.0 x 3.0 x 0.3 m

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Description	Detail	Dimensions (~L × W × H)
	Infrastructure crossings	

3.8.1 Existing Subsea Infrastructure

The proposed GWF4 subsea infrastructure will tie-in to three locations on the existing GWF subsea:

- LPA PLET
- KDA Manifold
- TPA Manifold

3.8.2 Underwater acoustic positioning

Long base line (LBL) transponders and/or ultrashort baseline transponders (USBL) are commonly used acoustic positioning methods and may be installed on the seabed as required by the installation activities. The USBL subsea transponder transmits an acoustic pulse back to the vessel receiver, hence providing an accurate positioning of the subsea transponder location. The LBL array provides accurate positioning by measuring ranges to three or more transponders deployed at known locations on the seabed and structures.

An LBL or USBL array near each well may be in place for ~1–6 months. Acoustic transmissions are not continuous—they are short ‘chirps’ when active and do not emit any sound when on standby. If used, the LBL transponders are installed in stands on the seabed. Both the transponders and stands are recovered after installation. The USBL transponders are mounted on the subsea infrastructure and removed post installation.

Transponders may also be installed in stands on the seabed for vessel positioning. Both transponders and stands will be removed post installation.

3.8.3 Subsea installation

3.8.3.1 Pre-lay survey

A pre-lay survey to identify debris and hazards (not a full geophysical survey) may be done before starting flowline installation and will be performed by the installation vessel, or alternatively, a uncrewed support vessel (USV).

The pre-lay survey may use various non-intrusive survey methods and techniques (such as side-scan sonar [SSS], multibeam echo sounder [MBES], or visual [e.g. via an ROV or autonomous underwater vehicle (AUV)]). Information is transferred to the vessel via an umbilical or downloaded when the instrument is recovered (if an AUV is used). Survey methods (e.g. SSS and MBES) use a technique of sound pulses to establish the profile of the seabed. Most systems work by transmitting a broad acoustic pulse from a hull or pole mounted transducer.

3.8.3.2 Sediment mobilisation and relocation

Sediment mobilisation and relocation techniques such as jetting, and mass flow excavation may be used to support subsea installation activities to meet design requirements.

3.8.3.3 Installation of subsea structures

Subsea structures (e.g. mud mats, fixed datum points, manifolds) will be installed by the PIV or IMMR vessel. Structures will be deployed using the PIV’s main crane to a pre-determined depth before engaging the ROV to guide it to the correct position. Underwater acoustic positioning, as described in Section 3.8.1, will be used to position the structure on the seabed.

3.8.3.4 Flowline initiation / initiation anchor deployment

Commencement of flowline installation may require using initiation anchor to pull against, in order to provide the required tension to the flowline as it transitions from the installation vessel to the seabed. The initiation anchors may consist of a suction pile, drag anchor or clump weight/dead-man anchor and will be recovered post installation.

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Installation aids such as sandbag markers or concrete mattresses may be used for positioning aids or wet storage as required. Where practicable these will be recovered.

3.8.3.5 General flexible flowline and EHU installation

The optimum flowline and umbilical routes are selected by considering seabed bathymetry, environmental data, preinstallation surveys and installation risk management, including dropped object risks and buckling/walking impacts.

The indicative installation methodology and principle applied when installing the flowlines and umbilicals is as follows:

- the flexible flowlines and umbilicals will be stored on reels or carousels
- a vertical lay system (VLS) on the vessel will be used
- during installation, a hydraulically driven centre reel drive will be engaged to the reel to rotate the reel in synchronised speed with the VLS
- installation sequence for flowline and umbilical is:
  - prepare connection system (flexible) or UTA (umbilical) and VLS onboard the vessel
  - perform tests and pre-deployment checks
  - deploy and land out the flowline or umbilical first end via VLS and crane wire, using ROV for observation, support activities and positioning as required
  - continue flexible flowline or umbilical lay as per lay route while monitoring touchdown with ROV until the total length of flowline/umbilical has been laid to (a) the second end connector for flexibles or (b) the second end UTA for umbilicals
  - land out the second end of the flowline or umbilical via the VLS and crane wire, using the ROV for observation, support activities and positioning as required.

The flexible flowline may be installed using a lighter installation spread on the installation vessel, via a deck mounted powered reel system in combination with a deployment chute mounted on the side of the installation vessel and temporary installation aids placed on the seabed. In the event the flexible flowline needs to make a turn, a temporary small bulkabag filled with sand are deployed to act as the turning bollard. Turning bollards (if required) would have their contents (sand locally sourced) left on the seabed and the bags recovered to the installation vessel.

3.8.3.6 General HFL, EFL and jumper installation

The Petroleum Activity includes installing several new subsea components that will tie in each well to the either existing or new production manifolds or to new UTAs. The FLs will be configured into deployment basket(s) or onto deployment frames and landed on the seabed using a crane. ROVs will complete the final subsea tie-in. Water jetting and/or acid injection may be used to clean the connections on the infrastructure prior to tie-in.

3.8.3.7 Span/scouring rectification and stabilisation

Spans are undulations in the seabed that do not provide sufficient support to the flowline. Spans are generally mitigated by installing structures, such as concrete mattresses or grout bags, before installing the flowline. Engineering will determine if span rectification is needed. The dimensions for each concrete mattress are typically 6 m x 3 m x 0.3 m.

Post-lay span rectification may also be required after subsea installation. This process typically involves placing grout bags under the span section. The empty bag is moved into position using ROV, then filled with grout supplied from a mixing and pumping spread on the vessel via a downline. Typical pumped grout volumes depend on the size of the span and may vary from about 200 kg to 2,000 kg per span.

If grout bags are used, the downline recovery time risks exceeding the grout curing time. If grout cures within the downline and pump, the equipment is likely to be rendered unserviceable, as well as the downline not being safely recoverable in the normal way. Therefore, after grouting activities at each span site, the downline and pump will need to be purged using seawater. This results in an amount of grout, equivalent to

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the downline volume (~5 m^3), being discharged to the ocean. This flushing is required once per grout site. The actual number is not known until the line is laid and need for span rectification determined, if any.

Scouring is the movement of seabed sediment (e.g. silt, sand and gravel) from around the base of a subsea structure to further afield due to prevailing hydrodynamic conditions, compromising the integrity of the structure. If scouring is a risk, then it is typically mitigated by installing concrete mattresses along the perimeter of the installed structure.

If concrete mattresses are used, the process for installation is likely to be similar to those described above for prelay span rectification. The concrete mattresses will be lifted off the installation vessel and lowered to the seabed by the vessel's main crane. The ROV from the installation vessel will assist with positioning the mattresses during installation.

Stabilisation is a post lay activity to ensure that the affected items, such as FLs, flexible flowlines and flexible jumpers, remain at their installed positions (i.e. not being shifted due to strong seabed current). Stabilisation of FLs is generally mitigated by installing sand bags on top at a predetermined distance apart. Sand bags generally come in a standard size with 20 to 25 kg weight. Concrete mattresses may be used to stabilise the flexible jumper. Sandbags or concrete mattresses may also be used to provide temporary stability of wet stored items if wet storage proves necessary.

3.8.3.8 Infrastructure Crossing Supports

The Wilcox flowline route crosses existing fibre optic cables which will require the installation of crossing supports (Table 3-6). The design and specifications of the crossing supports are specific to each crossing. Crossing supports are designed to be concrete mattresses. Concrete mattress will be installed in close proximity on either side of the existing subsea infrastructure. To ensure the correct height is achieved, the design allows for a layering of multiple mattresses to create sufficient bearing capacity. The installation and size of concrete mattresses is as described in Section 3.8.3.7. In addition sediment mobilisation and relocation may be used to create a short corridor to submerge flowlines and umbilicals for crossings in order to achieve design requirements.

Table 3-6: Commonwealth waters subsea infrastructure crossings

Crossing	KP	Water Depth (m)	Method
Fibre Optic Cable 1 (Telstra)	Wilcox - 4.7	~ 73 m	Mattresses
Fibre Optic Cable 2 (Telstra)	Wilcox - 9.5	~ 75 m	Mattresses
GWF2 Flowline	Flowline to KDA manifold	~ 124 m	Mattresses

3.8.4 Pre-commissioning

Pressure testing is performed to test the integrity of subsea infrastructure, test isolations and identify any leaks. Pressure is typically applied via a downline from the installation vessel or via ROV. Failure of testing equipment or integrity of the tested infrastructure may lead to a loss of leak test fluids to the marine environment. After the testing is completed, the system pressurisation volume may be released to the environment to mitigate the risk of hydrocarbons returning to the installation vessel.

During tie-in and pre-commissioning activities, any subsea connection break-outs will be preserved with chemical sticks. A small amount of chemically treated MEG/water may be discharged to the environment from the structure and tie-in flexible prior to final make-up of the connection. All chemicals used in pre-commissioning activities will be subject to the chemical selection assessment process described in Section 7.2.1

3.8.4.1 Flooding

The flexible jumpers and production flowlines will be installed filled with chemically treated, up to ~85 wt% MEG/water. While the Wilcox flowline will be installed with a ~30 wt% MEG/water. MEG is used to prevent formation of hydrates during start-up.

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3.8.4.2 Leak testing

Leak test/system pressure tests are performed to confirm the integrity of subsea connections and jumper. During leak testing there may be small volumes of test fluids discharged to environment during connection and disconnection of hot stabs.

3.8.4.3 Dewatering

The Wilcox flexible flowline will be dewatered and purged with nitrogen following installation and leak testing. Dewatering is accomplished by launching a dewatering pig train to remove as much line-fill medium from the piggable flexible flowline system as possible. The pig will be propelled by nitrogen gas to displace the fluid. The volume of pre-filled ~35 wt% MEG/water medium is expected to be approximately 1600 m^3.

After the pigging is completed, the flowline is left filled with nitrogen, at a pressure of at least 55 bar, in preparation for hot-commissioning (introduction of hydrocarbons). Hot commissioning is outside of scope of this EP.

The contents of the jumpers and the nearfield flowlines will be produced to the GWA Platforms, outside of the scope of this EP.

3.8.4.4 Tie-in to GWF subsea infrastructure

Prior to tie-in of the proposed infrastructure to the GWF infrastructure, verification testing of any leakage from the manifold isolation valves may be undertaken. This testing will verify that suitable isolations for safe tie-in are available, thereby preventing a major hydrocarbon release during tie-in. This verification may result in the release of hydrocarbons to the environment. The hydrocarbons are predominantly gas with a small quantity of condensate.

Additionally, when the flowline tie-ins take place, a quantity of hydrocarbons may be released. A conservative estimate of hydrocarbons that may be released during the flowline tie-in at a manifold is up to 400 L of condensate and residual gas over a 48 hour period. Water jetting and/or acid injection may be used to clean the connections on the infrastructure prior to tie-in.

3.8.4.5 Cold commissioning of subsea infrastructure

The commissioning associated with subsea infrastructure prior to the introduction of hydrocarbons (referred to as cold commissioning) generally includes subsea control systems verification and function testing of valves to verify that the HFLs and EFLs are ready for entry into the start-up phase.

During cold commissioning, an ROV is deployed from the installation vessel (or similar support vessel) to provide visual confirmation of Xmas tree valve actuation. This activity is typically less than 12 hours in duration per well.

3.8.5 Wet storage of equipment

Wet storage of infrastructure may be required intermittently throughout the duration of subsea installation activities as part of the Petroleum Activity There are three categories of equipment that may require wet storage as part of the Petroleum Activity and are summarised in Table 3-7.

Table 3-7: Wet storage that may be required as part of the Petroleum Activity

Wet storage category	Reason for wet storage	Typical equipment	Retrieval method
Installation aids	To facilitate safe installation of infrastructure	Predominantly installation aids (ROV baskets, clump weights, etc.)	Retrieval will be undertaken using project vessels and associated equipment such as cranes, ROV, etc.

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Wet storage category	Reason for wet storage	Typical equipment	Retrieval method
Subsea infrastructure	Prior to connection of infrastructure, wet storage may be necessary to optimise project schedule and support SIMOPs	Items may include jumpers, flying leads and wet parking/deployment frames, etc.	Retrieval is not required, as infrastructure will be used for production operations and once connected is no longer considered wet stored
Mooring	BOP tethers (if required), mooring chains and anchors may be wet stored for ~ 60 days pre/post MODU connection/disconnection	Mooring chains and anchors, BOP tether systems	Retrieval will be undertaken using project vessels and associated equipment such as cranes, ROV, etc.

Any installation aids and mooring equipment placed on the seabed will be removed at the completion of activities (i.e. no wet stored equipment will remain on the seabed). Noting that some installation aids may remain attached to installed subsea infrastructure.

3.8.6 Site surveys

Site surveys may be undertaken at various stages during the installation of subsea infrastructure. An initial flowline pre-lay survey will be undertaken (Section 3.8.3.1), with additional surveys carried out with an ROV, as required. These surveys will identify the location of all items placed on the seabed (including wet stored items and installed infrastructure).

An as-built survey will be conducted by ROV at the completion of the installation campaign to ensure equipment is installed in the designed location. This data will be used to update the ‘survey screen’ to develop the as-built report, which is considered the inventory of items remaining on the seabed (and in the petroleum title). In addition, any material items dropped to the marine environment and not recovered will be added to the inventory for the title.

3.8.7 Subsea IMR

Following installation of subsea infrastructure and flowlines, items will remain installed or wet-stored in a preserved state on the seabed, prior to commissioning, start-up and operations. During this non-production phase, Inspection, Monitoring, Maintenance and Repair (IMMR) activities may be carried out as required any time throughout the life of this EP, post-infrastructure installation. This may include cleaning of marine growth (e.g. ROV water jet), sediment relocation, ROV inspections, infrastructure repair.

All subsea structures installed during the Petroleum Activity have been designed to be removed above the mudline. The subsea infrastructure is designed not to require regular intervention; however, an IMR process will be in place to maintain the subsea infrastructure to acceptable standards while this EP is in force.

IMMR activities may occur at any time during the Petroleum Activity in the unlikely event that they are required. IMMR activities are typically undertaken from a support vessel and may use an ROV with transponders to inspect equipment.

3.9 Project fluids

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. This is detailed in Section 7.2.1

3.10 Contingent activities

The next sections present contingencies that may be required, 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 discharges and emissions being operationally discharged.

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3.10.1 Respud

A respud may be required for a number of reasons, such as if the conductor or well head slumps or fails installation criteria (typically during top hole drilling) or after drilling the reservoir section. Respudding involves moving the MODU to a suitably close location (e.g. about 25 m - 250 m from the original location, within the OA) to recommence drilling. A respud activity would result in repeating top-hole drilling.

The environmental aspects of respudding are the same as those for drilling and are considered to be adequately addressed by this EP, with no significant changes to existing environmental risks or any additional environmental risks likely. The net environmental effect would be limited to an increase in the volume of cuttings (similar to those identified in Section 3.7) generated and discharged at the seabed, from the repeat drilling of the top-hole section, plus an increase in the quantity of cement discharged at seabed from cementing the conductor and surface casing strings.

3.10.2 Sidetrack

Drilling of a sidetrack may be required if operational issues are encountered. The environmental aspects of a sidetrack well are the same as those for routine drilling activities, which are considered to be adequately addressed by this EP, with no significant changes to existing environmental risks or any additional environmental risks likely. The net environmental effect would be limited to an increase in the volume of cuttings generated (including potential swarf), potential increase in the use of cements, drilling fluids, and the additional emissions (atmospheric and waste) associated with an extended drilling program.

3.10.3 Workover

The proposed development wells may be worked over to monitor and maintain well integrity as required. A workover may be completed using either a MODU or a vessel. The environmental aspects of a workover operation are the same as those for undertaking well completion activities and are considered to be adequately addressed by this EP, with no significant changes to existing environmental risks or any additional environmental risks likely.

3.10.4 Well intervention

An intervention may be performed on any of the Petroleum Activity wells. Interventions may be performed due to down-hole equipment failure or to address underperformance of a well. Key well intervention methods include wire-line and coiled tubing. Potential environmental impacts from intervention activities have been included in this EP, including discharge of suspension fluids and brines and small volume gas releases subsea due to removal of a tree cap which may be in place if the well was previously suspended.

3.10.5 Well suspension

During drilling activities, a well may need to be temporarily suspended. Suspension involves establishing suitable barriers, removing the riser and disconnecting the MODU from the well. The BOP may be left in place to act as a barrier. Suspension may be short term (e.g. in the case of a cyclone) or longer term (more than one year). On return to a well after suspension, the MODU reconnects to the well via the riser, and with BOP in place, barriers are removed and drilling and completions activity resumes.

3.10.6 Well abandonment

The Petroleum Activity covers the drilling of development wells, which are not envisaged to be abandoned until the end of the production field life. For technical reasons, it may be required to abandon the lower section of a well, prior to sidetracking, or in the event that a respud is required or in the event of a dry hole scenario.

Well abandonment activities are conducted in accordance with Woodside's internal standards. Base oil may be used for inflow testing prior to abandonment; to verify barrier integrity (base oil is also used for well cleanup/test activities and as such has been risk assessed in this EP). Base oil would be pumped down the drill string and reverse circulated back to the rig, with fluids collected for disposal onshore or flared if equipment / facilities are available. If stored in a mud pit, the base oil and other fluids associated with the test may result in pit wash water contaminated with hydrocarbons. If this is the case, mud pit wash water would be discharged in accordance with requirements in this EP; with a hydrocarbon content <1% by volume.

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If required, wells would be abandoned with abandonment cement plugs, including verification of the cement plug in accordance with Woodside Standard -Well Barrier Standard. A lower section of a well may also be abandoned prior to sidetracking.

Following abandonment activity, the marine riser and BOP will be removed and every reasonable attempt for retrieval of the wellhead will be made. Wellheads are removed by deploying a cutting device on drill pipe that then cuts through the surface casing and conductor, allowing the wellhead to be retrieved to the surface. Backup cutting equipment is sent offshore as a contingency should the primary set of equipment fail. The cutting equipment is very reliable with a high success rate of cutting wellheads. If these recognised removal techniques are ineffective, the wellhead may be left in-situ. The integrity of the wellbore is not affected by the wellhead assembly remaining in-situ.

3.10.7 Sediment mobilisation and relocation

If required, an ROV-mounted suction pump/dredging unit may be used to relocate sediment/cuttings around the wellhead or other infrastructure, to keep the area clear and safe for operations and equipment. This activity has the potential to generate plumes of suspended sediment during pumping.

3.10.8 Venting

During drilling or completion of the well, a well kick may occur. A kick is an undesirable influx of formation fluid into the wellbore. To maintain well integrity in this situation, a small volume of greenhouse gases is released to the atmosphere via the degasser, in a well control operation known as ‘venting’.

3.10.9 Emergency Disconnect Sequence

An Emergency Disconnect Sequence (EDS) may be implemented if the intervention vessel/MODU is required to rapidly disengage from the well. The EDS closes the BOP (i.e. shutting in the well) and disconnects the riser to break the conduit between the BOP and MODU. Common examples of when this system may be initiated include when the MODU moves outside of its operating circle (e.g. failure of one or more of the moorings) or moves to avoid a vessel collision (e.g. third-party vessel on collision course with the MODU). The EDS aims to leave the well in a secure condition but will result in the loss of the fluids/cuttings in the riser after disconnection.

3.11 Vessels

Several vessel types will be required to complete the activities associated with the Petroleum Activity (Table 3-3). Up to three vessels may be on site within the Operational Area at any time, noting that vessel presence may vary during different stages of the activity. Vessels are discussed in further detail in the following section and include:

- MODU, the term MODU refers to a hybrid mobile offshore drilling unit; with both moorings and DP systems
- IMMR vessels may be used for cold commissioning, installing the Xmas tree and IMMR activities
- installation vessels for flowlines, umbilicals, flying leads, jumpers, manifold and other subsea infrastructure and hardware. May also support cold commissioning prior to start up
- support vessels, including:
  - anchor handling vessels (AHVs) (if required) to set anchors and support the MODU during operations
  - offshore support vessels and heavy lift vessels for:
    - transporting hardware from port/staging area to the Operational Area and installation vessels
    - general re-supply activities
    - support for the MODU and installation vessel(s).

Vessels may mobilise from the nearest Australian port or directly from international waters to the Operational Area. All project vessels are subject to the Marine Offshore Assurance process and review of the Offshore Vessel Inspection Database (OVID). All required audits and inspections will assess compliance with the laws

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of the international shipping industry, which includes safety and environmental management requirements, and maritime legislation including International Convention for the Prevention of Pollution from Ships 1973 as modified by the Protocol of 1978 (MARPOL) and other International Maritime Organization (IMO) standards.

For power generation, vessels may use diesel-powered generators and/or LNG. All vessels will display navigational lighting and external lighting, as required for safe operations. Lighting levels will be determined primarily by operational safety and navigational requirements under relevant legislation, specifically the *Navigation Act 2012.* The MODU and project vessels will be lit to maintain operational safety on a 24-hour basis. Note: Vessel activities outside the Operational Area are not part of the Petroleum Activity, and are not within scope of this Petroleum Activity (Section 3.2).

3.11.1 MODU

Wells will be drilled, completed and unloaded using a hybrid MODU (moored/DP). The type of MODU mooring system used will vary depending on the location and seabed conditions, and may include conventional or pre-lay anchors, or pile moorings.

Typical specifications for a hybrid MODU types are provided in Table 3-8. These are collectively referred to as the MODU for the remainder of the document unless specific risks for different MODU types have been identified. Due to variabilities, such as contractual and operational matters, the MODU used may be subject to change.

Table 3-8: Typical MODU specification ranges

Component	Specification Range
Rig type/design/class	Semi-submersible MODU
Accommodation	120 to 200 personnel (maximum persons on board)
Station keeping	Minimum eight-point mooring system and thrusters for Dynamic Positioning (DP3)
Bulk mud and cement storage capacity	283 to 1,360 m^3
Liquid mud storage capacity	576 to 3,000 m^3
Fuel oil storage capacity	966 to 4,000 m^3
Drill water storage capacity	3,500 m^3

3.11.2 IMMR vessels

It is anticipated that IMMR vessels will be involved no more than one to two weeks. Noting that an IMMR type vessel is an option for subsea installation (e.g. subsea xmas trees), ROV surveys, isolation testing and other activities. However, timing may vary depending on operational requirements, capability and availability. Size of the vessel may also vary depending on the scope of work. The specifications of the Fugro Etive are presented in Table 3-9 as an example and represent the typical specifications of a IMMR vessels.

Table 3-9: Typical IMMR vessel

Component	Specification Range
Vessel type	Operations support vessel
Length overall	92.95 m
Breadth	19.70 m
Depth	7.7 m
Gross tonnage	4,926 t
Accommodation	100 people
Dynamic positioning system	DP2
Fuel Capacity	2,225 m^3 (241 m^3 largest isolated diesel tank)

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3.11.3 Primary Installation vessel

The subsea installation scopes of work may require a vessel, with sufficient capacity to accommodate subsea infrastructure and hardware such as flowlines, umbilicals, FLs and jumpers.

A typical installation vessel for subsea and flowline installation would be a DP vessel (usually DP2 class) equipped with a primary differential global surface positioning system (DGPS) and an independent secondary DGPS backup. The specification of a typical subsea installation vessel is provided in Table 3-10.

Installation vessels are typically equipped with various material handling equipment, which includes cranes, winches, ROVs and ROV launch and recovery systems, vertical lay system (VLS) with either vertical reel drive or horizontal reel drive (carousel) and pre-commissioning spread.

Lifting operations may involve loading and unloading equipment from support and supply vessels onto the installation vessel and subsequently onto the seabed. Cranes are typically equipped with active heave compensation and auto tension, modes and have lifting capacities in excess of lifting loads expected to be encountered during operations.

Table 3-10: Typical DP2 Class subsea installation vessel

Component	Specification Range
Vessel type	DP2 Class as a minimum
Crane capacity	250 T active heave compensation crane as minimum
ROVs	Work Class ROVs
Deck space	~1,900 m^2
Deck strength	~15 T/m^2
Accommodation	~120 people
Fuel oil	~2,200 m^3 [total across multiple tanks]
Potable water	~800 m^3

3.11.4 Support vessels

The MODU and installation vessels will be supported by other vessels, such as general support vessel(s), cargo vessel(s), AHVs, barges and multiservice construction vessels. These vessels are expected to be in the Operational Area intermittently for short periods of time, as required.

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

Typical support vessels use a DP (Dynamic Positioning) system to allow manoeuvrability and avoid anchoring when undertaking work, due to the proximity of subsea infrastructure. However, these vessels are equipped with anchors that may be deployed in an emergency.

3.11.4.1 Uncrewed Surface Vessel

An Uncrewed Surface Vessel (USV) may be utilised to undertake ROV operations. The USV will be remotely controlled from an onshore remote operations centre (ROC) in Australia which is staffed 24 hours a day whilst the vessel is in transit or undertaking activities. Key roles in the ROC mirror those on a usual vessel management team and include a Vessel Master, First Officer, Offshore Manager and ROV Supervisor. The vessels are designed with multiple forms of high speed and reliable communication systems to allow connection to the ROC and provide redundancy in the case of disconnection during operations, including an independent emergency low bandwidth satellite communications system.

The USV will be assessed by Woodside Marine to review compliance with marine laws, flag requirements, vessel class and Woodside's safety and environment requirements.

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Because there are no facilities to support human occupancy on USV's, emissions and discharges are typically limited to cooling water and combustion of marine diesel. The vessel is equipped with bilge monitoring systems to monitor the bilge tanks for hydrocarbons (such as leaks from engine machinery spaces or from marine diesel tanks), and where detected the bilge pumps will auto disable and the vessel will be required to immediately return to port.

The USV may be equipped with a built-in work class ROV with the ability to deploy and retrieve equipment from the seabed.

3.11.5 Project vessel-based activities

3.11.5.1 Holding Station: Mooring Installation and Anchor Hold Testing/Soil Analysis

Mooring uses a system of chains/ropes and anchors, which may be pre-laid before the MODU arrives at the location, to maintain position when drilling. If moorings are used, a mooring analysis will be performed to determine the appropriate mooring system for the Petroleum Activity. The mooring analysis will identify whether the mooring system will be pre-laid or set by the rig, proof tension values, or if using synthetic fibre mooring ropes is required. A pre-laid system can generally withstand higher sea states compared to a system that only uses the rig's mooring chain/equipment.

Installation and proof tensioning of anchors involves some disturbance to the seabed. Anchor handling vessels are used to deploy and recover the mooring system.

As part of mooring preparations, anchor hold may be tested around the well locations. Anchor hold testing would be performed if Woodside determines that further assurance is required to ensure a robust mooring design.

Anchor hold testing may consist of an AHV or similar vessel dropping an anchor at a potential mooring location. The AHV would then tension the anchor to determine its ability to hold, embed and not drag at the location. This may have to be repeated several times at each location. A ROV may also be used to judge how deep the anchor has embedded and independently verify the seabed condition. Anchor hold testing activities would occur before the MODU arrives on location.

Soil analysis may also be necessary to provide data on composition and rock/substrate strength as input into the mooring design – and verify seabed conditions for anchor holding. Soil analysis could include taking a physical sample of the seabed using ROV or other tools, or using measuring devices such as a cone penetrometer. These tests would be performed up to several months before the MODU arrives on location, and may occur from a support vessel or anchor handling vessel.

Suction piling may be required as a contingent activity, and will be reviewed with the MODU contractor.

3.11.5.2 Holding Station: Rig Anchor Release MODU

The hybrid MODU scenario is such that the MODU is DP capable though predominantly holds station via pre-laid mooring system. If a hybrid MODU is used to conduct drilling, it will likely have a rig anchor release (RAR) system integrated. The moorings are typically pre-laid, though a RAR device couples the MODU mooring components with the anchor mooring components. The RAR is an acoustic release connecting link that can be installed in a mooring line to enable a rapid disconnection of a MODU from the mooring system. Each mooring leg would have one RAR installed in the mooring line. The acoustic release process is instigated from a command unit on the MODU that, when activated, transmits a low frequency signal (9 – 11 kHz) that is received by the RAR transducer in the mooring line and activates the primary hydraulic actuator. The hydraulic cylinder then releases the RAR and the mooring line is disconnected. The MODU then recovers the wire/chain ready for transit (on DP) and the subsea mooring leg remains in place, which may be buoyed off to reduce interaction with infrastructure if required.

To reconnect the MODU with the mooring system, the AHV will recover the mooring line from the MODU with RAR and the trigger sleeve before connecting to the pre-laid line, which is recovered from the water column by the AHV with assistance from a ROV.

3.11.5.3 Holding Station: Dynamic Positioning MODU

DP uses satellite navigation and radio transponders in conjunction with thrusters to maintain the position of the MODU, PIV and OSVs at the required location. Information about the position of the MODU is provided

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via a number of seabed transponders, which emit signals that are detected by receivers on the MODU and used to calculate position. The transponders and associated clump weights are typically deployed in an array on the seabed for the duration of the drilling at each well, and are recovered at the end, generally by ROV.

3.12 ROV

The MODU and project vessels may be equipped with an ROV system that is maintained and operated by a specialised contractor aboard the vessel. ROVs may be used during drilling operations and subsea installation, for activities such as:

- visual observations or surveys
- anchor hold testing
- anchor installation and connection of mooring systems
- BOP tether installation and connection (if required)
- positioning of subsea infrastructure
- supporting contingency activities
- subsea Xmas tree control systems hook-up and contingency control
- removal of sediments on or around subsea infrastructure
- installing, testing and pre-commissioning subsea infrastructure.
- contingency remote operation of BOP

An ROV may be fitted with various tools or camera systems as required. Specifically, during installation, the ROV is fitted with hydraulically driven tools to facilitate flowline tie-in. Temporary disturbance to a small area of the seabed (<25 m^2) may occur due to wet parking.

3.13 Helicopters

Helicopters are typically the primary means used to transport crew and/or urgent freight to and from the Operational Area They are also the preferred means of evacuating personnel in an emergency. Helicopter support will likely be sourced from Karratha or Exmouth airports.

Helicopter operations within the Operational Area are limited to helicopter take-off and landing on the helideck. Helicopters may be refuelled on the helideck of the MODU. Note: Helicopter activities outside the Operational Area are not part of, or within scope of, the Petroleum Activity (Section 3.2).

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4. DESCRIPTION OF THE EXISTING ENVIRONMENT

4.1 Overview

In accordance with Regulations 21 (2) and 21 (3) of the Environment Regulations, this section describes the existing environment that may be affected (EMBA) by the activity (planned and unplanned, as described in Section 2.1), 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 and/or socio-cultural consequence on the surrounding environment. For this EP, the EMBA is the combined potential spatial extent of surface and in-water hydrocarbons at concentrations above ecological impact thresholds (as defined in Section 0). The EMBA also includes any areas that are predicted to experience shoreline contact with hydrocarbons above threshold concentrations. The worst-case credible spill scenario for this EP (Section 6.8.1) is a loss of well integrity resulting in the release of hydrocarbons to the environment. The EMBA for this EP is based on the EMBA of spill following scenarios.

- Scenario 1 – Well blow-out event from the Wilcox development well
- Scenario 2 – Well-blow out event from the Yodel Updip development well

Woodside recognises that hydrocarbons may be visible beyond the EMBA at lower concentrations than the ecological impact thresholds defined in Section 0. These visible hydrocarbons have the potential to cause socio-cultural impacts. These visible hydrocarbons are not expected to cause ecological impacts. In respect of this, an additional socio-cultural EMBA is defined, as the potential spatial extent within which social-cultural impacts may occur from changes to the visual amenity of the marine environment. Receptors relevant to the socio-cultural EMBA include cultural values and heritage, Commonwealth and State marine protected areas (MPAs), National and Commonwealth Heritage Listed places, areas of tourism and recreation, and commercial and traditional fisheries. For this EP, the socio-cultural EMBA based on surface hydrocarbons encompasses an area fully within the boundaries of the EMBA for ecological impacts. The EMBA and socio-cultural thresholds EMBA are shown in Figure 4-1 and described in Table 4-1.

The EMBA presented does not represent the predicted coverage of any one hydrocarbon spill nor a depiction of a slick or plume at any particular point in time. Rather, the EMBA represents a composite of a large number of theoretical paths, integrated over the full duration of the simulations under various metocean conditions.

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 operational and scientific monitoring
Surface	10 g/m^2 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/m^2 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.	

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Hydrocarbon type	Ecological hydrocarbon thresholds [1]	Socio-cultural hydrocarbon thresholds[1]	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 6.8.1.		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 6.8.1.		
Shoreline	100 g/m^2 This represents the threshold that could impact the survival and reproductive capacity of benthic epifaunal invertebrates living in intertidal habitat.	10 g/m^2 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 0.

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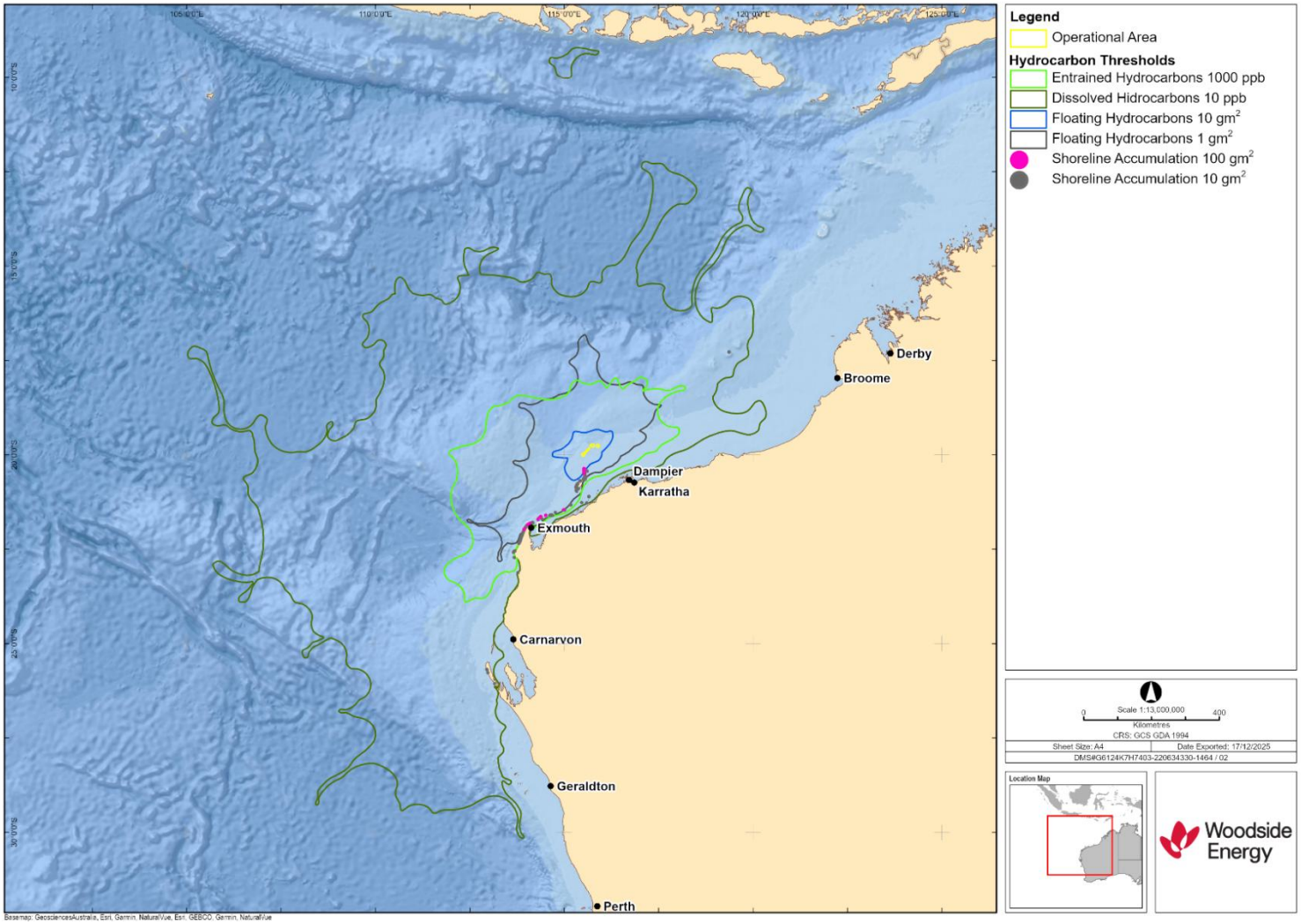


Figure 4-1: Environment that may be affected by the Petroleum Activity

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4.2 Regional context

The Operational Area is located in Commonwealth waters (~40 – 150 m depth) off the north-west coast of Western Australia, located within the North West Marine Region (NWMR). Within the NWMR the Integrated Marine and Coastal Regionalisation of Australia (IMCRA v4.0) (Commonwealth of Australia, 2006) places the Operational Area within the Northwest shelf Province (Figure 4-2). Additionally, the EMBA extends into the Northwest Transition, Central Western Transition, Central Western Shelf Transition, and South-West Marine Region provincial bioregions. Additional information on relevant marine bioregions is described in Section 3 of the Master Existing Environment.

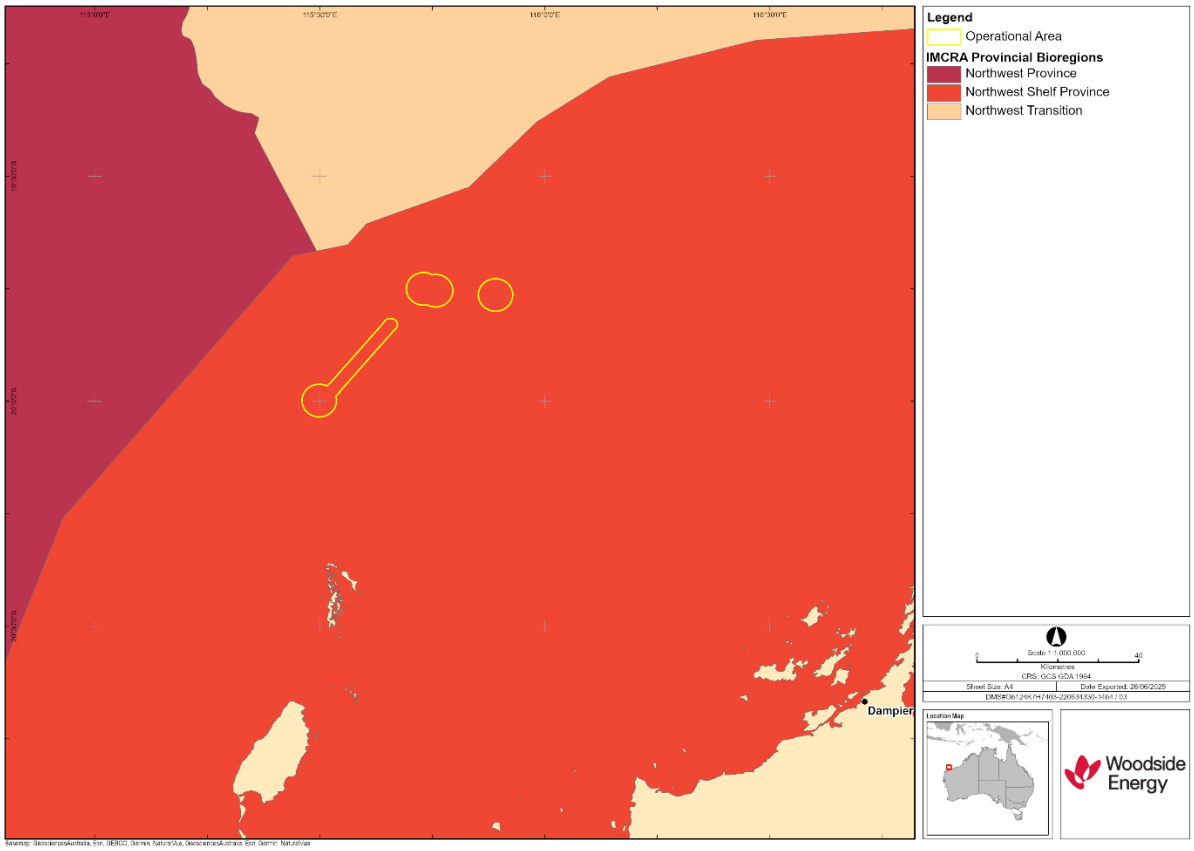


Figure 4-2: Location of the Operational Area and relevant marine bio-regions

4.3 Matters of National Environmental Significance (EPBC ACT)

Table 4-2 summarises the matters of national environmental significance (MNES) overlapping the Operational Area and EMBA, according to Protected Matters Search Tool (PMST) results (Appendix D). It should be noted that 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/absence of MNES based on a conservative grid-based search function. 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 D) can indicate the presence of MNES that do not actually intersect with the Operational Area or EMBA. To ensure the accurate consideration of any impacts from the Petroleum Activity on MNES, shapefiles (provided by DCCEEW) have been assessed using Geographic Information System software to determine the actual presence and distance to MNES.

Additional information on these MNES is provided in the subsequent sections of this chapter and described in detail in the Master Existing Environment.

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Table 4-2: Summary of relevant MNES identified by the EPBC Act Protected Matters Search Tool (PMST) as potentially occurring within the Operational Area and EMBA

MNES	Number of MNES in OA	Number of MNES in EMBA	Relevant Section
World Heritage Properties	0	3	Section 4.9.1.9
National Heritage Places	0	6	Section 4.9.1.9
Wetlands of International Importance (Ramsar)	0	2	Section 4.8
Commonwealth Marine Area	1	1	Section 4.8
Listed Threatened Ecological Communities	0	0	Section 4.8
Listed Threatened Species	27	79	Section 4.6
Listed Migratory Species	43	87	Section 4.6

4.4 Physical environment

A summary of the physical characteristics identified within the Operational Area and EMBA is described in Table 4-3 and further described in the Master Existing Environment.

Table 4-3: Summary of physical characteristics within the Operational Area and EMBA

Physical Characteristics	Description
Climate	The Operational Area offshore conditions (as reported for the Pluto Offshore Basic Design Data (Woodside 2014) show air temperatures range from highest mean record of 28.71 ºC in March to lowest mean record of 22.89 ºC in July (as derived from North Rankin records (excluding tropical cyclones). The broader NWMR experiences a tropical or monsoon climate (in northern Australia areas), exhibiting a hot summer season from October to April and a milder winter season between May and September (BoM 2024).
Winds	Seasonal variability derived from Pluto Offshore Basic Design Data (Woodside 2014) predicted the highest mean wind speed for June and July (7.63 m/s) and the lowest mean wind speed for November and December (7.15 m/s) based on hindcast modelling of wind speed. Winds within the EMBA are expected to follow this pattern.
Currents and tides	The dominant annual current directions at the Pluto offshore facility, in close proximity of the OA, are west or north-west and maximum current speeds between 2 and 3 m/s (Woodside 2014). Geophysical surveys undertaken within the Operational Area indicate that prevailing seafloor currents in this area are orientated east-north east / west-south west (Fugro 2011, Neptune Geomatics 2010). The broader NWMR is primarily influenced by the Indonesian Through Flow (ITF) current and the Leeuwin Current, internal tides and cyclones. The ITF brings warm waters from the Indonesian Archipelago into the NWMR and the Leeuwin Current flows southward along the edge of the continental shelf and is primarily a surface flow (up to 300 m deep). The ITF and Leeuwin Current are strongest during late summer and winter (Holloway and Nye 1985).
Water temperature	Measured seawater temperature (September 2005 and December 2007) in the Pluto offshore facility Basic Design Data shows the mean seawater temperatures at surface and through the water column in the upper 100 m depth range from 26.5 ºC at surface to 24 ºC at 100 m depth (Woodside 2014). The mean seawater temperature declines rapidly with mean temperatures of 17°C and 15°C at 200 m and 220 m, respectively (Woodside 2014). Within the NWMR the currents contribute to variability in seawater temperature and salinity throughout the water column. The water temperatures ranging between 30 ºC in summer and 22 ºC in winter (Pearce, et al. 2003). Water temperatures near the seabed have low interannual variability (±1.5°C at depths of 150 m) and become more stable with increasing water depth (Pearce, et al. 2003).

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Physical Characteristics	Description
Seabed features and marine sediments	Based on Geoscience Australia's geomorphic classification of seabed (Harris, et al. 2005), the geomorphic features present within the EMBA are 'canyon', 'deep/hole/valley', 'pinnacle', 'plateau', 'reef', 'shelf', 'slope', 'terrace', and trench/trough. Wilcox shoal is located ~2.8 km east of the Operational Area (Figure 3-2) Rankin Bank is located ~1 km north of the Operational Area and Glomar Shoal is located ~90 km east, north-east of the OA, respectively, where identified within the EMBA. There is an unnamed shoal within the Operational Area boundary and adjacent to nominal flowline route. Sediments in the NWMR generally become finer with increasing water depth, ranging from sand and gravels on the continental shelf to mud on the continental slope and abyssal plain (Brewer, et al. 2007). The predominant seafloor sediment type within the EMBA are 'calcareous gravel, sand and silt', 'calcareous ooze', and 'mud and calcareous clay' (CSIRO 2015).
Air quality	Due to the extent of the open ocean area, the ambient air quality in the Operational Area and wider offshore region is considered to be of high quality.

4.5 Habitats and biological communities

Key habitats and ecological communities within the Operational Area and EMBA are identified in Table 4-4 and described in Section 4 and 5 of the Master Existing Environment. There are no threatened ecological communities identified within the Operational Area

Table 4-4: Habitats and Communities within the EMBA

Habitat / Community	Description
Marine primary producers	
Coral	Coral reef habitats typically have a high diversity of corals with associated fish communities and support numerous flora and fauna species; many of which are of both commercial and conservation importance. Coral reef habitats are an integral part of the marine environment within the NWMR. Coral was identified at the unnamed shoal ~2.5 km from the Wilcox drill centre and within the Operational Area (See Section 4.5.1). Additional coral reef habitat occurs at Rankin Bank (1 km from the OA) and Wilcox Shoal (2.8 km from the OA). Other coral reef habitats in the EMBA include those within the Montebello and Barrow Island protected areas, the Muiron Islands and Ningaloo Coast.
Seagrass beds and macroalgae	Seagrass beds and macroalgae habitats represent a food source for many marine species and may also provide key habitats and nursery grounds to species (DoF 2011). WA's clear coastal waters allow seagrasses to inhabit depths of >40 m; in contrast, in many estuaries, light penetration is poor, so seagrasses are limited to two m in depth (DoF 2011). The nearest seagrass is located at the Montebello and Barrow Islands, ~38 km and 80 km south of OA, respectively, within the EMBA. Seagrass beds and macroalgae habitat can also be found within the EMBA at some islands in the Pilbara Island Groups, the Muiron Islands and along the Ningaloo Coast.
Mangroves	Mangrove systems provide complex structural habitats that act as nurseries for many marine species as well as nesting and feeding sites. Mangroves also maintain sediment, nutrient and water quality within habitats and minimise coastal erosion (Nagelkerken, et al. 2008). The closest mangrove habitats to the Operational Area are located at the Montebello and Barrow Islands~35 km and 70 km south of the OA, respectively, within the EMBA. Other mangrove habitats associated with the EMBA include those located along the Ningaloo Coast.
Sandy beaches	Given the location of the OA, there are no sandy beaches within this area. Sandy beaches, within the broader EMBA, can be found around mainland and some Pilbara islands.

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Habitat / Community	Description
Salt marshes	Given the location of the OA, there are no salt marshes within this area. The closest salt marshes habitats to the Operational Area are located at the Barrow Islands ~70 km south of the OA, within the EMBA. Other salt marshes habitats associated with the EMBA include those located along the Ningaloo Coast.
Other communities and habitats	
Plankton	Primary productivity of the NWMR 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. There is a tendency for offshore phytoplankton communities in the NWMR to be characterised by smaller taxa (e.g. bacteria), whereas shelf waters are dominated by larger taxa such as diatoms (Hanson, et al. 2007). Plankton within the Operational Area and EMBA are expected to be representative of the wider NWMR. Within the wider EMBA, peak primary productivity occurs in late summer / early autumn, along the shelf edge of the Ningaloo Reef. It also links to a larger biologically productive period in the area that includes mass coral spawning events, peaks in zooplankton and fish larvae abundance (MPRA 2005) with periodic upwelling throughout the year.
Pelagic and demersal fish populations	Demersal fish are associated with a wide range of habitats, including coastal and estuarine ecosystems, macroalgal and seagrass communities, and coral reefs (Hutchins 2001, Blaber, Young and Dunning 1985). Abundance and species richness of demersal fish species and communities (those that live and feed on or near the seabed) typically increase with increasing marine habitat complexity (Gratwicke and Speight 2005). Benthic habitats of the Operational Area are not expected to support a high diversity of demersal fish species. However, the nearest location identified as supporting high demersal fish richness and abundance is located at Rankin Bank, which overlaps the northern Operational Area The Continental slope demersal fish communities KEF (see Section 4.8) which features high levels of demersal fish endemism has also been identified within the EMBA (~25 km north of the OA). Pelagic fish species within the NWMR include both small and large species; small pelagic fish inhabit a range of marine habitats, including inshore and continental shelf waters. They feed on pelagic plankton and represent a food source for a wide variety of predators including larger pelagic fish, sharks, seabirds and marine mammals (Mackie, et al. 2007). Large pelagic fish in the NWMR include commercially targeted species such as mackerel, barracuda, billfishes and tunas (Lewis 2020). Large pelagic fish are typically widespread, found mainly in offshore waters (occasionally on the shelf) and often travel extensively (Hobday, Griffiths and Ward 2009). Pelagic fish species may be present within the OA, although there are no habitats considered important to these species within the Operational Area
Epifauna and infauna	The predominant habitat within the vicinity of the nearfield wells is expected to be soft sediment with infauna communities, supported by available geophysical data (Section 4.4) and previous studies (RPS 2011; BMT 2021). 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, sea cucumbers). This is supported by surveys undertaken around the GWA Facility, which is predominantly comprised of sparse benthic infauna communities dominated by polychaetes and crustaceans (BMT 2021). Within the OA, in proximity to the LPA manifold and Wilcox drill centre, hard substrate has been identified which has the potential to support epifauna and filter feeder communities. Filter-feeding epifauna (e.g. 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. Surveys have identified filter feeder communities within the Operational Area as detailed in the following sections (Refer to Section 4.5.1) The benthic infauna and epifauna found within the Operational Area are representative of the wider NWMR (and EMBA) (Brewer, et al. 2007, Rainer 1991).

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4.5.1 Offshore benthic habitats

Shallow submerged bathymetry features in and near the Operational Area have been identified; those that occur at ≤50 m depth are shown in Figure 4-3 with only the Unnamed Shoal occurring within the Operational Area. These shallower areas (<40 m water depth) have the potential to support diverse coral reef ecosystems (both Rankin bank and Wilcox Shoal near the Operational Area) while the deeper surrounding area supports a mesophotic coral reef ecosystem characterised by a gradient of declining light availability and a gradual transition from phototrophic to mixotrophic and heterotrophic communities (Abdul Wahad et al 2018). To further understand the potential habitats a study was undertaken using geophysical and ROV data to characterise the benthic habitats and communities in the Wilcox field (Worley, 2025; Figure 4-4), this expanded on the AIMS study which mapped Rankin bank and the surrounding environment. A total of approximately 260 km^2 of seabed in this area has been mapped (Figure 4-5).

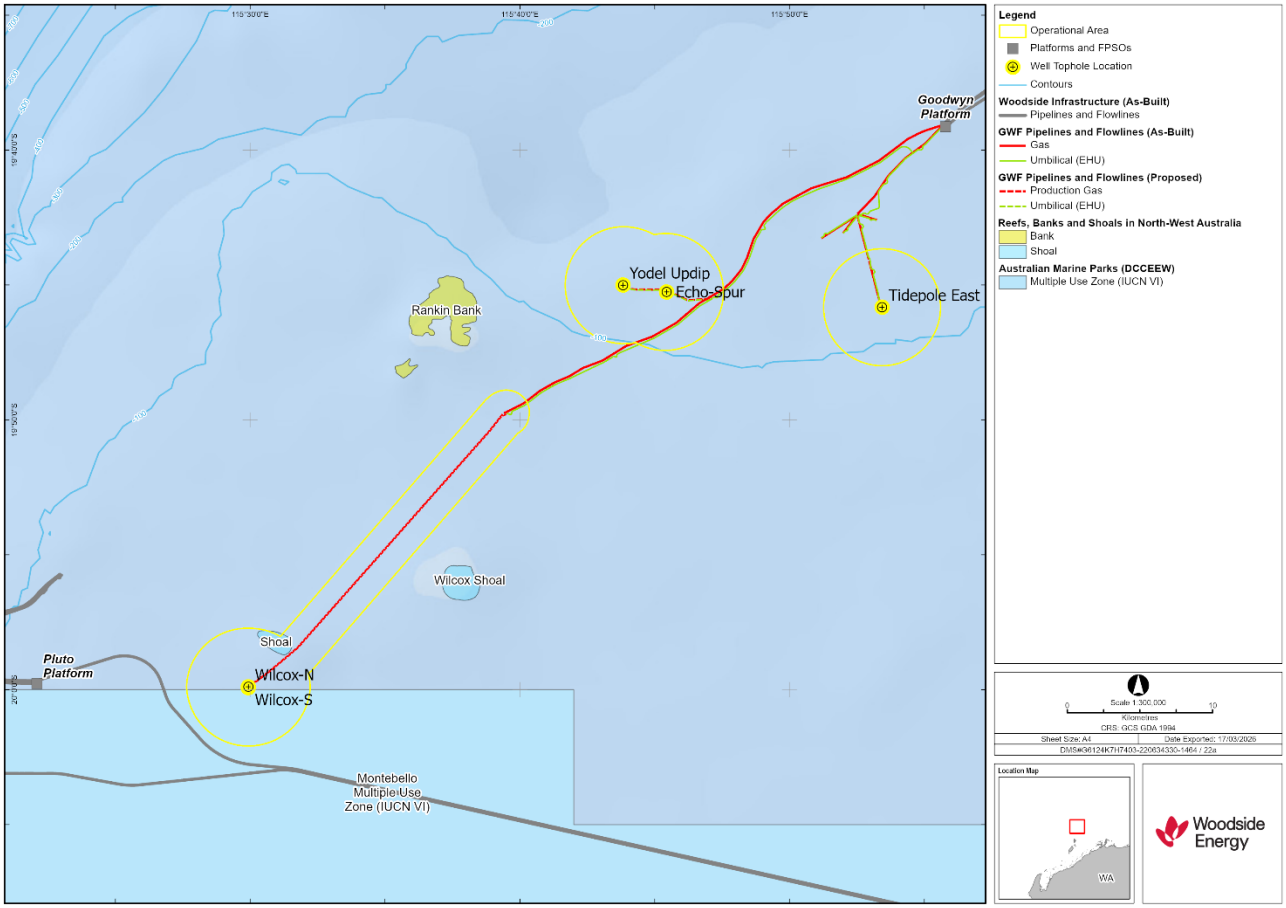


Figure 4-3: Shoals and Reefs in the vicinity of the Operational Area

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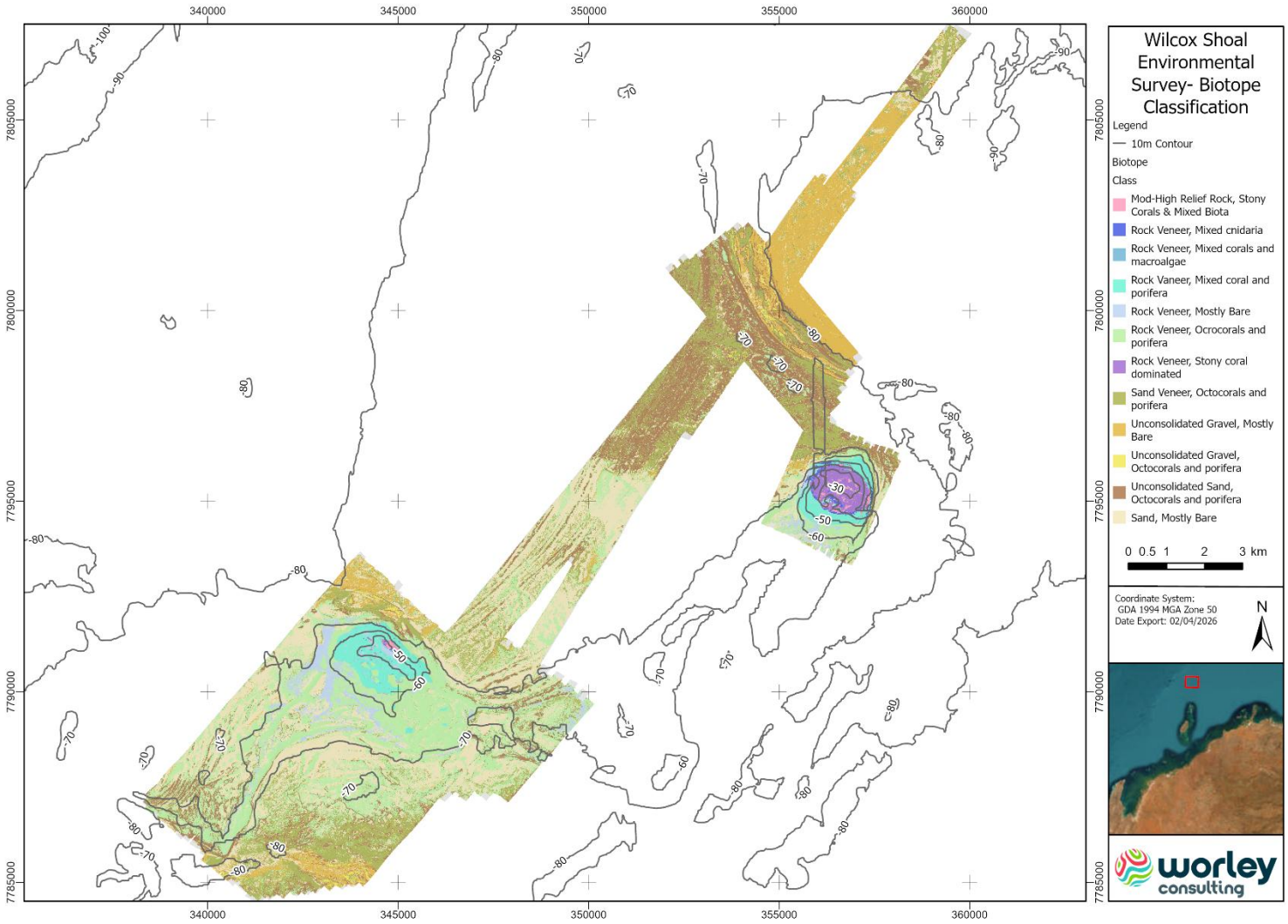


Figure 4-4: Mapped benthic habitat types along the proposed Wilcox flowline and at the Wilcox drill centre

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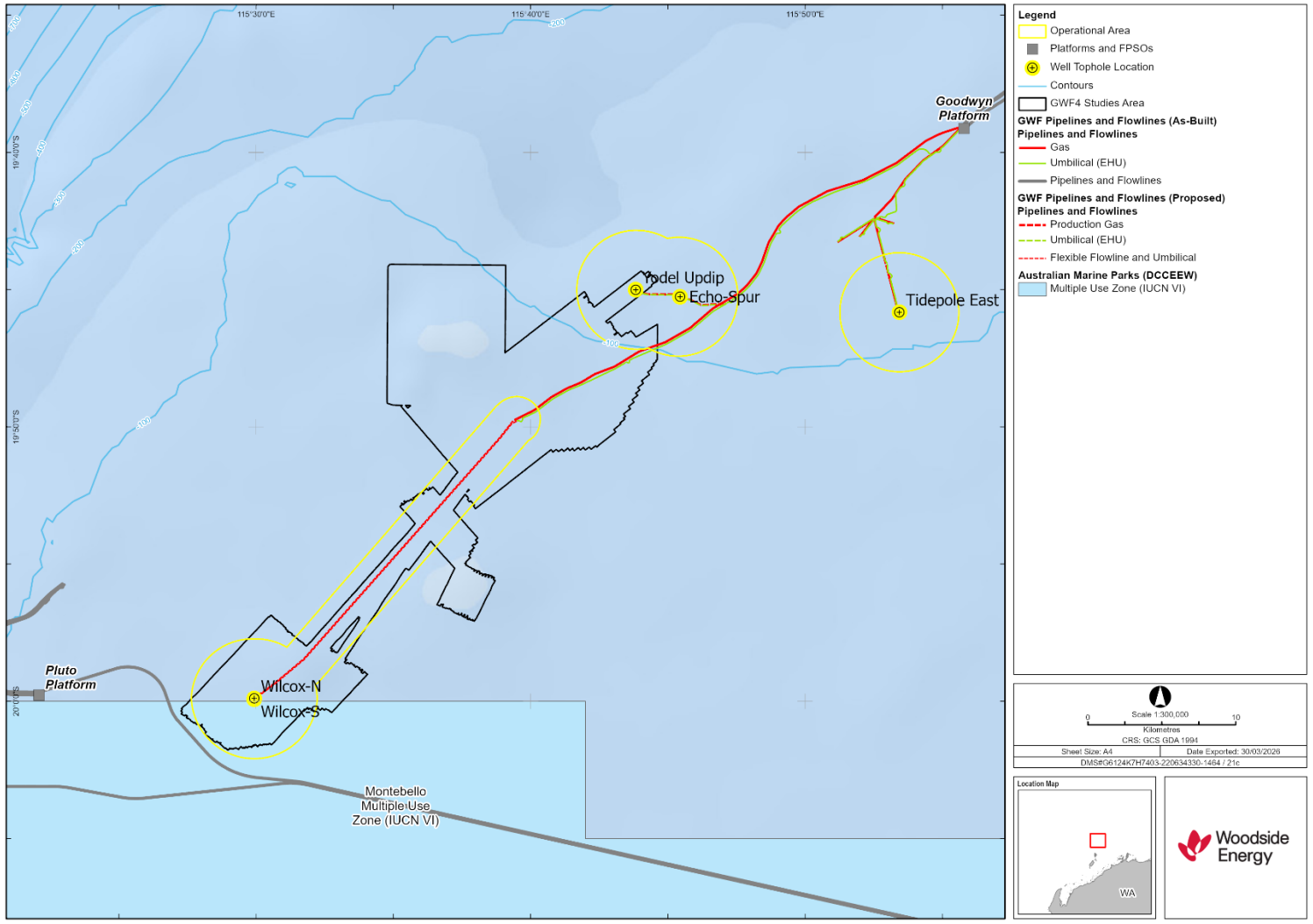


Figure 4-5: Total area of mapped benthic communities in the vicinity of the Operational Area

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4.5.1.1 Wilcox Shoal

Wilcox Shoal is an isolated submerged oceanic shoal, rising from 80 m depth and reaching 26 m depth at its shallowest point (Worley, 2025). The top of the shoal has high structural complexity owing to the presence of shallow (<30 m) surface reef communities dominated by hard corals. The north and north-eastern sides of the shoal have steep slopes that drop from 40 m to 75 m, whereas the southern side has a gentle depth gradient and a long plateau out to the 70 m contour (Worley, 2025). In general, the habitat transitions from coral-dominated within the reef top into consolidated cobbles (coral rubble) and unconsolidated (soft) sand with sparsely distributed hard corals and other invertebrates including octocorals and porifera (e.g. gorgonians, sea whips, soft corals, sponges, and sea fans) along the shoal slope at ~30 m to 60 m depth (Worley, 2025). The seabed surrounding the base of the shoal was characterised as unconsolidated sand with intermittent octocorals and porifera in deep (70–80 m) waters (Worley, 2025).

The range of habitat types recorded at Wilcox Shoal were similar to those recorded at other shoals along the Western Australian coastline, including Rankin Bank (18 km north of Wilcox Shoal) (Worley, 2025).

4.5.1.2 Wilcox drill Centre and flowline route

The Pipeline Route area was dominated by unconsolidated sand with an intermittent and patchy distribution of octocorals and porifera to the south. There was a series of low ridges in the centre of the route orientated northwest-southeast. The area to the north of the ridges was dominated by unconsolidated gravel mostly bare. This area ended at the proposed Wilcox drill centre in in 60-70 m depth of water. Substrate type was mostly rock and veneer or unconsolidated sand. There were areas of rock veneer with mostly low cover of biota consisting of octocorals and porifera. Seabed habitats at the Wilcox drill centre and the pipeline route were characterised by low benthic cover (less than 11 % cover), low richness and similar community composition. These deep benthic assemblages were dominated by sponges (including crustose, erect, and massive morphotypes) and octocorals, with smaller contributions from bryozoans, hydroids, and ascidians. This pattern is typical of the North West Shelf (DSEWPaC, 2012; Wilson, 2013)

4.5.1.3 Unnamed Shoal

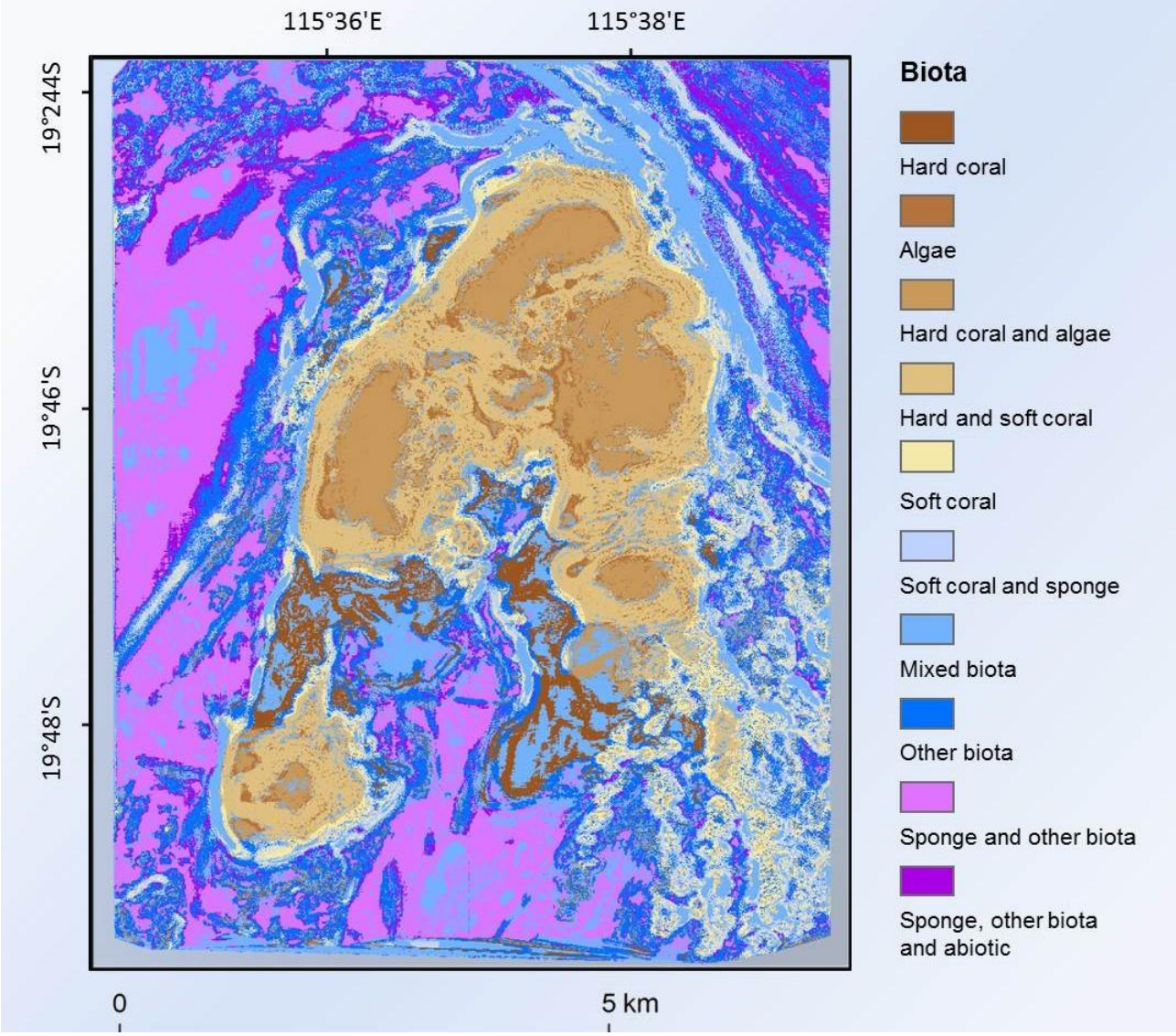
Unnamed Shoal is within the Operational Area and approximately 3 km north west of the Wilcox well locations. It is a small shoal around ~1 km^2 in water depths between 40 and 50 m. The reef top has moderate to high relief rock with stony corals (~40 m water depth) with ~30% cover and then transitioning to mixed biota on the reef slopes in depths 50 to 60 m. Unnamed Shoal supports some high relief coral reef but lacks the extent and structural complexity of the coral habitat on Wilcox Shoal (Worley, 2025). Deeper water habitats surrounding Unnamed Shoal are very similar to Wilcox Shoal consisting of sparsely distributed gorgonians, sea whips, soft corals, sponges, and sea fans (Worley, 2025). To the southwest there are areas of rock veneer that were mostly bare, and to the north there are areas of sand veneer, unconsolidated gravel, and unconsolidated sand, similar to Wilcox Shoal (Worley, 2025).

4.5.1.4 Rankin bank

Rankin Bank is on the continental shelf, ~5 km north-west of the proposed tie-in point at LPA. Although it is not a KEF, Rankin Bank, along with Glomar Shoal, are large and complex bathymetric features on the outer western shelf of the Pilbara and represents habitats that are likely to play an important role in the productivity of the Pilbara region (AIMS 2014a). Rankin Bank comprises three submerged shoals delineated by the 50 m depth contour, with water depths of ~18–30.5 m (AIMS 2014a).

Rankin Bank has a diverse marine environment, predominantly comprising consolidated reef and algae habitat (~55% cover at depths of <40 m), followed by hard corals (~25% cover at depths of <40 m), unconsolidated sand/silt habitat (~16% cover with increasing prevalence at depth), and benthic communities comprising macroalgae, soft corals, sponges and other invertebrates (~3% cover) (AIMS 2014a; Figure 4-6) Hydrocarbon and trace metal concentrations in sediments indicate the bank has not been affected by anthropogenic pollution (AIMS 2014a). Hard corals are a significant component of the benthic community of some parts of the bank, with abundance in the upper end of the range observed elsewhere on the submerged shoals and banks of north-west Australia (Heyward et al. 2012).

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Source: North West Atlas; https://maps.northwestatlas.org

Figure 4-6: Rankin bank benthic habitats

The habitat surrounding Rankin Bank (<50 m) was mapped by AIMS on behalf of Woodside (AIMS 2014b) and hosts filter-feeding communities in areas of consolidated substrate interspersed by sand. Further surveys in 2017 in water depths greater than 70 m, at the LPA manifold location, found that epibenthic taxa were very sparse but typically clumped and comprised of mixed filter feeders such as sea whips, sea fans (gorgonians) other soft corals, sponges and hydroids (Jones et al 2021). It is expected that these filter feeder communities may be sparsely distributed in the south-west section of the Operational Area.

4.5.1.5 Glomar Shoal

Glomar Shoal is a large (~215 km^2) and complex bathymetric feature situated on the outer continental shelf off the Pilbara coast. Glomar Shoal is ~8.5 times wider than Rankin Bank at the 60 m contour. Glomar Shoal is a shallow sedimentary bank comprising coarser biogenic material than the surrounding seabed. The shoal is ~26–70 m below the sea surface (Falkner et al. 2009b) and is ~90 km east of the Operational Area. Glomar Shoal has been identified as a KEF for its high productivity and aggregations of marine life (Falkner et al. 2009b). This KEF encompasses a wider area than the shoal feature itself. Together with Rankin Bank, these remote shallow-water shoals represent regionally significant habitats and are considered likely to play an important role in the productivity of the Pilbara region (AIMS 2014a; Abdul Wahab et al. 2018).

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Glomar Shoal has a high percentage of marine-derived sediments with high carbonate content and gravels of weathered coralline algae and shells (McLoughlin and Young 1985) The area's higher concentrations of coarse material compared to surrounding areas are indicative of a high-energy environment subject to strong seafloor currents (Falkner et al. 2009b). Cyclones are also frequent in this area and stimulate periodic bursts of productivity because of increased vertical mixing (Abdul Wahab et al. 2018). Studies by Abdul Wahab et al. (2018) found several hard coral and sponge species in water depths <40 m.

.Montebello Marine Park

The southern extent of the Operational Area partially extends into the northern extent of the Montebello Marine Park (See Figure 4-3).

An ROV survey within the northern extent of the Montebello Marine Park was undertaken in 2019 to characterise the benthic habitats and communities (Advisian 2019). Video imagery was collected from transects, and the habitat was classified in accordance with the Collaborative and Automated Tools for the Analysis of Marine Imagery (CATAMI) classification system. Five areas within the Montebello Marine Park were surveyed, of which three (Area 2, Area 3, Area 4) are near the Operational Area (Figure 4-7). Water depths in the three areas were very similar, with the midpoints depth of transects ranging from ~70–78 m. The survey findings are summarised in Table 4-5.

Table 4-5: Summary of benthic habitat and communities in the northern Montebello Marine Park

Area	Summary description[1]	Example ROV footage
2	• The seafloor was relatively flat and sandy with a light to high cover of unconsolidated biologenic gravel and/or organic material. Small undulations of the seabed were seen but no other regular bedforms such as sand ripples or sand waves were apparent. • No significant high relief habitat features, or areas of consolidated hard substrate, were observed in any transect. • Some areas of seafloor were relatively bare while others included a low (~5%) to high (~80%) density cover of benthic organisms. This benthic cover changed continually and often (within metres) over each transect. Benthic fauna comprised a diverse array of sponges and corals with varying forms, sizes and colours. Hydroids and cnidarians were also apparent on occasion. • Bioturbation of the seafloor in the form of small cones, craters, burrows, small and large trails was also apparent. Mobile organisms including fish, echinoderms and jellyfish, were also noted on the videos.	
3	• The seafloor in Area 3 was relatively flat and sandy with a light to high cover of biologenic gravel and/or organic material over its entire length (continually changing). Small undulations of the seabed and some small sand waves were present on occasion, but no other regular bedforms such as sand ripples or sand waves were apparent. • No significant moderate or high relief habitat features were observed on the video or can be seen on the transect maps with detailed bathymetry. Any features seen are ~1 m high and occur over relatively large scales. • The seabed was a mosaic of bare substrate and low (~5%) to high (~75%) density cover of benthic organisms (e.g. sponges, corals). Benthic fauna	

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Area	Summary description[1]	Example ROV footage
	comprised a diverse array of sponges and corals with varying forms, sizes and colours. Hydroids and cnidarians were also apparent on occasion along the transect length. • Bioturbation of the seafloor in the form of small cones, craters, burrows and small and large trails was apparent. Mobile organisms including fish, echinoderms and jellyfish were also noted on the videos. Fish fauna diversity was quite high, and varying sizes of fish were seen amongst the aggregations of corals and sponges and also over bare sandy seafloor.	
4	• The seafloor within Area 4 was typically flat sand with a high level of biologenic gravel of unknown origin. Small mounds, waves and undulations all <50 cm high were seen on occasion, mainly around aggregations of benthic epifauna (i.e. sponges and corals). • No significant moderate or high relief features or significant areas of consolidated hard substrate were present in Area 4 that could be seen on the video or transect maps. • The seafloor was scattered with sponges and corals of varying forms and sizes; these occurred as individuals with a low-density cover (~5%) up to more dense clusters (~50%). Other benthic epifauna included echinoderms and cnidaria. Mobile fauna (mainly small bony fishes) were most common around the larger clusters of sponges and corals. • Areas of bare sand occurred amongst the patches of epifauna. The switch between bare sand and benthic cover changed constantly and over short distances. • Bioturbation of the seafloor in the form of small mounds and craters was evident along the entire transect length.	 

Source: (Advisian 2019)

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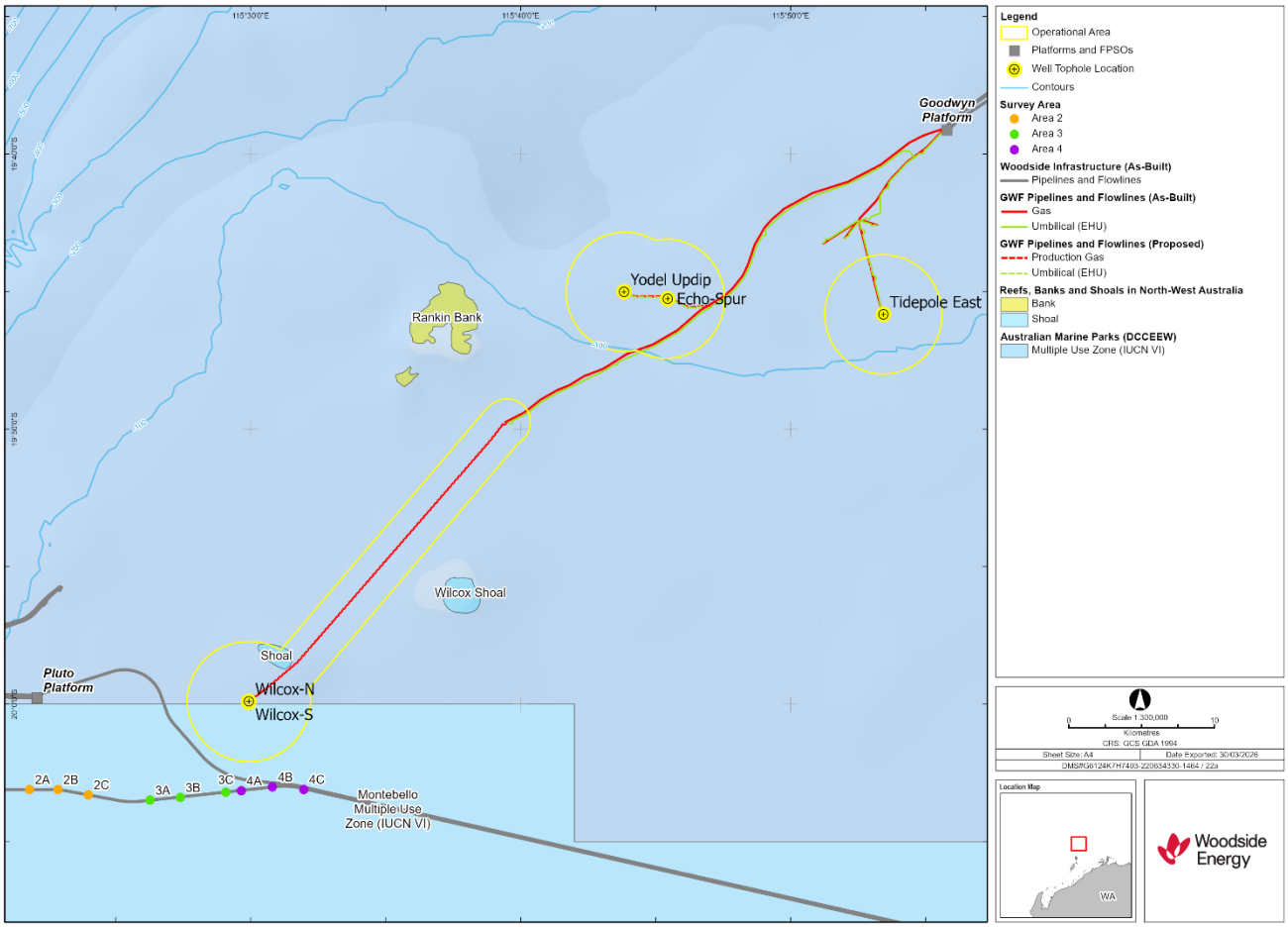


Figure 4-7: Benthic transect locations

4.6 Protected species

A total of 126 EPBC Act listed species considered to be MNES were identified as potentially occurring within the EMBA, of which a subset of 50 species were identified as potentially occurring within the Operational Area The full list of marine species identified from the PMST report(s) is provided in Appendix D including several MNES that are not considered to be credibly impacted (e.g. terrestrial species within the EMBA). Criteria for determining species to be considered for impact assessment is outlined in Section 3.2 of the Master Existing Environment. Two conservation dependent species have also been identified with a potential to occur within the Operational Area and EMBA. These species, the scalloped hammerhead and little gulper shark, are listed on the Species Profile and Threats Database (DCCEEW n.d.).

Species identified as potentially occurring within the Operational Area and EMBA and biologically important areas (BIAs) or habitat critical to their survival (habitat critical) which overlap the Operational Area and EMBA are listed in Table 4-6 to Table 4-15. Figure 4-8 to Figure 4-11 show the spatial overlap between relevant BIAs and habitat critical areas and the Operational Area and EMBA. Species that have been identified as having ecologically significant interactions in the Operational Area are described in further detail in this section. Key threatened and migratory species and associated biologically important behaviours in the EMBA are further described in the Master Existing Environment.

4.6.1 Fish, sharks and rays

A total of 15 EPBC Act listed threatened and migratory fish species have been identified to potentially occur within the EMBA, of which 13 occur in the Operational Area. A full list of EPBC Act listed species identified in the PMST search is provided in Appendix D.

Further description of BIAs and species is provided in the Master Existing Environment.

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4.6.1.1 Whale Shark

The whale shark, *Rhincodon typus*, is a planktivorous shark and feeds on a variety of planktonic organisms including krill, jellyfish, and crab larvae (Last and Stevens 2009).

Whale sharks form seasonal aggregations at Ningaloo Reef between March and July (TSSC 2015c). However, seasonal aggregation can be variable, with individual whale sharks recorded at other times of the year.

This species undergoes an annual migration along the 200 m isobath of the WA coast between July and November (TSSC 2015c). Timing of the whale shark 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 2024a). At Ningaloo Reef, whale sharks stay within a few kilometres of the shore and in waters about 30–50 m deep (Wilson, et al. 2005). After the aggregation period, the distribution of the whale sharks is largely unknown. Satellite tracking has shown that the sharks may follow three migration routes from Ningaloo (Meekan and 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 the Woodside offshore facilities on the NWS indicate whale sharks are present on the NWS in the months of April, July, August, September and October, corresponding with the whale shark's seasonal migration to and from the 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 different migration paths that the sharks may follow.

It is expected that whale sharks may traverse the vicinity of the Operational Area during their migrations to and from Ningaloo Reef. However, presence of the whale shark within the area 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 (DPW 2013, MPRA 2005)

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Table 4-6: Threatened and migratory fish, shark and ray species predicted to occur within the Operational Area and EMBA

Species name	Common name	Environment Protection and Biodiversity Conservation Act 1999 (as per PMST report Appendix D)			Potential for interaction	
		Threatened status	***Migratory status***	***Listed***	***OA***	***EMBA***
Sphyrna lewini	Scalloped Hammerhead	Conservation Dependent	N/A	N/A	Species or species habitat known to occur within area	Species or species habitat known to occur within area
Carcharodon carcharias	White Shark	Vulnerable	Migratory	N/A	Species or species habitat may occur within area	Species or species habitat may occur within area
Pristis pristis	Freshwater Sawfish	Vulnerable	Migratory	N/A	Species or species habitat may occur within area	Species or species habitat known to occur within area
Carcharias taurus (west coast population)	Grey Nurse Shark (west coast population)	Vulnerable	N/A	N/A	Species or species habitat likely to occur within area	Species or species habitat may occur within area
Pristis zijsron	Green Sawfish	Vulnerable	Migratory	N/A	Species or species habitat known to occur within area	Breeding known to occur within area
Pristis clavata	Dwarf Sawfish	Vulnerable	Migratory	N/A	Species or species habitat known to occur within area	Breeding known to occur within area
Rhincodon typus	Whale Shark	Vulnerable	Migratory	N/A	Foraging, feeding or related behaviour known to occur within area	Foraging, feeding or related behaviour known to occur within area
Mobula alfredi	Reef Manta Ray	N/A	Migratory	N/A	Species or species habitat likely to occur within area	Species or species habitat known to occur within area
Mobula birostris	Giant Manta Ray	N/A	Migratory	N/A	Species or species habitat likely to occur within area	Species or species habitat likely to occur within area

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Species name	Common name	Environment Protection and Biodiversity Conservation Act 1999 (as per PMST report Appendix D)			Potential for interaction	
		Threatened status	*Migratory status*	*Listed*	*OA*	*EMBA*
Anoxypristis cuspidata	Narrow Sawfish	N/A	Migratory	N/A	Species or species habitat may occur within area	Species or species habitat known to occur within area
Isurus paucus	Longfin Mako	N/A	Migratory	N/A	Species or species habitat likely to occur within area	Species or species habitat likely to occur within area
Carcharhinus longimanus	Oceanic Whitetip Shark	N/A	Migratory	N/A	Species or species habitat likely to occur within area	Species or species habitat likely to occur within area
Isurus oxyrinchus	Shortfin Mako Shark	N/A	Migratory	N/A	Species or species habitat likely to occur within area	Species or species habitat likely to occur within area
Centrophorus uyato	Little Gulper Shark	Conservation Dependent	N/A	N/A	N/A	Species or species habitat likely to occur within area
Lamna nasus	Porbeagle, Mackerel Shark	N/A	Migratory	N/A	N/A	Species or species habitat may occur within area

Table 4-7: Fish, shark and ray BIAs within the Operational Area

Species	BIA type	Approx. distance and direction of BIA from Operational Area (km)
Whale Shark	Foraging (northward from Ningaloo along 200 m isobath)	Overlaps OA
	Foraging (Ningaloo Marine Park)	~250 km south-west

Source: DCCEEW, 2024

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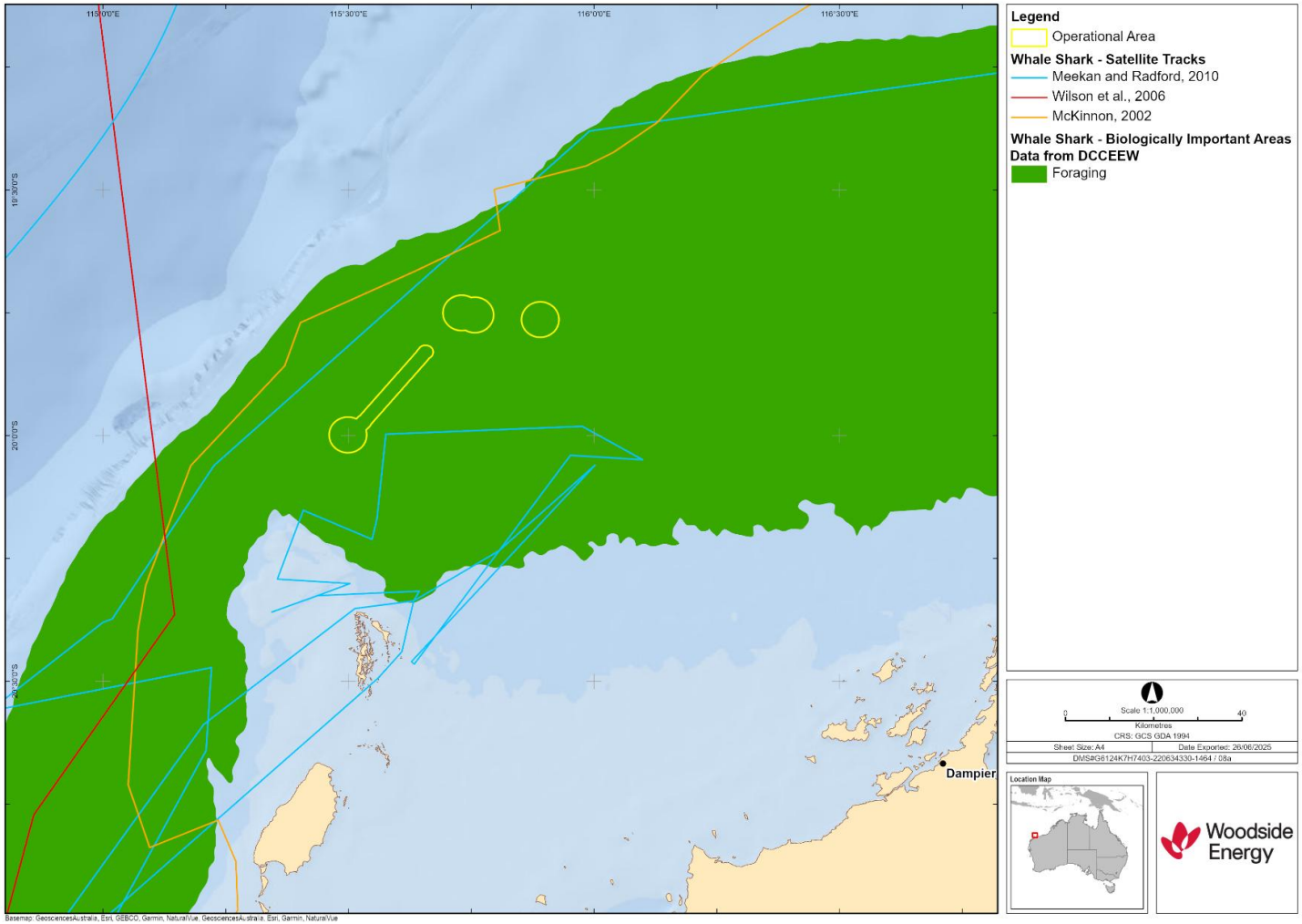


Figure 4-8:Whale shark BIAs overlapping the EMBA and tagged whale shark satellite tracks

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4.6.2 Marine reptiles

A total of nine EPBC Act listed threatened and migratory marine reptile species have been identified to potentially occur within the EMBA, of which eight occur in the Operational Area (Table 4-8). A full list of EPBC Act listed species identified in the PMST search is provided in Appendix D

Further description of BIAs is provided in the Master Existing Environment.

4.6.2.1 Flatback Turtle

Flatback turtle nesting on Barrow Island occurs between October and March, with peak nesting activity occurring between November and January (Commonwealth of Australia 2017a). On Barrow Island, nesting activity is concentrated on the east coast on sandy, low-sloped, low-energy beaches with wide, shallow intertidal zones (K. Pendoley 2005, Pendoley, et al. 2014).

The Montebello Islands and Barrow Island are identified as nesting habitat critical to the survival of the species, as is the 60 km internesting buffer (Figure 4-10) around the Montebello Islands (Commonwealth of Australia 2017a).

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 2017a). However, the foraging ecology of post-hatchling Flatback turtles is currently unknown. Limited observations suggest they feed on small animals living in the water column (Commonwealth of Australia 2017a). During internesting turtles remain close to the nesting beach or rookery (Commonwealth of Australia 2017a).

A habitat suitability modelling study for internesting Flatback turtles in the NWS region of WA (Whittock, Pendoley and Hamann 2016) was conducted to identify areas of suitable Flatback turtle internesting habitat and determine overlap with identified industrial hazards. The study used a turtle tracking dataset of 47 nesting female turtles from five important rookeries in the NWS study area, including Barrow Island. The results showed internesting Flatback turtles from all rookeries remained within water depths of <44 m, with a mean depth of <10 m (Whittock, Pendoley and Hamann 2016). Results also showed internesting turtles from all rookeries remained within <28 km of the nearest coast, with a mean distance from the coast of <6.1 km. The habitat suitability modelling study defined suitable Flatback turtle internesting habitat as water depths of 0–16 m within 5–10 km of the coast. Unsuitable Flatback turtle internesting habitat was defined as waters >25 m deep and >27 km from the coast (Whittock, Pendoley and Hamann 2016). The Operational Area is therefore, classified as unsuitable for internesting Flatback turtles.

Another recent study involving satellite tracking data for 11 Flatback turtles following nesting on the Lacepede Islands (Thums, Waayers and Pattiaratchi 2017) found that Flatback turtles remained at an average distance of 15.75±12.25 km from the nesting beach in water depths of <20 m.

Other previous studies (Dobbs 2007, Guinea, Sperling and Whiting 2006, Pendoley Environmental 2010) have also presented findings that internesting behaviour was only observed in water depths of <40 m. One of these studies (Pendoley Environmental 2010) further indicates that internesting Flatback turtles have relatively shallow dives, with 85% of the time during spent in ≤20 m water depth, of which most was spent in 5–10 m (27±2.7%) and 10–15 m (22.3±3.5%) water depths.

Although individuals may transit through and forage within the Operational Area, habitat typically associated with species aggregations is not present due to the distance offshore (135 km from mainland), and to nesting beaches (~27 km).

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Table 4-8: Threatened and migratory marine reptile species predicted to occur within the Operational Area and EMBA

Species name	Common name	Environment Protection and Biodiversity Conservation Act 1999 (as per PMST report Appendix D)		Potential for interaction	
		Threatened status	***Migratory status***	***Operational Area***	***EMBA***
Caretta caretta	Loggerhead turtle	Endangered	Migratory	Species or species habitat known to occur within area	Breeding known to occur within area
Chelonia mydas	Green turtle	Vulnerable	Migratory	Species or species habitat known to occur within area	Breeding known to occur within area
Dermochelys coriacea	Leatherback turtle	Endangered	Migratory	Species or species habitat likely to occur within area	Species or species habitat known to occur within area
Eretmochelys imbricata	Hawksbill turtle	Vulnerable	Migratory	Species or species habitat known to occur within area	Breeding known to occur within area
Natator depressus	Flatback turtle	Vulnerable	Migratory	Congregation or aggregation known to occur within area	Breeding known to occur within area
Aipysurus apraefrontalis	Short-nosed sea snake	Critically endangered	N/A	Species or species habitat likely to occur within area	Species or species habitat known to occur within area
Aipysurus foliosquama	Leaf-scaled sea snake	Critically endangered	N/A	Species or species habitat likely to occur within area	Species or species habitat likely to occur within area
Crocodylus porosus	Salt-water crocodile	N/A	Migratory	Species or species habitat may occur within area	Species or species habitat may occur within area
Lepidochelys olivacea	Olive ridley turtle	Endangered	Migratory	N/A	Species or species habitat likely to occur within area

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Table 4-9: Marine turtle BIAs within the EMBA

Species	BIA type	Approx. distance and direction of BIA from Operational Area (km)
Flatback turtle	Internesting buffer:	
	• Montebello Is - Hermite Is, NW Is, Trimouille Is	• Overlaps Operational Area
	• Dampier Archipelago islands to the west of the Burrup Peninsula	• ~20 km east
	• Legendre Is, Huay Is	• ~40 km east
	• Thevenard Island – South coast	• ~50 km south
	• Delambre Island	• ~70 km easy
	Mating:	
	• Coral reef habitat west of the montebello group. Extends the entire length of Montebellos	• ~40 km south
	• Montebello Island, Hermite Island, NW Island, Trimouille Island	• ~30 km south
	• Barrow Island	• ~60 km south
	• Dampier Archipelago islands to the west of the Burrup Peninsula	• ~95 km south east
	Foraging:	
	• Coral reef habitat west of the montebello group. Extends the entire length of Montebellos	• ~40 km south
	• Montebello Island, Hermite Island, NW Island, Trimouille Island	• ~30 km south
	• Barrow Island	• ~60 km south
	• String of islands between Cape Preston and Onslow, inshore of Barrow Is	• ~90 km south
	• Dampier Archipelago Islands to the west of the Burrup Peninsula	• ~95 km south east
	• Legendre Is, Huay Is	• ~115 km south east
	• Delambre Island	• ~135 km south east
	Aggregation:	
	• Coral reef habitat west of the Montebello group. Extends the entire length of Montebellos	• ~40 km south

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Species	BIA type	Approx. distance and direction of BIA from Operational Area (km)
	Internesting: • Coral reef habitat west of the Montebello group. Extends the entire length of Montebellos • Dampier Archipelago (islands to the west of the Burrup Peninsula	 • ~40 km south • ~100 km south
	Nesting: • Montebello Island, Hermite Island, NW Island, Trimouille Island • Barrow Island • Dampier Archipelago islands to the west of the Burrup Peninsula • Legendre Is, Huay Is • Thevenard Island – South coast • Delambre Island	 • 30 km south • ~60 km south • ~95 km south east • ~115 km south east • ~135 km south • ~135 km south east
	Migration Corridor: • Dampier Archipelago (islands to the west of the Burrup Peninsula	 • ~100 km south

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Table 4-10: Internesting habitat critical to the survival of marine turtle species predicted to occur within the EMBA

Species	Genetic stock	Nesting locations	Approx. distance and direction from Operational Area (km)	Internesting buffer	Nesting period	Hatching period
Flatback turtle	Pilbara	Barrow Island, Montebello Islands, coastal islands from Cape Preston to Locker Island.	Overlaps	60 km	Oct–Mar (peak: Feb-Mar)	Oct–Mar
		Dampier Archipelago, including Delambre Island and Hauy Island.	40 km south east			
		Mundabullangana Beach.	175 km south east			
Green turtle	North West Cape	Barrow Island, Montebello Islands, Serrurier Island and Thevenard Island.	15 km south	20 km	Nov–Mar	Jan–May (peak: Feb–Mar)
		Exmouth Gulf and Ningaloo coast.	220 km south west			
		Dampier Archipelago	80 km south east			
Loggerhead turtle	Western Australia	Exmouth Gulf and Ningaloo coast.	220 km south west	20 km	Nov–May (peak: Jan)	Jan–May
		Gnaraloo Bay and beaches. 20km internesting buffer	420 km south west	20 km	Nov-May	
Hawksbill turtle	Western Australia	Cape Preston to mouth of Exmouth Gulf including Montebello Islands and Lowendal Islands.	15 km south	20 km	All year (peak: Oct–Feb)	All year (peak: Dec–Feb)
		Dampier Archipelago, including Delambre Island and Rosemary Island.	80 km south east			

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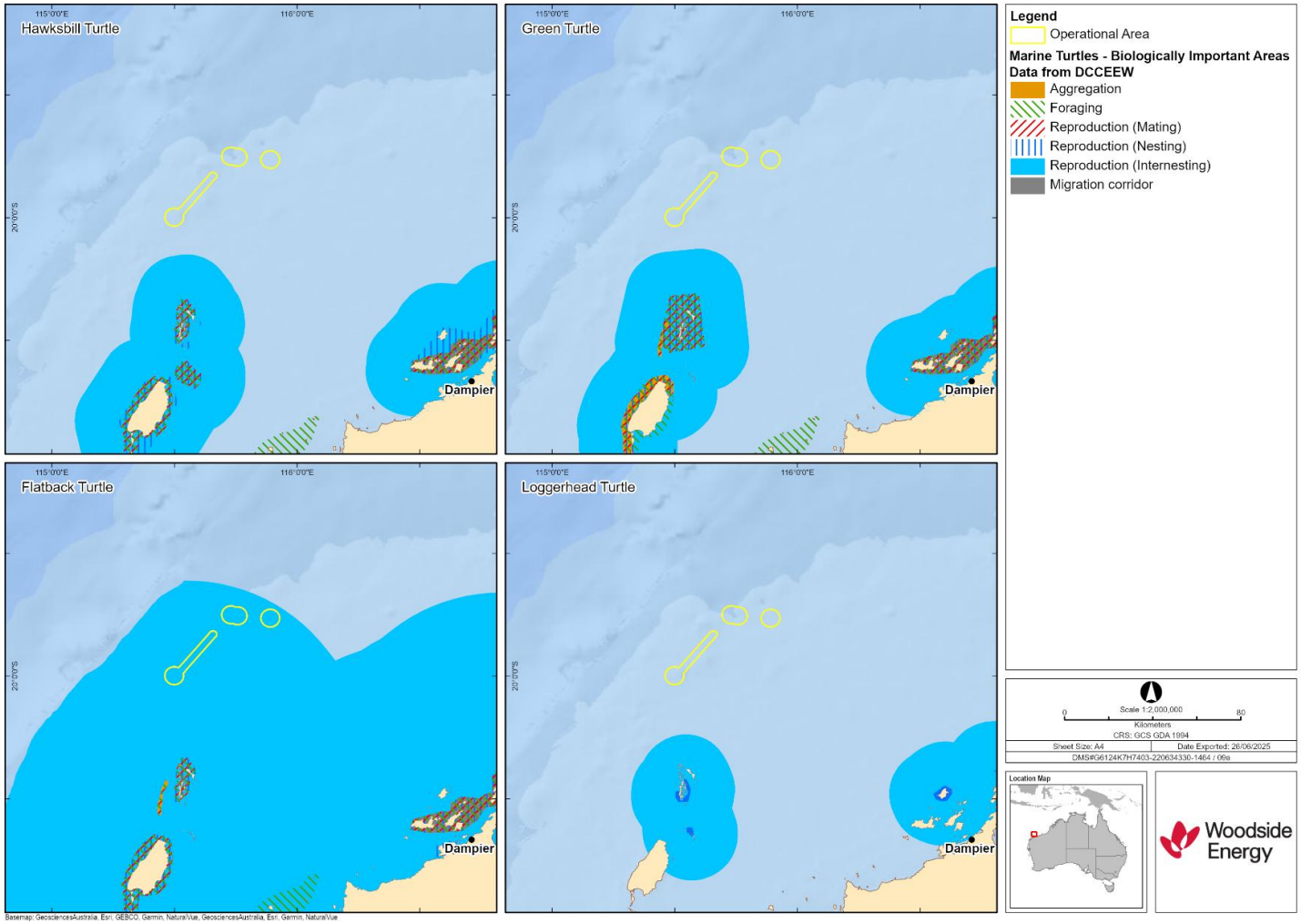


Figure 4-9: Marine turtles BIAs location relative to the Operational Area

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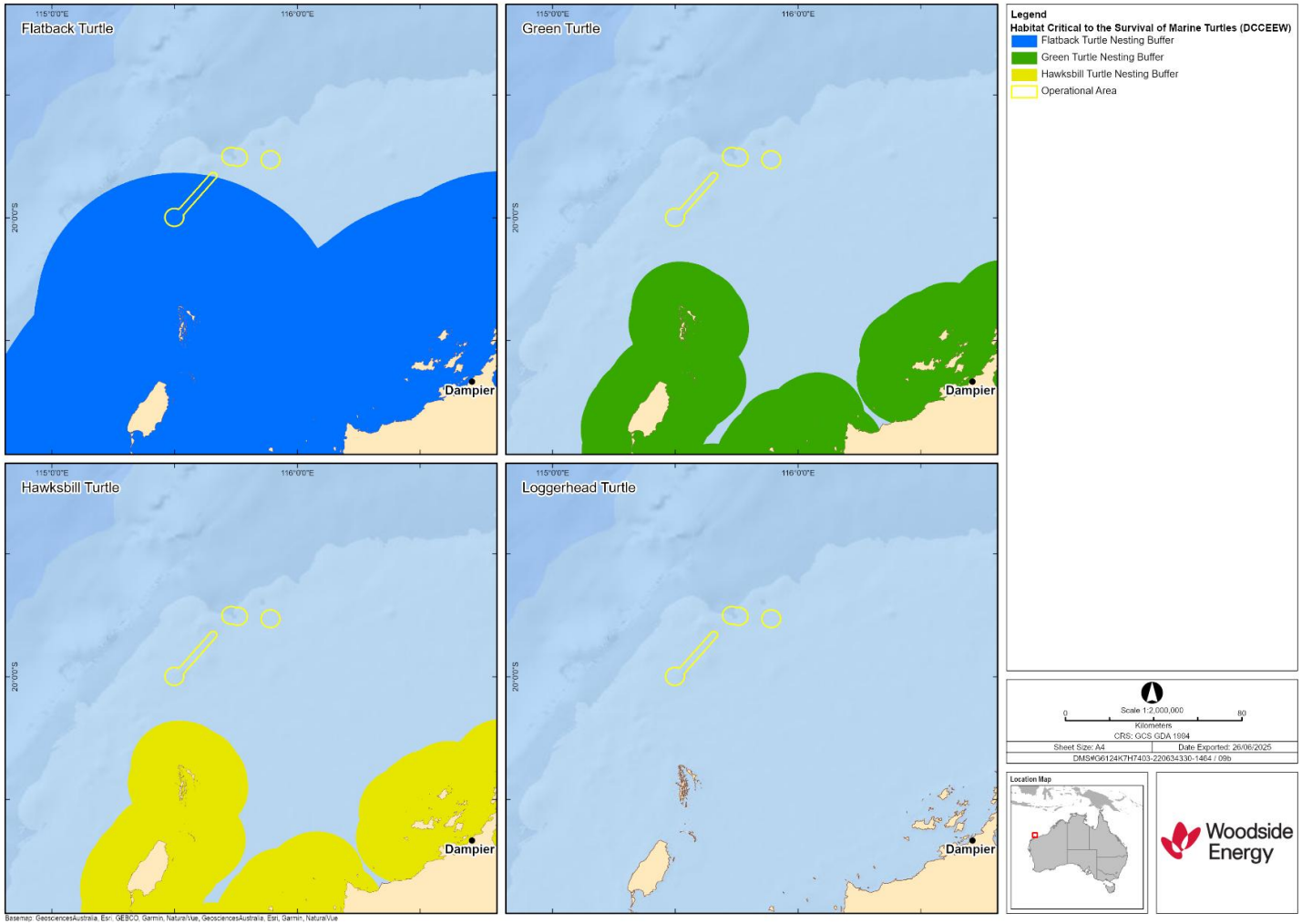


Figure 4-10: Marine turtles' habitat critical to the survival of the species location relative to the Operational Area

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4.6.3 Marine mammals

A total of 15 EPBC Act listed threatened and migratory marine mammal species have been identified to potentially occur within the EMBA, of which 11 occur in the Operational Area (Table 4-11). A full list of EPBC Act listed species identified in the PMST search is provided in Appendix C.

Further description of BIAs is provided in the Master Existing Environment.

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Table 4-11: Threatened and migratory marine mammal species predicted to occur within the Operational Area and EMBA

Species name	Common name	*Environment Protection and Biodiversity Conservation Act 1999* (as per PMST report Appendix C)		Potential for interaction	
		Threatened status	***Migratory status***	***OA***	***EMBA***
Balaenoptera musculus	Blue whale	Endangered	Migratory	Migration route known to occur within area	Migration route known to occur within area
Balaenoptera borealis	Sei whale	Vulnerable	Migratory	Species or species habitat likely to occur within area	Foraging, feeding or related behaviour likely to occur within area
Megaptera novaeangliae	Humpback whale	Vulnerable	Migratory	Breeding known to occur within area	Breeding known to occur within area
Balaenoptera physalus	Fin whale	Vulnerable	Migratory	Species or species habitat likely Vulnerable to occur within area	Foraging, feeding or related behaviour likely to occur within area
Balaenoptera edeni	Bryde's whale	N/A	Migratory	Species or species habitat likely to occur within area	Species or species habitat likely to occur within area
Balaenoptera bonaerensis	Antarctic minke whale	N/A	Migratory	Species or species habitat may occur within area	Species or species habitat likely to occur within area
Physeter macrocephalus	Sperm whale	N/A	Migratory	Species or species habitat may occur within area	Species or species habitat may occur within area
Orcinus orca	Killer whale	N/A	Migratory	Species or species habitat may occur within area	Species or species habitat may occur within area
Orcaella heinsohni	Australian snubfin dolphin	Vulnerable	Migratory	Species or species habitat may occur within area	Species or species habitat known to occur within area
Sousa sahulensis	Australian humpback dolphin	Vulnerable	Migratory	Species or species habitat may occur within area	Species or species habitat known to occur within area
Tursiops aduncus	Spotted bottlenose dolphin (Arafura/Timor Sea populations)	N/A	Migratory	Species or species habitat likely to occur within area	Species or species habitat known to occur within area

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Species name	Common name	*Environment Protection and Biodiversity Conservation Act 1999* (as per PMST report Appendix C)		Potential for interaction	
		Threatened status	***Migratory status***	***OA***	***EMBA***
Balaenoptera omurai	Omura's whale	N/A	Migratory	Species or species habitat likely to occur within area	Species or species habitat likely to occur within area
Eubalaena australis	Southern right whale	Endangered	Migratory	N/A	Species or species habitat likely to occur within area
Dugong dugon	Dugong	N/A	Migratory	N/A	Breeding known to occur within area
Neophoca cinerea	Australian sea lion	Endangered	N/A	N/A	Breeding known to occur within area

Table 4-12: Marine mammal BIAs within the Operational Area and EMBA

Species	BIA type	Approx. distance and direction from Operational Area (km)
Pygmy blue whale	Migration. Northern migration enters Perth canyon April/May; pass the North-West Shelf June/July; continue north to Indonesia) southern migration (follow WA coastline from October to late December)	~25 km north
	Foraging	• ~255 km south west
Humpback whale	Migration (north and south). Northern migration, June to September and southern migration July to November	~15 km south
	Resting. Exmouth Gulf is an important northward facing embayment, which is sheltered from prevailing weather. It provides a sheltered place for whales with calves to rest on their migration.	215 km south west
Southern right whale	Migration (~April to October).	230 km south west
	Reproduction (~May to October).	230 km south west
Dugong	Foraging (high density seagrass beds) and breeding (year-round).Calving (Exmouth Gulf)	• 2300 km south west • 710 km south west

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Species	BIA type	Approx. distance and direction from Operational Area (km)
	Foraging	715 km south west

Table 4-13: Habitat critical to the survival of marine mammal species predicted to occur within the EMBA

Species	Location of habitat critical	Approx. distance and direction from Operational Area (km)
Southern right whale	North West Cape/ Exmouth Gulf	~230 km south west

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4.6.4 Seabirds and migratory shorebirds

A total of 67 EPBC Act listed threatened seabirds and migratory shorebird species have been identified to potentially occur within the EMBA, of which 16 occur in the Operational Area (Table 4-14). A full list of EPBC Act listed species identified in the PMST search is provided in Appendix C.

Detailed descriptions of seabirds and migratory shorebirds in the EMBA are provided in the Master Existing Environment.

4.6.4.1 Wedge-tailed shearwater

The Wedge-tailed shearwater (*Arena pacifica*) is a pelagic, marine seabird known from tropical and subtropical waters (DCCEEW 2024). Its distribution is widespread across the Indian and Pacific oceans with a global population of 2.6 million pairs. Of this, approximately 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 (DCCEEW 2024).

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 ten-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 (DBCA 2017). The breeding season in the Pilbara region occurs between November and April (DBCA 2017). Breeding behaviours are typically nocturnal in Wedge-tailed shearwaters.

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 outside burrows. Known breeding locations in the NWMR include Forestier Island (Sable Island), Bedout Island, Dampier Archipelago, Passage Island, Lowendal Island, islands off Barrow Island (Mushroom, Double and Boodie islands), islands in the Onslow area (including Airlie, Bessieres, Serrurier, North and South Muiron and Locker islands), islands in Freycinet Estuary, and south Shark Bay (Slope, Friday, Lefebre, Charlie, Freycinet, Double and Baudin islands (DSEWPC 2012). This species forages relatively close to breeding islands and its diet consists of squid, fish and crustaceans (DSEWPC 2012), tracking studies found that foraging activities at sea were more frequent during the day compared with at night (Catry, et al. 2009, Weimerskirch, de Grissac, et al. 2020).

Wedge-tailed shearwaters breeding on the Muiron Island (north) undertook extensive foraging trips during the incubation period (1,200 – 1,400 km) and shorter trips during chick rearing (<300 km, (Cannell, Hamilton and Driessen 2019)). Longer foraging trips took individuals in a NW direction offshore towards oceanic seamounts. Conversely, the shorter tended to include waters to the west and NW of the Muiron Islands (Cannell, Hamilton and Driessen 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 and Congdon 2005), and New Caledonia (Weimerskirch, Le Corre, 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 and Congdon 2005, Weimerskirch, Le Corre, et al. 2005).

The Breeding BIA of the Wedge-tailed shearwater overlaps the Operational Area.

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Table 4-14: Threatened and migratory seabird and migratory shorebird species predicted to occur within the Operational Area and EMBA

Scientific Name	Common name	*Environment Protection and Biodiversity Conservation Act 1999* (as per PMST report Appendix C)		Potential for interaction	
		Threatened status	***Migratory status***	***Operational Area***	***EMBA***
Sternula nereis nereis	Australian fairy tern	Vulnerable	N/A	Foraging, feeding or related behaviour likely to occur within area	Breeding known to occur within area
Phaethon lepturus fulvus	Christmas Island White-tailed Tropicbird, Golden Bosunbird	Endangered	N/A	Species or species habitat may occur within area	Species or species habitat may occur within area
Phaethon rubricauda westralis	Red-tailed Tropicbird (Indian Ocean), Indian Ocean Red-tailed Tropicbird	Endangered	N/A	Species or species habitat likely to occur within area	Species or species habitat known to occur within area
Calidris acuminata	Sharp-tailed Sandpiper	Vulnerable	Migratory	Species or species habitat may occur within area	Species or species habitat known to occur within area
Macronectes giganteus	Southern Giant-Petrel, Southern Giant Petrel	Endangered	Migratory	Species or species habitat may occur within area	Species or species habitat may occur within area
Anous stolidus	Common Noddy	N/A	Migratory	Species or species habitat may occur within area	Species or species habitat likely to occur within area
Actitis hypoleucos	Common Sandpiper	N/A	Migratory	Species or species habitat may occur within area	Species or species habitat known to occur within area
Fregata minor	Great Frigatebird, Greater Frigatebird	N/A	Migratory	Species or species habitat may occur within area	Species or species habitat may occur within area
Fregata ariel	Lesser Frigatebird, Least Frigatebird	N/A	Migratory	Species or species habitat likely to occur within area	Breeding known to occur within area
Pandion haliaetus	Osprey	N/A	Migratory	Species or species habitat may occur within area	Breeding known to occur within area
Calonectris leucomelas	Streaked Shearwater	N/A	Migratory	Species or species habitat likely to occur within area	Species or species habitat likely to occur within area

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Scientific Name	Common name	*Environment Protection and Biodiversity Conservation Act 1999* (as per PMST report Appendix C)		Potential for interaction	
		Threatened status	***Migratory status***	***Operational Area***	***EMBA***
Phaethon lepturus	White-tailed Tropicbird	N/A	Migratory	Species or species habitat may occur within area	Breeding known to occur within area
Papasula abbotti	Abbott's booby	Endangered	N/A	N/A	Species or species habitat may occur within area
Diomedea amsterdamensis	Amsterdam Albatross	Endangered	Migratory	N/A	Species or species habitat likely to occur within area
Anous tenuirostris melanops	Australian lesser noddy	Vulnerable	N/A	N/A	Breeding known to occur within area
Thalassarche melanophris	Black-browed Albatross	Vulnerable	Migratory	N/A	Foraging, feeding or related behaviour likely to occur within area
Onychiprion anaethetus (listed as Sterna anaethetus)	Bridled tern	N/A	Migratory	N/A	Breeding known to occur within area
Sula leucogaster	Brown Booby	N/A	Migratory	N/A	Breeding known to occur within area
Thalassarche impavida	Campbell Albatross	Vulnerable	Migratory	N/A	Species or species habitat may occur within area
Hydroprogne caspia	Caspian Tern	N/A	Migratory	N/A	Breeding known to occur within area
Ardenna carneipes	Flesh-footed Shearwater, Fleshy-footed Shearwater	N/A	Migratory	N/A	Foraging, feeding or related behaviour likely to occur within area
Apus pacificus	Fork-tailed Swift	N/A	Migratory	N/A	Species or species habitat likely to occur within area
Thalasseus bergii	Greater Crested Tern	N/A	Migratory	N/A	Breeding known to occur within area

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Scientific Name	Common name	*Environment Protection and Biodiversity Conservation Act 1999* (as per PMST report Appendix C)		Potential for interaction	
		Threatened status	***Migratory status***	***Operational Area***	***EMBA***
Thalassarche carteri	Indian yellow-nosed albatross	Vulnerable	Migratory	N/A	Species or species habitat likely to occur within area
Sternula albifrons	Little Tern	Vulnerable	Migratory	N/A	Breeding known to occur within area
Sula dactylatra	Masked Booby	N/A	Migratory	N/A	Breeding known to occur within area
Macronectes halli	Northern Giant Petrel	Vulnerable	Migratory	N/A	Foraging, feeding or related behaviour likely to occur within area
Sterna dougallii	Roseate Tern	N/A	Migratory	N/A	Breeding known to occur within area
Thalassarche cauta	Shy Albatross	Endangered	Migratory	N/A	Species or species habitat may occur within area
Pterodroma mollis	Soft-plumaged petrel	Vulnerable	N/A	N/A	Foraging, feeding or related behaviour known to occur within area
Phoebetria fusca	Sooty Albatross	Vulnerable	Migratory	N/A	Species or species habitat may occur within area
Diomedea epomophora	Southern Royal Albatross	Vulnerable	Migratory	N/A	Species or species habitat may occur within area
Diomedea exulans	Wandering Albatross	Vulnerable	Migratory	N/A	Species or species habitat likely to occur within area
Ardenna pacifica	Wedge-tailed Shearwater	N/A	Migratory	N/A	Breeding known to occur within area
Thalassarche steadi	White-capped Albatross	Vulnerable	Migratory	N/A	Species or species habitat may occur within area
Malurus leucopterus leucopterus	White-winged Fairy-wren (Dirk Hartog Island), Dirk	Vulnerable	N/A	N/A	Species or species habitat likely to occur within area

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Scientific Name	Common name	*Environment Protection and Biodiversity Conservation Act 1999* (as per PMST report Appendix C)		Potential for interaction	
		Threatened status	***Migratory status***	***Operational Area***	***EMBA***
	Hartog Black-and-White Fairy-wren				
Calidris ferruginea	Curlew Sandpiper	Critically Endangered	Migratory	Species or species habitat may occur within area	Species or species habitat known to occur within area
Numenius madagascariensis	Eastern Curlew, Far Eastern Curlew	Critically Endangered	Migratory	Species or species habitat may occur within area	Species or species habitat known to occur within area
Calidris canutus	Red Knot, Knot	Vulnerable	Migratory	Species or species habitat may occur within area	Species or species habitat known to occur within area
Calidris melanotos	Pectoral Sandpiper	N/A	Migratory	Species or species habitat may occur within area	Species or species habitat known to occur within area
Limnodromus semipalmatus	Asian Dowitcher	Vulnerable	Migratory	N/A	Species or species habitat known to occur within area
Rostratula australis	Australian Painted Snipe	Endangered	N/A	N/A	Species or species habitat likely to occur within area
Hirundo rustica	Barn Swallow	N/A	Migratory	N/A	Species or species habitat known to occur within area
Limosa lapponica	Bar-tailed Godwit	N/A	Migratory	N/A	Species or species habitat known to occur within area
Limosa limosa	Black-tailed Godwit	Endangered	Migratory	N/A	Species or species habitat known to occur within area
Tringa nebularia	Common Greenshank, Greenshank	Endangered	Migratory	N/A	Species or species habitat known to occur within area
Calidris tenuirostris	Great Knot	Vulnerable	Migratory	N/A	Roosting known to occur within area
Charadrius leschenaultii	Greater Sand Plover, Large Sand Plover	Vulnerable	Migratory		Species or species habitat known to occur within area

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Scientific Name	Common name	*Environment Protection and Biodiversity Conservation Act 1999* (as per PMST report Appendix C)		Potential for interaction	
		Threatened status	***Migratory status***	***Operational Area***	***EMBA***
Pluvialis squatarola	Grey Plover	Vulnerable	Migratory	N/A	Roosting known to occur within area
Tringa brevipes	Grey-tailed Tattler	N/A	Migratory	N/A	Roosting known to occur within area
Charadrius veredus	Oriental Plover, Oriental Dotterel	N/A	Migratory	N/A	Roosting known to occur within area
Glareola maldivarum	Oriental Pratincole	N/A	Migratory	N/A	Roosting known to occur within area
Calidris ruficollis	Red-necked Stint	N/A	Migratory	N/A	Roosting known to occur within area
Arenaria interpres	Ruddy Turnstone	Vulnerable	Migratory	N/A	Roosting known to occur within area
Calidris alba	Sanderling	N/A	Migratory	N/A	Roosting known to occur within area
Xenus cinereus	Terek Sandpiper	Vulnerable	Migratory	N/A	Roosting known to occur within area
Numenius phaeopus	Whimbrel	N/A	Migratory	N/A	Roosting known to occur within area
Tringa glareola	Wood Sandpiper	N/A	Migratory	N/A	Species or species habitat known to occur within area
Leipoa ocellata	Malleefowl	Vulnerable	N/A	N/A	Species or species habitat likely to occur within area
Pezoporus occidentalis	Night Parrot	Critically Endangered	N/A	N/A	Species or species habitat may occur within 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 within area

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Scientific Name	Common name	*Environment Protection and Biodiversity Conservation Act 1999* (as per PMST report Appendix C)		Potential for interaction	
		Threatened status	***Migratory status***	***Operational Area***	***EMBA***
Aphelocephala leucopsis	Southern Whiteface	Vulnerable	N/A	N/A	Species or species habitat likely to occur within area
Erythrotriorchis radiatus	Red Goshawk	Endangered	N/A	N/A	Species or species habitat may occur within area

Table 4-15: Seabird and shorebird BIAs within the EMBA

Species	BIA type	Approx. distance and direction from Operational Area (km)
Wedge-tailed shearwater	Breeding. Kimberley, Pilbara and Gascoyne coasts and islands including Ashmore Reef (Breeding from November to April in the Pilbara).	Overlap
	Foraging (in high numbers)	~680 km south west
Roseate tern	Breeding. Kimberley, Pilbara and Gascoyne coasts and islands including Ashmore Reef (Breeding from May to August. Also, birds from South-west Marine Region dispersing north in winter).	~35 km south
Fairy tern	Breeding. Pilbara and Gascoyne coasts and islands (Breeding from June to September, birds from South-west Marine Region dispersing northwards in winter).	~30 km south
Lesser crested tern	Breeding. Kimberley, Pilbara and Gascoyne coasts and islands including Ashmore Reef (Breeding March to June).	~35 km south

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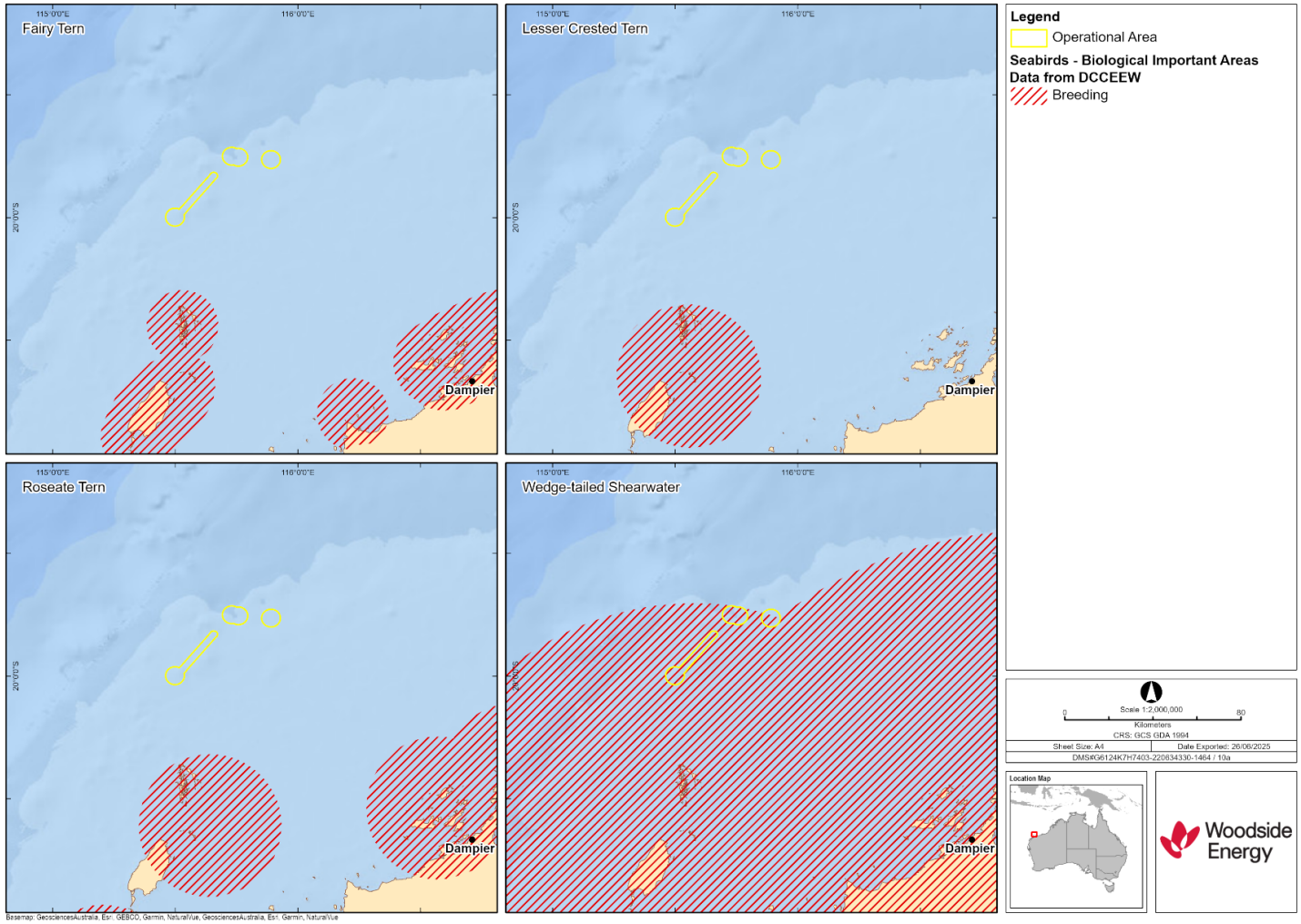


Figure 4-11: Seabird BIAs overlapping the Operational Area and EMBA

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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. Movement patterns of all protected species identified in Section 4.6 are described in Section 5 of the Master Existing Environment.

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Table 4-16: Key seasonal sensitivities for protected migratory species identified as occurring within the Operational Area

Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Fish, sharks and rays												
Whale shark – foraging/ aggregation (Ningaloo Coast) (TSSC 2015f)												
Whale shark – northern and southern migration (NWMR) (TSSC 2015f)												
Mammals												
Fin whale												
Humpback whale – northern migration (TSSC 2015d; Double et al. 2010)												
Humpback whale – southern migration (TSSC 2015d; Double et al. 2010)												
Sei whale - migration (DEH 2005)												
East Indian Ocean (EIO) pygmy blue whale – northern migration (Double et al. 2012; 2014)												
East Indian Ocean (EIO) pygmy blue whale – southern migration (Double et al. 2012; 2014)												
Marine reptiles												
Flatback Turtle												
Pilbara Coast genetic stock - nesting												
Pilbara Coast genetic stock -												
Green Turtle												
Northwest Shelf genetic stock - nesting												
Northwest Shelf genetic stock - foraging												

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Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Hawksbill Turtle												
Western Australia genetic stock - nesting												
Western Australia genetic stock - foraging												
Loggerhead Turtle												
Nesting												
Foraging												
Seabirds and shorebirds												
Wedge-tailed shearwater – various breeding sites (DSEWPaC 2012e)												
	Species may be present in the OA											
	Peak period. Presence of animals is reliable and predictable each year											

1.Information regarding seasonal occurrence of marine turtles has been taken from the Recovery Plan for Marine Turtles in Australia 2017–2027 (CoA 2017b).

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4.7 Key ecological features (KEFs)

KEFs within the Operational Area and EMBA are identified in Table 4-17 and described in Section 9 of the Master Existing Environment. Further information of the KEFs within the Operational Area is provided in the following subsections.

Figure 4-12 shows the spatial overlap with KEFs and the Operational Area and EMBA.

Table 4-17: KEFs within the Operational Area and EMBA

Key ecological feature	Distance and direction from Operational Area to KEF (km)
Ancient coastline at 125 m depth contour	Overlaps Operation Area
Continental Slope demersal fish communities	25 km north
Glomar Shoals	70 km east
Exmouth Plateau	120 km west
Canyons linking the Cuvier Abyssal Plain and the ape Range Peninsula	180 km south west
Commonwealth waters adjacent to Ningaloo Reef	225 km south west
Mermaid Reef and commonwealth waters surrounding Rowley Shoals	375 km north east
Wallaby Saddle	720 km south west
Canyons linking the Argo Abyssal plain with the Scott Plateau	690 km north east
Western Rock lobster	870 km south west
Western Demersal slope and associated fish communities	690 km south west
Ancient coastline at 90 – 120 m depth	875 km south west
Commonwealth marine environment surrounding the Houtman Abrolhos Island	910 km south west
Perth Canyon and adjacent shelf break, and other west coast canyons	910 km south west

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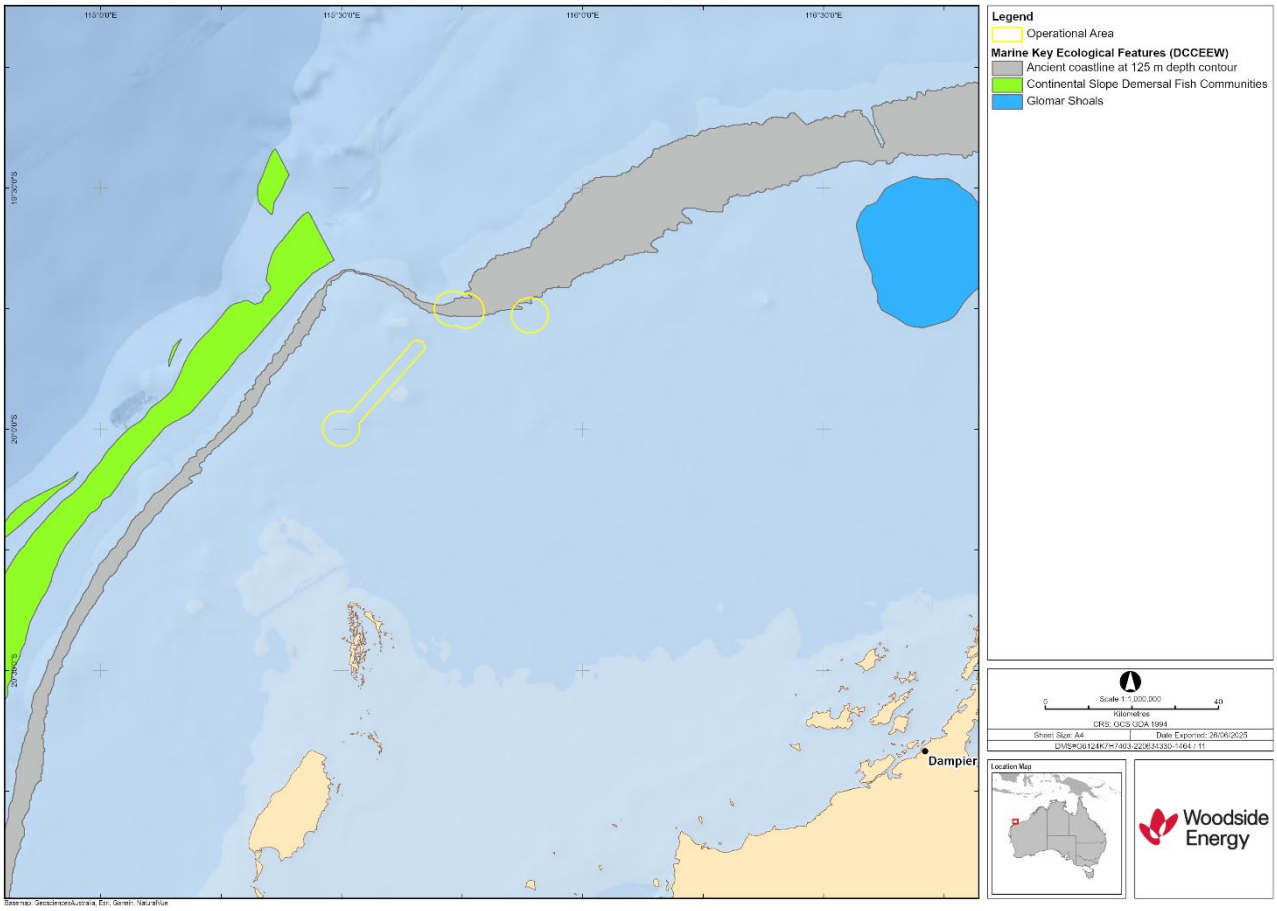


Figure 4-12: KEFs overlapping the Operational Area

4.7.1 Ancient Coastline at 125 m 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 both the benthic and pelagic habitats within the feature (DSEWPC 2012).

Parts of the Ancient Coastline, particularly where it exists as a rocky escarpment, are thought to provide biologically important habitats in areas otherwise dominated by soft sediments (DSEWPC 2012). The escarpment type features may also potentially 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 North West Shelf bioregion (DSEWPC 2012).

Although the Ancient Coastline adds additional 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

The Montebello Australian Marine park overlaps the Operational Area. No other protected places overlap the Operational Area. The Montebello Marine Park is located offshore of Barrow Island and 80 km west of Dampier extending from the Western Australian State water boundary and is adjacent to the Western Australian Barrow Island and Montebello Islands Marine Parks. This Marine Park covers an area of 3413 km² and water depths from less than 15 m to 150 m. Further information on the Montebello Australian Marine Park within the Operational Area is provided in Section 4.8.1.

Protected places within the Operational Area and EMBA are identified in Table 4-18 and presented in Figure 4-13. The Master Existing Environment outlines the values and sensitivities of protected places and other sensitive areas in the Operational Area and EMBA.

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Table 4-18: Established protected places and other sensitive areas overlapping the Operational Area and EMBA

	Distance and direction from Operational Area to protected place or sensitive area (km)	IUCN category* or relevant park zone overlapping the Operational Area and/or EMBA
AMPs[4]		
NWMR		
Montebello Marine Park	Overlaps	VI
Ningaloo Marine Park	225 km south west	IV, II, VI
Dampier Marine Park	110 km south east	IV, II, VI
Gascoyne Marine Park	340 km south west	IV, II, VI
Carnarvon Canyon Marine Park	555 km south west	IV
Shark Bay Marine Park	530 km south west	VI
Mermaid Reef	475 km north east	II
Argo-Rowley Terrace Marine Park	375 km north east	VI, II
SWMR		
Abrolhos	705 km south west	IV, II, VI
State Marine Parks and Nature Reserves[5]		
Marine Parks		
Montebello Islands	30 km south	N/A
Barrow Island	80 km south	N/A
Ningaloo	225 km south west	N/A
Rowley shoals	385 km north east	N/A
Shark Bay	655 km south west	N/A
Marine Management Areas		
Barrow Island	50 km south	N/A
Muiron Islands	205 km south west	N/A
Fish Habitat Protection Areas		
Abrolhos Islands	920 km south	N/A
Nature Reserves		
Great Sandy Island	105 km south	N/A
Rocky Island	215 km south	N/A
Thevenard Island	165 km south	N/A
Other sensitive areas		
Nyangumarta Warrarn Indigenous Protected Area	430 km south east	N/A

**Conservation objectives for IUCN categories include:*

Ia: Strict Nature Reserve

Ib: Wilderness Area

[4] Distances are approximate based on available Geographic Information System (GIS) data.

[5] Distances are approximate based on available Geographic Information System (GIS) data.

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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.

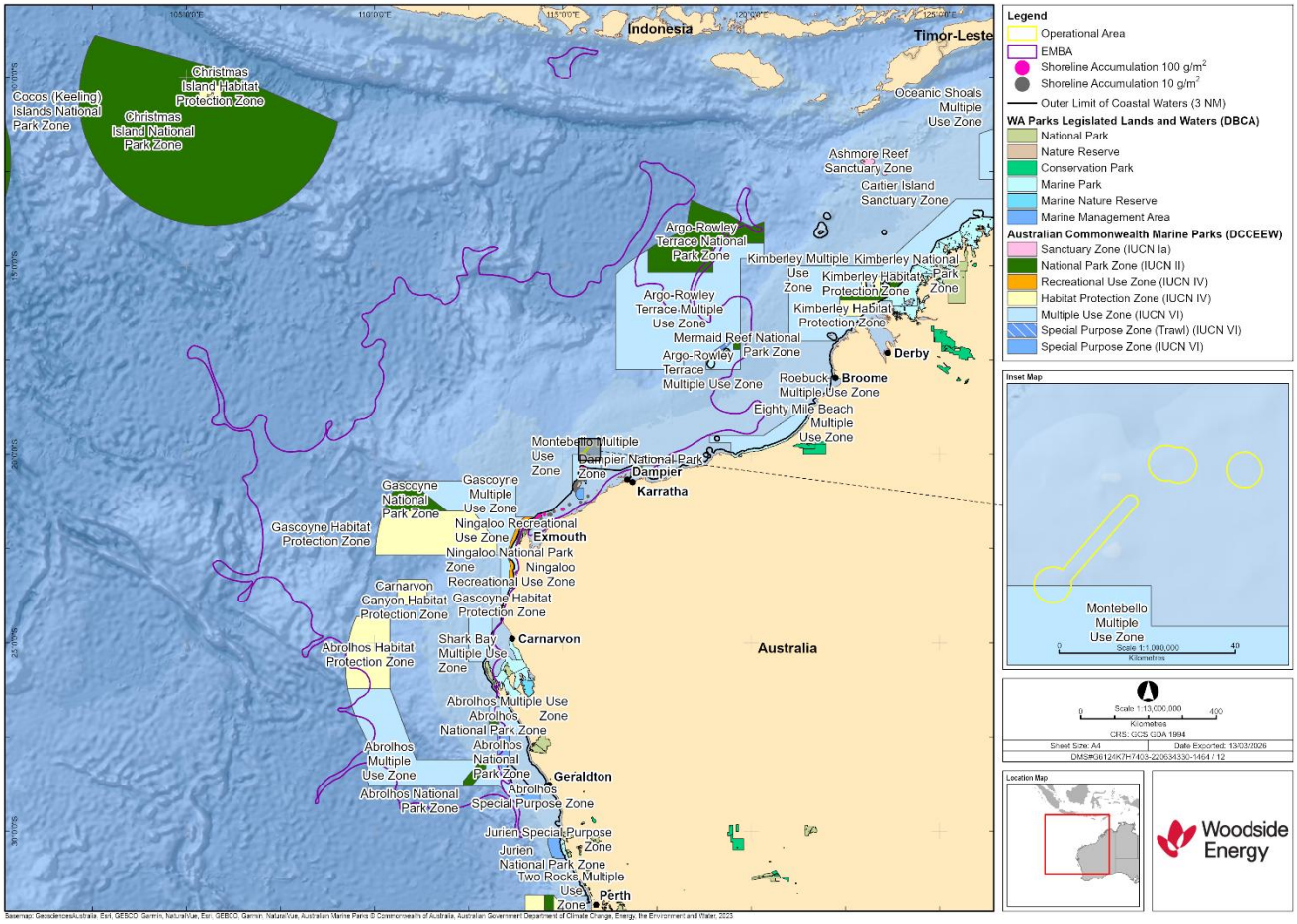


Figure 4-13: Protected areas overlapping the Operational Area and EMBA

4.8.1 Montebello Marine Park

The Montebello Marine Park includes shallow shelf environments and provides protection for shelf and slope habitats, as well as pinnacle and terrace seabed features. The North-west Marine Parks Network Management Plan (DNP 2018) identifies the following values for the Montebello Marine Park:

- **Natural Values**: the 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 key ecological feature of the Marine Park is the Ancient Coastline at the 125 m depth contour. The Marine Park supports a range of species listed under the EPBC Act. Biologically important areas within the 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.
- **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

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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 listings apply to the Marine Park, however the Marine Park is adjacent to the Western Australia Barrow Island and the Montebello– Barrow Island Marine Conservation Reserves which have been nominated for national heritage listing. The Marine Park contains two known shipwrecks listed under the *Historic Shipwrecks Act 1976*: 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 the Marine Park.

4.9 Socio-economic 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. Description of cultural values and heritage as they relate to the wider North-west Marine Region (NWMR) are described in the Master Existing Environment.

4.9.1.1 Native Title

For the activity in this EP, there are no native title claims or determinations, and no ILUAs overlapping the Operational Area. There are eight Native Title claims that interact with the EMBA (Table 4-19). Claims and determinations have not been differentiated in this table, as it is acknowledged that rights and interest may exist within either of these. Figure 4-14 shows the spatial overlap with native title claims and ILUAs.

Further description of how Woodside considers native title rights and interest is provided in the Master Existing Environment.

4.9.1.2 Coastally adjacent First Nations 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 First Nations groups to be consulted (see Section 5).

Further description of how Woodside engages with coastally adjacent first nations groups is provided in the Master Existing Environment.

A summary of native title claims, determinations and ILUAs overlapping or coastally adjacent to the EMBA is set out in Table 4-19 and shown in Figure 4-14.

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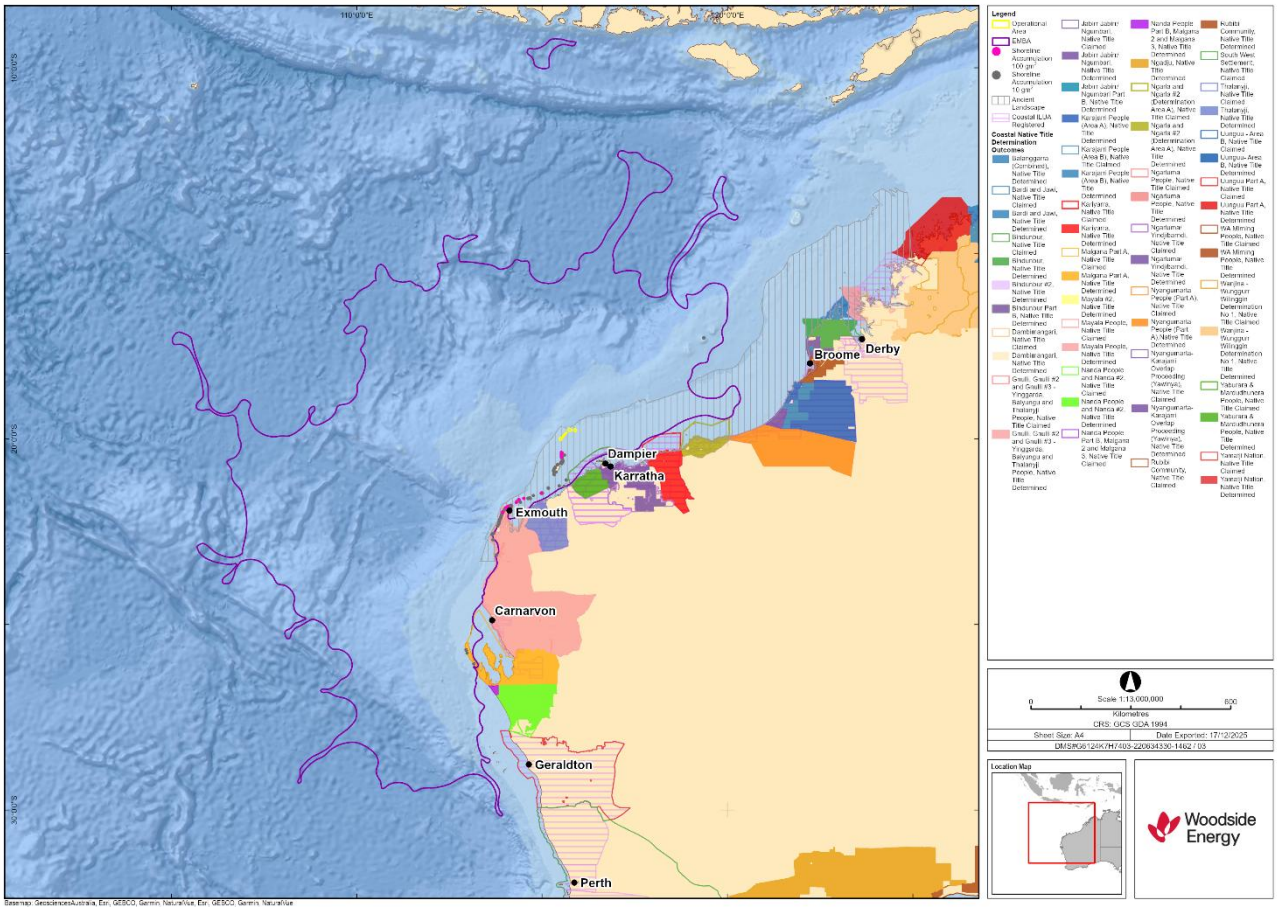


Figure 4-14:Operational Area and socio-economic EMBA in relation to Native Title Claims, Determinations and Indigenous Land Use Agreements

Table 4-19: Summary of Native Title Claims, Determinations and Indigenous Land Use Agreements which overlap or are coastally adjacent to the EMBA

Claim/ determination/ ILUA	Registered Native Title Body Corporate	Overlap with EMBA	Coastally adjacent to the EMBA
Determination			
Gnulli, Gnulli #2 and Gnulli #3 – Yinggarda, Baiyungu and Thalanyji People	Nganhurra Thanardi Garrbu Aboriginal Corporation (NTGAC), Yinggarda Aboriginal Corporation (YAC)	Yes	Yes
Kariyarra	Kariyarra Aboriginal Corporation	Yes	Yes
Ngarluma/Yindjibarndi	Yindjibarndi Aboriginal Corporation, Ngarluma Aboriginal Corporation (NAC)	Yes	Yes
Thalanyji	Buurabalayji Thalanyji Aboriginal Corporation (BTAC)	Yes	Yes
Yaburara & Mardudhunera People	Wirrawandi Aboriginal Corporation (WAC)	Yes	Yes
Bardi and Jawi	Bardi and Jawi Niimidiman Aboriginal Corporation	No	Yes

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Claim/ determination/ ILUA	Registered Native Title Body Corporate	Overlap with EMBA	Coastally adjacent to the EMBA
Bindunbur	Gogolanyngor Aboriginal Corporation, Nimanburr Aboriginal Corporation, Nyul Nyul PBC Aboriginal Corporation	No	Yes
Bindunbur #2	Gogolanyngor Aboriginal Corporation, Nimanburr Aboriginal Corporation, Nyul Nyul PBC Aboriginal Corporation	No	Yes
Bindunbur Part B	Gogolanyngor Aboriginal Corporation, Nimanburr Aboriginal Corporation	No	Yes
Jabirr Jabirr/Ngumbari	Gogolanyngor Aboriginal Corporation	No	Yes
Jabirr Jabirr/Ngumbarl Part B	Gogolanyngor Aboriginal Corporation	No	Yes
Karajarri People (Area A and Area B)	Karajarri Traditional Lands Association (Aboriginal Corporation)	No	Yes
Malgana Part A	Malgana Aboriginal Corporation	Yes	Yes
Nanda People Part B, Malgana 2 and Malgana 3	Malgana Aboriginal Corporation, Nanda Aboriginal Corporation	No	Yes
Nanda People and Nanda #2	Nanda Aboriginal Corporation	No	Yes
Ngarla and Ngarla #2 (Determination Area A)	Wanparta Aboriginal Corporation	Yes	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
Nyangumarta People (Part A)	Nyangumarta Warrarn Aboriginal Corporation	No	Yes
Nyangumarta-Karajarri Overlap Proceeding (Yawinya)	Nyangumarta Karajarri Aboriginal Corporation	No	Yes
Rubibi Community	Yawuru Native Title Holders Aboriginal Corporation	No	Yes
Yamatji Nation	Bundi Yamatji Aboriginal Corporation	No	Yes
Nhuwala Claim Group	Yamatji Marlpa Aboriginal Corporation	Yes	Yes
Thalanyji / Nhuwala People	Buurabalayji Thalanyji Aboriginal Corporation	Yes	Yes
ILUA			
Alinta-Kariyarra Electricity Infrastructure ILUA	No representative body specified	Yes	Yes
Anketell Port, Infrastructure Corridor and Industrial Estates Agreement	Ngarluma Aboriginal Corporation	Yes	Yes

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Claim/ determination/ ILUA	Registered Native Title Body Corporate	Overlap with EMBA	Coastally adjacent to the EMBA
Bardi Jawi Conservation Estate ILUA	Bardi and Jawi Niimidiman Aboriginal Corporation	No	Yes
Brickhouse and Yinggarda Aboriginal Corporation ILUA	Yinggarda Aboriginal Corporation	No	Yes
Cape Preston Project Deed (YM Mardie ILUA)	Wirrawandi Aboriginal Corporation	Yes	Yes
Cape Preston West Export Facility	Wirrawandi Aboriginal Corporation	No	Yes
Eco Beach ILUA	Yawuru Native Title Holders Aboriginal Corporation	No	Yes
FMG – Kariyarra Land Access ILUA	No representative body specified	Yes	Yes
Gnaraloo Indigenous Land Use Agreement	Nganhurra Thanardi Garrbu Aboriginal Corporation	Yes	Yes
Great Sandy Desert Project ILUA – Infrastructure	Karajarri Traditional Lands Association (Aboriginal Corporation)	No	Yes
Karajarri Traditional Lands Association KSCS Eighty Mile Beach ILUA	Karajarri Traditional Lands Association (Aboriginal Corporation)	No	Yes
Kariyarra and State ILUA	Kariyarra Aboriginal Corporation, Yamatji Marlpa Aboriginal Corporation	No	Yes
KM & YM Indigenous Land Use Agreement 2018	Wirrawandi Aboriginal Corporation, Robe River Kuruma Aboriginal Corporation, Yamatji Marlpa Aboriginal Corporation	Yes	Yes
Kuruma Marthudunera and Yaburara and Coastal Mardudhunera Indigenous Land Use Agreement	No representative body specified	Yes	Yes
Macedon ILUA	Buurabalayji Thalanyji Aboriginal Corporation	Yes	Yes
Malgana Aboriginal Corporation Conservation Estate ILUA	Malgana Aboriginal Corporation		
Malgana Tamala Pastoral Lease Agreement	Malgana Aboriginal Corporation	No	Yes
Malgana Woodleigh Carbla Pastoral Lease Agreement	Malgana Aboriginal Corporation	No	Yes
Malgana Wooramel Pastoral Lease Agreement	Malgana 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	Yes	Yes
Nganhurra Thanardi Garrbu Aboriginal Corporation Conservation Estate ILUA	Nganhurra Thanardi Garrbu Aboriginal Corporation	Yes	Yes

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Claim/ determination/ ILUA	Registered Native Title Body Corporate	Overlap with EMBA	Coastally adjacent to the EMBA
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
Quobba – Yinggarda Pastoral ILUA	Yinggarda Aboriginal Corporation	No	Yes
RTIO Kuruma Marthudunera People ILUA	Robe River Kuruma Aboriginal Corporation	Yes	Yes
RTIO Ngarluma Indigenous Land Use Agreement (Body Corporate Agreement)	Ngarluma Aboriginal Corporation	No	Yes
Yamatji Nation Agreement	Yamatji Southern Regional Corporation	No	Yes
Yawuru Area Agreement ILUA	Yawuru Native Title Holders Aboriginal Corporation, Kimberly Land Council	No	Yes
Yawuru Nagulagun / Roebuck Bay Marine Park ILUA	Yawuru Native Title Holders Aboriginal Corporation	No	Yes
Yawuru Prescribed Body Corporate ILUA – Broome	Yawuru Native Title Holders Aboriginal Corporation	No	Yes
Yued Indigenous Land Use Agreement	Yued Aboriginal Corporation	No	Yes

4.9.1.3 Marine and National Parks

Woodside undertakes an assessment of cultural values within Marine Park Management Plans where the Operational Area or EMBA overlaps a Marine Park.

Woodside considers the management plans of marine parks that overlap the Operational Area and the EMBA to determine whether cultural features and heritage values have been identified and whether there are specified Traditional Custodians or representative bodies referenced to contact regarding potential cultural features and heritage values. For completeness, Woodside considers cultural features and heritage values identified in the management plans, where EP relevant Traditional Custodians or representative bodies are represented. These values are outlined in Table 4-21.

The Operational Area overlaps the Montebello AMP. The EMBA overlaps a further ten AMPs under the South-West Marine Parks Network Management Plan 2018 (DNP 2018) and North West Marine Parks Network Management Plan 2018 (DNP 2018). The Operational Area does not overlap any State Marine protected areas, however the EMBA overlaps a further 12 State marine protected areas. 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). Consultation with these group[s] may identify heritage values and cultural features beyond those

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addressed in the marine park management plans. Eight identifiable representative bodies were specified for the marine parks overlapped by the EMBA (Table 4-20).

Management plans for the AMPs note shipwrecks within the AMPs and overlap with World, National and Commonwealth heritage lists. These are addressed in Sections 4.9.1.8 and 4.9.1.9.

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 and Department of Conservation and Land Management, 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 activity described in this EP does not include the addition of any structures within these parks, no impacts on the aesthetic values of these parks are anticipated.

Table 4-20: 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			
Abrolhos AMP	No	Yes	Yamatji Marlpa Aboriginal Corporation
Argo–Rowley Terrace AMP	No	Yes	No identifiable body specified.
Carnarvon Canyon AMP	No	Yes	No identifiable body specified.
Dampier AMP	No	Yes	NAC, Yindjibarndi Aboriginal Corporation
Eighty Mile Beach AMP	No	Yes	Karajarri Traditional Lands Association, Nyangumarta Karajarri Aboriginal Corporation, Nyangumarta Warrarn Aboriginal Corporation, Wanparta Aboriginal Corporation.
Gascoyne AMP	No	Yes	Yamatji Marlpa Aboriginal Corporation
Mermaid Reef AMP	No	Yes	No identifiable body specified.
Montebello AMP	Yes	Yes	Yamatji Marlpa Aboriginal Corporation
Ningaloo AMP	No	Yes	Nganhurra Thanardi Garrbu Aboriginal Corporation
Shark Bay AMP	No	Yes	Yamatji Marlpa Aboriginal Corporation (YMAC)
State Marine Park Management Plan			
Barrow Island Marine Management Area	No	Yes	No identifiable body specified.
Barrow Island Marine Park	No	Yes	No identifiable body specified.
Eighty Mile Beach Marine Park	No	Yes	Karajarri Traditional Lands Association, Nyangumarta Warrarn Aboriginal Corporation, Wanparta Aboriginal Corporation and Nyangumarta Karajarri Aboriginal Corporation
Montebello Island Marine Park	No	Yes	No identifiable body specified.
Muiron Island Marine Management Area	No	Yes	No identifiable body specified.

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Marine Park Management Plan	Operational Area Overlap	EMBA Overlap	Specified bodies
Ningaloo Marine Park	No	Yes	Nganhurra Thanardi Garrbu Aboriginal Corporation
Rowley Shoals Marine Park	No	Yes	No identifiable body specified.
Shark Bay Marine Park	No	Yes	Malgana Aboriginal Corporation

4.9.1.4 Indigenous protected areas

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.

No IPAs were identified within the Operational Area One IPA was identified within the EMBA—the Nyangumarta Warrarn IPA (Unassigned [IUCN VI]) (Table 4-18).

This IPA is described in the Master Existing Environment.

4.9.1.5 Sea Country values

Sea Country can be defined as the area of sea over which a First Nations group has interests, cultural value, connection and use. Sea Ccountry values of marine ecosystems are further described in the Master Existing Environment.

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 were identified through publically available literature (Table 4-21) and through consultation in the course of preparing this EP and other Woodside EPs (Table 4-22)

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 4-21 according to the First Nations groups (where identified or inferable) who hold these values.

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Table 4-21: Cultural features and heritage values identified in publicly available literature

First Nations group	Features and values	Source	Potential for overlap	
			Operational Area	EMBA
Bardi and Jawi	Feature: Mythologically important places	FCAFC (2010)	Unlikely (unspecified)	Possible (unspecified)
	Value: Activities of mythological beings in the sea area		Unlikely (unspecified)	Unlikely (unspecified)
	Feature: Resources including (1) dugong, (2) turtle and (3) trochus shell		Possible (turtles) Other resources (No)	Possible
	Value: Traditional knowledge of the sea and the features within		Possible (unspecified) Unlikely given distance from Operational Area	Possible (unspecified)
	Value: Access to the sea around the coast of the mainland of the Dampier Peninsula and among the islands for traveling, hunting and fishing		No	Possible (unspecified)
	Feature: Pearl shell	FCA (2005)	No	Possible
	Value: Fishing		No	Possible (unspecified)
	Feature: Feather		No	Possible
	Value: Reefs		No	Possible
	Value: Resource collection at One Arm Point (reef)	Oades and Meister (2013)	No	No
	Value: resources including: Banyjarr, (clam and abalone) (1) Noomool (seagrass) (2) Alngir (trochus), Goowarn (pearl shell) (3) Bluebone (Goorlan) (4) Aarli (fish) and fish stocks (5) Goorlil (turtle) (6) Odorr (dugong) (7)		 Unlikely (1) No (2, 7, 10) Possible (4, 5, 8, 9)	Possible (all)

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First Nations group	Features and values	Source	Potential for overlap	
			Operational Area	EMBA
	Joord (mullet) (8) Barnamb (stingray) (9) Ngarrangg (mud crab) (10)			
	Feature: Seagrass meadows		No	Possible
	Feature: Mangroves		No	Possible
	Value: Access to Sea Country		Unlikely (No access restrictions beyond Operational Area)	Possible (No access restrictions beyond Operational Area)
	Value: Sustainable fishing of (1) fish, (2) turtle and (3) dugong [resource availability]		No	Possible
	Feature: Saltwater including coral reefs communities (1), sea grass (2), saltmarsh communities (3), mangroves and macroalgae (4)		No (all)	Possible
	Feature: Whales (1), dolphins (2), estuarine crocodiles (3), sea and shore birds (4).		Possible (except for crocodiles)	Possible (except for crocodiles)
	Value(s): Marrgoorr (coral) (1) and marnany (reef) communities (2) Mangroves (3), creeks (4) and saltmarsh communities (5) Noomool (seagrass) (6) and laanyji (macroalgae) communities(7) Water and sediment quality (8) Geomorphology including beaches (9) Subtidal filter-feeding communities (10) Intertidal sand and mud flat communities and oombans (freshwater soaks) (11) Goorlil (marine turtles) (12)	DBCA (2022)	No (1-7, 9-11) Possible (8) Possible (12)	Possible (all except for crocodiles)

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First Nations group	Features and values	Source	Potential for overlap	
			Operational Area	EMBA
	Aarli (fish) (13) including joorroo (sharks) (14) and barnamb (rays) (15)		Possible (13-15,17)	
	Odorr (dugongs) (16)		No (16,18)	
	Miinimbi (whales) and bayalbarr (dolphins) (17)			
	Linygurra (estuarine crocodiles) (18)			
	Sea and shore garrabal (birds) (19)		Possible (19-20)	
	Invertebrates (20)			
	Value: Shark Dreamtime associated with saltwater including how the hammerhead came into existence.		Possible (unspecified)	Possible (unspecified)
	Value: Access to Sea Country areas specified below:			
	Woolardgoon Special Purpose Zone		No (No access restrictions beyond Operational Area)	No (No access restrictions beyond Operational Area)
	Packer Island			
	Bool Special Purpose Zone			
	Thomas Bay			
	Jilany Creek Special Purpose Zone			
	Arnbarnani Special Purpose Zone			
	Cape Leveque Island			
	Oorroondoorroon Special Purpose Zone			
	Alarm Shoal			
	Birimbir Special Purpose Zone			
	Hunter Creek			

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First Nations group	Features and values	Source	Potential for overlap	
			Operational Area	EMBA
	Iinalang Special Purpose Zone Sunday Island Group Nooblooloon Special Purpose Zone Catamaran Bay Garrambany Special Purpose Zone Chunelarr Creek Maljin Special Purpose Zone Cygnet Bay Garramal Special Purpose Zone Cunningham Point			
	Value: Dreaming stories and songlines associated with ancestral beings that travelled Sea Country	Smyth and Bahrdt (2007)	Possible (unspecified)	Possible (unspecified)
	Feature: Islands (1), reefs (2), sandbanks (3) and marine species (4)		Possible (4 only)	Possible (all)
	Value/s: shark ancestral being (Looloolo) (1) spirit beings (rai) (2)		Possible (1,2 unspecified)	Possible (1,2 unspecified)
	double log raft (gaalwa) (3) pearl shell (goowarn) (4) middens (5) fish traps (6) reefs (marnany) (7)		No	Possible (all)
	turtles (goorlil) (8)		Possible	

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First Nations group	Features and values	Source	Potential for overlap	
			Operational Area	EMBA
	dugongs (odorr) (9) Value/s:		No	
	Rock cod (jimbiridj) (1)		No (6, 8, 17, 19)	No (8)
	Baler shell (ngarlanggarnanya) (2)		Possible (all other values)	Possible (all other values)
	Blue crab (gandjeelaadj) (3)		Possible (18 shoreline accumulation)	Possible (18 shoreline accumulation)
	Flat head fish (beelbaba) (4)			
	Creator snake (unggudia) (5)		Possible (5 - unspecified)	Possible (5 - unspecified)
	Dugong (waliny) (6)			
	Turtle (julawaddaa (7)			
	Estuarine crocodile (goiyoiya) (8)			
	Whale (ngunuubange) (9)			
	Dolphin (jigeedany) (10)			
	Sea birds (11)			
	Barramundi (Ilerdda) (12)			
	Fish (jaiya) (13)			
	Crabs (ganbaneddee) (14)			
	Oysters (marlinju) (15)			
	Green turtle (waarlee) (16)			
	Coral reefs (waddaroo) (17)			
	Beaches (galaab) (18)			
	Mangrove (jindirm) (19)			

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First Nations group	Features and values	Source	Potential for overlap	
			Operational Area	EMBA
	Seagrass beds (julum) (20)			
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 Gastropods Shellfish	Morse (1993)	No (mangrove crabs) Possible (all other values)	Possible (all)

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First Nations group	Features and values	Source	Potential for overlap	
			Operational Area	EMBA
	Turtle			
Jabirr Jabirr and Ngumbarl	Value: coastal areas used for hunting, fishing and camping	FCA (2013)	No	Possible (unspecified)
	Features: Lurujarri Dreaming Trail	FCA (2007)		
	Ngu nungurrukun (Coconut Well)		Possible (Salmon and mullet)	Possible (the ocean reef, mangroves, salmon and mullet)
	Judinnang (the ocean reef) and the Lurujarri (coastal dunes)		No (all other values)	No (all other values)
	Gudurlwarany (Brolga)			
	Lindalinda (Jabiru)			
	Galbany (mullet) and Walgawalga (salmon)			
	Wader birds			
	Wirrkinymirri (Willie Creek)			
	Saltwater crocodiles. Linygoorr will usually feed on Wangkaja (mangrove crab) and fish			
	Biyalbiyal (mangrove) trunks			
	Value(s): Resources including:	Goolarabooloo n.d	Possible (1, 5, 6)	Possible (1, 2, 5, 6)
	Turtle (1)			
	Dugong (2)		No (all other values)	No (all other values)
	Stone at Yalun or Cone Bay (3)			
	Gulngarriny or yams and madilang tubers at Long, Mermaid, Pascoe and other islands (4)			
	Trochus, clams, oysters (5)			
	Fish (6)			
	Sugarbag (native honey) (7)			

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First Nations group	Features and values	Source	Potential for overlap	
			Operational Area	EMBA
Karajarri, Nyangumarta and Ngarla	Value: Cultural sites (Coastal and Inland) *There are significant cultural sites in coastal and inland areas that are regularly used and maintained by Karajarri people. These sites include fish traps, Ceremonial Increase sites, ceremonial areas and Pulany (mythical Serpent) sites.*	Department of Parks and Wildlife (2014)	No	Possible (coastal only – shoreline accumulation only)
	Value: Eighty Mile Beach Value: Roebuck Bay		No	No
	Value: Obligation to Care for Country *Karajarri people view their environmental responsibilities as Palanapayana Tukjana Ngurra meaning "everybody looking after country properly" and that this obligation is from Yatangal (spiritual conception). Karajarri believe they are born with a binding responsibility to care for their country.*		Possible (unspecified)	Possible (unspecified)
	Value/s: Marine/ Coastal resources Value: Intergenerational Knowledge sharing *Some important Karajarri places are not considered sacred but are regularly used by Karajarri to utilize the resources of the land. Places such as Warlpi (camping sites), fishing spots or Kurrjungu (stone fish traps) are important for Karajarri and are used by people to maintain their connection to their country and harvest resources from the land and sea.*		Possible (unspecified)	Possible (unspecified)
	Value/s: Saltwater habitats (Reef, Deep Sea) Value: Marine Resources *Karajarri saltwater habitats include Wintirri (sandy beaches, dunes and cliffs), Wangku (rocky headlands), Puntu (intertidal mudflats/freshwater seepages), Parnany (reefs) and Wankurru (deep sea). All of these areas are valuable to Karajarri people because of the resources they provide and their cultural importance.*		Possible (deep sea)	Possible (marine only)

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First Nations group	Features and values	Source	Potential for overlap	
			Operational Area	EMBA
	Value: Saltwater habitats Value: Turtles (Egg laying) Value: Seagrass		No	Possible (all)
	Value: Seagrass, Seaweed Value: Reef Value: Fish (resource) *Areas of Parnany (reef), Wirntirri (sea grass) and Wurrja (seaweed) along the Karajarri coastline provide important habitats for fish and other marine species that contribute to the diet of Karajarri people.*		No Possible (Fish)	Possible (all)
	Value: Marine Resources Value: Archaeological sites (Fishtraps and middens along the Karajarri coast) *Karajarri saltwater systems provide important food resources for the Karajarri people. Fishtraps and middens along the Karajarri coast show the historic cultural importance of saltwater resources. Fishtraps are still in use today and require ongoing maintenance. Use of saltwater resources varies across seasons.*		No	Unlikely (Location specific)
	Value: Pangunu (Blue-nosed Salmon)		No	Unlikely
	Value: Pirrala (Threadfin Salmon)		No	Unlikely
	Value: Important saltwater resources are Ulu (Bluebone Groper), Yilany (Mangrove Jack), Wangkaja (Mudcrab), Janga (Oyster) and Riji (Pearl Shell) *Rijii or Jakuli (Pearl Shell) is important to the regional economy as well as of great cultural significance to the people of the Kimberley.*		Unlikely	Possible (all)
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)

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First Nations group	Features and values	Source	Potential for overlap	
			Operational Area	EMBA
Malgana	Value: Shark Bay	Shark Bay (2025)	No	Possible (Shoreline accumulation)
	Value: Turtles (*buyungurramutha*)		Possible	Possible
	Value: Stromatolites		No	Possible (Shoreline accumulation)
	Feature: resources including Bird eggs (shags [cormorants], seagull, divers) Turtle eggs Dugongs Turtle Mullet, bluebone, whiting, snapper Oysters, mussels, crabs, prawns, scallops, cockles, little 'redies', black snapper	Oxenham on behalf of the Malanga People v State of Western Australia (2018)	Possible (turtles, dugong, fish)	Possible (all other values) No (turtle and bird eggs)
	Value: access to Country		No (No access restrictions beyond OA)	No (No access restrictions beyond OA)
	Feature: resources including dugong, green and loggerhead turtles and sharks.	Statton et al. (2021)	Possible (turtles, sharks)	Possible (all)
	Value: traditional knowledge maintains records of freshwater seeps in the submerged landscape.		Possible (unspecified)	Possible (unspecified)
	Feature: green sea turtles, dugongs, shags and bottlenose dolphins are species of cultural significance.	Malgana Land and Sea Management et al. (2021)	Possible (turtles, dolphins, seabird)	Possible (turtles, dugong, dolphins, seabird)
	Value: Sharing and controlling the sharing of knowledge.	Lyons et al. (2021)	Possible (unspecified)	Possible (unspecified)
	Value: Transfer of Knowledge to younger generation Value: Fishing		Unlikely (unspecified)	Possible (unspecified)

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First Nations group	Features and values	Source	Potential for overlap	
			Operational Area	EMBA
	Fishermen are the older people in the knowledge system, their knowledge comes from the old ways and cultural learning in their ways…			
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 • Microalgal communities • Subtidal soft-bottom communities • Intertidal sand and mudflat communities		No (Fish, Dolphins, Whales, turtles, sea snakes) No (all other values)	Possible (all)

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First Nations group	Features and values	Source	Potential for overlap	
			Operational Area	EMBA
	• Rocky shores			
Nanda	Value: Connection to Country	Kabarri visitor centre	Possible (unspecified, but unlikely due to location of OA)	Possible (unspecified)
	Value: Dreamtime Stories (mythical serpent emerges at Kalbarri Coastal Cliffs)		No	No
	Feature: Red sandstone outcrops		No	No
	Feature: Fresh water springs		No	No
	Value: Archaeological sites		No	Possible (shoreline accumulation areas only)
	Feature: Kalbarri Ocean Cliffs	Hawkins (n.d)	No	No
	Value: Mythological/Creation Stories		Possible (unspecified)	Possible (unspecified)
Ngarluma	Value: Manggan (creative beings) used supernatural force to shape the hills, rivers, seas and landforms.		Possible (unspecified)	Possible (unspecified)
Ngarda-Ngarli (Mardudhunera, Ngarluma, Wong-Goo-Tt-Oo, Yaburara and/or Yindjibarndi)	Value: Creation Stories Value: Murujuga *Murujuga as 'where the Law came up out of the sea and travelled inland'. The following story explains the origin of Murujuga Sea Country:* *It was the Marrga and Minkala/Mangunyba (Skygod) that named and shaped the country, then all the birds and the animals, and finally the Ngardangali (Aboriginal people) came from Marrga themselves. In other places they call this the 'dreaming', but here we call it Ngurra Nyunjunggamu—'when the world was soft'*	Leach (2021)	Unlikely (location specific)	Possible
	Value: Marine subsistence resources *...marine resources were favoured by the occurrence of discarded turtle and fish bones near old fireplaces throughout the archipelago...spears for fishing and hunting turtles were made*		No (Unlikely to be found in OA)	Possible (coastal only)

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First Nations group	Features and values	Source	Potential for overlap	
			Operational Area	EMBA
	from hard woods sharpened to a point. Turtle shells were utilised for carrying and bathing babies and for cooking			
	Feature: Cape Bruguieres Island Feature: Submerged and Terrestrial Archaeological Sites *Cape Bruguieres Island has high potential to reveal how Ngardangali adapted to marine transgression through the identification and analysis of submerged and terrestrial sites.* *The identification of an ephemeral waterway associated with engravings, grinding patches and lithics demonstrates that water would have been available to the Ngardangali during the wet season.*		No	Possible (submerged sites only)
	Value: Murujuga	ICOMOS (2023)	No	Possible
	Value: Songlines Feature: Submerged Landscapes		Possible (all)	Possible (all)
	Value: Intergenerational Knowledge *"For us, as Ngarda-Ngarli, we hope by sharing knowledge and educating people, we can fulfil our responsibilities to care for our country going into the future."*		Possible (unspecified)	Possible (unspecified)
	Value: Archaeological Sites *Archaeological sites around Shark Bay tend to be close to the shoreline. Edel Land was a particularly important place for early Aboriginal people with a stone quarry at Crayfish Bay, fresh water at Willyah Mia on Heirisson Prong, and numerous middens and camp sites. There is also a burial site at Heirisson Prong.*		No (location specific)	Possible (shoreline accumulation only)
	Value: traditional knowledge recalls that the sea is a source of creation for flying foxes.	DEC (2013)	Possible (unspecified)	Possible (unspecified)

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First Nations group	Features and values	Source	Potential for overlap	
			Operational Area	EMBA
	Value: petroglyphs are understood as permanent signs left by ancestral beings.		No	Possible (submerged)
	Value: cultural obligations to look after places of special potency.		Possible (unspecified)	Possible (unspecified)
	Value: petroglyphs are important in initiation and education.		No	Possible (submerged)
	Value: the sea is acknowledged a starting point for songlines, including the flying fox songline.	MAC (2023a)	Possible (unspecified)	Possible (unspecified)
	Feature: resources including fishes, turtles and dugong.	Water Corporation (2019)	Possible (not dugong)	Possible (all)
	Value: traditional knowledge recalls a sea serpent which travelled from the coast to inland pools.		Possible (unspecified)	Possible (unspecified)
	Value: traditional knowledge recalls a water serpent from the ocean now lives in an inland pool. He created many sites and punishes law breakers.	Barber and Jackson (2011)	Possible (unspecified)	Possible (unspecified)
	Value: In a separate account a sea serpent punishing people was driven back to the sea by a freshwater serpent.		Possible (unspecified)	Possible (unspecified)
	Value: traditional knowledge recalls Manggan created the seas.	NAC (n.d.)	Possible (unspecified)	Possible (unspecified)
	Value: traditional knowledge recalls Pannawonica Hill being carried from the sea near Barrow Island or Murujuga by a spirit bird.	Hook et al (2004)	Possible (unspecified)	Possible (unspecified)
	Value: traditional knowledge recalls Murujuga is where ancestral beings emerged from the sea and brought the Law.	Australian Heritage Council (2012)	Possible (unspecified)	Possible
	Feature: Submerged First Nations archaeological sites in Cape Bruguieres channel.	Benjamin et al. (2020)	No	No
	Feature: Submerged First Nations archaeological sites in Cape Flying Foam Passage.	Benjamin et al. (2023)	No	No
	Value: traditional knowledge recalls Maarga (creation ancestors) lifted the land and sky out of the ocean.	Milroy and Revell (2013)	Possible (unspecified)	Possible (unspecified)

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First Nations group	Features and values	Source	Potential for overlap	
			Operational Area	EMBA
	Value: traditional knowledge recalls Maarga (creation ancestors) lifted the land and sky out of the ocean.	Japingka Aboriginal Art Gallery (2023)	Possible (unspecified)	Possible (unspecified)
	Feature: submerged waterholes related to the Kangaroo songline.	Kearney et al. (2023)	Possible (submerged)	Possible (submerged)
	Value; traditional knowledge holds that Songlines continue beyond the current coast and across the submerged landscape.		Possible (unspecified)	Possible (unspecified)
	Value: songlines are captured through storytelling, rock art, songs and dance, and in the landmarks themselves.	Bainger (2021)	Possible (unspecified)	Possible (unspecified)
	Value: Murujuga is the start of many songlines, including the Seven Sisters.		No	Possible
	Value: songlines at Murujuga date back to times when the sea-level was lower.	MAC (2023b)	No	Possible
	Feature: rock art	Weerianna Street Media Production (2017)	No	Possible (submerged)
	Feature: sacred sites		No	Possible (submerged)
	Feature: resources including fish, turtles.	Leach (2020)	Possible	Possible
	Feature: fish traps exist throughout the archipelago.		No	Possible (submerged)
	Feature: shell middens exist on coastal margins.		No	Possible (submerged)
	Feature: submerged archaeological sites.		No	Possible (submerged)
	Value: Law emerged from the sea and travelled inland.		No	Possible (unspecified, but likely refers to onshore areas above HAT)
	Feature: resources including mangrove seeds, turtles, turtle eggs)	Smyth (2007)	No	Possible
	Value: it is recalled that ceremonies were conducted on islands.		Possible (albeit unlikely)	Possible (submerged, highly unlikely for most

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First Nations group	Features and values	Source	Potential for overlap	
			Operational Area	EMBA
				evidence of faunal use to survive inundation)
	Feature: archaeological sites on Murujuga.	McDonald (2015)	No	Possible (submerged)
	Feature: archaeological sites on Murujuga.	McDonald (2023)	No	Possible (submerged)
	Feature: archaeological sites on Enderby Island.	McDonald et al. (2023a)	No	No
	Feature: archaeological sites on Rosemary Island.	McDonald et al. (2023b)	No	No
	Feature: petroglyph and other archaeological sites at Murujuga.	Dortch et al. (2019)	No	Possible (submerged)
	Feature: archaeological evidence of the use of resources including fish, turtles, marine mammals, crocodiles, crabs and sea urchins.		Possible (submerged)	Possible (submerged)
Ngarluma and Yindjibarndi	Value: Creation Spritis *"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

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First Nations group	Features and values	Source	Potential for overlap	
			Operational Area	EMBA
	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 *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.*		Possible (unspecified)	Possible (unspecified)
	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 demonstarte the use fof the islands well beofore the inundation of the last Ice Age. Example of coastal people's patterns ....report on ,sea urchin spines as evidence of intertidal zone exploitation by groups duting low tide, faunal remains of species found in other archaeologica assemblages from Cape Range and Montebello Islands.*	McDonald et al. 2022	No	Possible (submerged)

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First Nations group	Features and values	Source	Potential for overlap	
			Operational Area	EMBA
Nimanburr	Value: Valentine Island	Marshall (2020)	No	No
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), Parnany (reefs) and Wankurru (deep sea)		Possible (deep sea only)	Possible (reef, sandy beaches and deep sea only)
	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: Fishtraps 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:			

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First Nations group	Features and values	Source	Potential for overlap	
			Operational Area	EMBA
	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] Turtle [hunting]		Unlikely due to distance to OA	Possible
	Interest: Water		Possible	Possible
	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

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First Nations group	Features and values	Source	Potential for overlap	
			Operational Area	EMBA
	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: Saltwater Fish	Director of National Parks (2018)	No (dugong) Possible (all other values)	Possible (all values)
	Turtles			
	Dugong			
	Crabs			
	Oysters			
	Value/s: Sea Country is culturally significant and important to their identity.		Possible (unspecified)	Possible (unspecified)
Nyul Nyul	Value: Tjukurrpa (Dreaming Story)	Indigenous Desert Alliance. n.d.	Unlikely	Possible (unspecified)
	Feature: Middens near the coast	Dobbs, et al. (2015)	No	No
	Feature: Burial grounds near the coast		No	No
	Feature: Weedong, a large coastal lake located immediately behind sand dunes		No	No
	Feature: Boolamon is a coastal lake-like waterhole located south-west of Bobbis Creek		No	No
	Value: Access to Weedong for hunting animals including cattle, ducks, goanna, nimunburr (Black flying fox) and Jibalgurr (Little friarbird) and gathering Wirdamunga (Waterlily) for food.		No	No

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First Nations group	Features and values	Source	Potential for overlap	
			Operational Area	EMBA
	Value: Trees (including Garnboorr/Paperbark and Lardik) surrounding Weedong attract animal species hunted as food and provide indicators of important seasonal events		No	No
	Value: Women's' sites at Weedong		No	No
	Value: Water flow on Dampier Peninsula for fish movements		No	No
	Value: Caring for Country including preserving routes for fish movement for breeding, and erecting signs		No	Possible
	Feature: resources including Fish Shellfish Crabs Crustaceans Sea urchins Turtles	Commonwealth of Australia (2002)	Possible (all)	Possible (all)
	Dugong		No	
	Flora and fauna associated with mangrove communities		No	
	Feature: archaeological sites on Barrow Island.		No	No
	Value: connection to Country.		Possible (unspecified)	Possible (unspecified)
	Feature: resources include turtles, eggs, fish, shellfish and plants.	DBCA et al. (2002)	Possible (except eggs)	Possible (except eggs)
	Value: connection to Country.	DBCA (2022)	Possible (unspecified)	Possible (unspecified)
	Value: transfer of knowledge.		Possible (unspecified)	Possible (unspecified)
	Value: access to Country.		No (No access restrictions beyond OA)	No (No access restrictions beyond OA)
	Value: access to Barrow and possibly Montebello Islands	Hook et al. (2004)	No (No access restrictions beyond OA)	No (No access restrictions beyond OA)

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First Nations group	Features and values	Source	Potential for overlap	
			Operational Area	EMBA
	Feature: artefact scatters are located in coastal sand dunes.	Hook (2020)	No	No
	Feature: burials are located in coastal sand dunes.		No	No
	Feature: archaeological sites are located on Barrow Island.	Ditchfield et al. (2018)	No	No
	Feature: archaeological sites are located at Barrow and Montebello Islands.	Dortch et al. (2019).	No	No
	Feature: archaeological evidence of the use of resources including fish, turtles, marine mammals, crocodiles, crabs and sea urchins.		No	No
	Feature: thalu ceremonial sites for the increase of turtle, shark, ray, fish, squid, octopus, hill kangaroo and emu.	DBCA (2022)	No	Possible (unspecified)
	Feature: ceremonies.		No	Possible (unspecified)
	Value: connection to Country.		Possible (unspecified)	Possible (unspecified)
	Value: transfer of knowledge.		Possible (unspecified)	Possible (unspecified)
	Value: access to Country.		No (No access restrictions beyond OA)	No (No access restrictions beyond OA)
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)

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First Nations 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)
	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.		Possible (submerged)	Possible (submerged)

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First Nations group	Features and values	Source	Potential for overlap	
			Operational Area	EMBA
	Feature: archaeological evidence of varied occupation and adaptation.	Macfarlane and McConnell (2017)	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)
	Value: Traditional Fishing and Hunting *Fishing, hunting and the maintenance of culture and heritage*		No	Possible (unspecified)

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First Nations group	Features and values	Source	Potential for overlap	
			Operational Area	EMBA
	through ritual, stories and traditional knowledge continue as important uses of nearshore and adjacent areas.			
	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.*		Possible (unspecified)	Possible (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
Yawuru	Feature: Camp sites including middens and shells	Yawuru RNTBC (2014)	No	Unlikely (related to onshore archaeological sites)
	Feature: Snubfin Dolphin (1) Fish (2) including sharks (3) and rays (4) Migratory birds (5)		Possible (all values)	Possible (all values)
	Value: Cultural obligation to care for country		Possible (unspecified)	Possible (unspecified)
	Value: Yawuru traditional ecological knowledge associated with Sea Country resources		Possible (unspecified)	Possible (unspecified)

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First Nations group	Features and values	Source	Potential for overlap	
			Operational Area	EMBA
	Value: Reefs and sea-grass beds		No (reefs and seagrass beds)	Possible
	Value: Mangrove communities		No	Possible
	Value: Rights, access to and management of Country including the waters	FCA (2006)	Possible (unspecified)	Possible (unspecified)
	Value: Cultural obligations to respect the Dreaming and spirits and to continue cultural traditions		Possible (unspecified)	Possible (unspecified)
	Feature: Nagulagun (Sea Country) includes all that lives in the sea:			
	Fish (1)		Possible (1, 2, 4, 5)	No (13, 15, 16, 17)
	Turtles (2)		No (all other values)	Possible (all other values)
	Dugongs (3)			
	Nagula (seawater) (4)			
	Seabed (5)			
	Barnany (the reefs) (6)	DBCA (2023)		
	Muri (tidal creeks) (7)			
	Jani (white sandy beaches) (8)			
	Seagrass meadows (9)			
	Jabarlbarl (mudflats and claypans) (10)			
	Gamirda-gamirda (shorebird) habitat (11)			
	Jani and intertidal flats (12)			
	The wirrjinmirr/willie creek wetlands system (13)			
	Gundurung (mangroves) (14)			
	Salt flats (15)			

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First Nations group	Features and values	Source	Potential for overlap	
			Operational Area	EMBA
	Nimalaica/nimmalarragun wetland (16) Ngunungurrukum/coconut wells lagoon (17)			
	Value: Knowledge associated with cultural activities		Possible (unspecified)	Possible (unspecified)
	Value/s:	Department of Parks and Wildlife (2016)		
	Jurru (snake like beings associated with both salt and fresh water that protect Yawuru country) (1)		Possible (1, 2, 3 unspecified)	Possible (1, 2, 3 unspecified)
	Cultural dreaming areas (Bugarrigarra sites and tracks) (2)		Possible (turtles, birds, fish, rays, dolphins, whales)	No (5, 11)
	Rayi sites (spirit birth and origin sites) (3)		No (all other values)	Possible (all other values)
	Mangrove communities (gundurung) (4)			
	Saltmarsh and saline grassland communities (bundu) (5)			
	Water and shore birds (gamirda) (6)			
	Marine turtles (gurlibil) (7)			
	Green turtles (8)			
	Dugong (nganarr) (9)			
	Sandbars (gidi gidi) (10)			
	Mudflats (11)			
	South sea pearl oyster (guwarn) (12)			
	Cockles (13)			
	Conch (mala) (14)			
	Crab (wanggaja) (15)			
	Threadfin salmon (16)			
	Mullet (gurlban) (17)			

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First Nations group	Features and values	Source	Potential for overlap	
			Operational Area	EMBA
	Catfish (langa) (18) Queenfish (murruwaran) (19) Bluebone or blackspot tuskfish (20) Snapper (yilany) (21) Rays (22) Snubfin dolphins (23) Bottle nose dolphins (24) Humpback whales (25)			
Yinggarda	Value: Ongoing connection to Country *"We still take care of those ... places. We still have to go and keep them clean, make sure they haven't been disturbed. If we didn't do this, we'd get sick, because the Old People, the spirits would think we weren't taking care of the country…"*	FCA [2019]	Possible (unspecified)	Possible (unspecified)
	Value: Right and responsibility to speak and care for Country		Possible (unspecified)	Possible (unspecified)
	Value: Contemporary use of Country for cultural activities (camp, fish, hunt and gather on their country)		Unlikely (unspecified)	Possible (unspecified)

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4.9.1.5.2 First Nations archaeological heritage assessment

Known First Nations heritage places including archaeological sites may be protected subject to declarations under the ATSIHP Act, UCH Act, or EPBC Act. Woodside is not aware of any registered or recorded First Nations archaeology within Commonwealth waters.

There are 44 registered sites and 55 lodged sites identified by the DPLH Aboriginal Cultural Heritage inquiry system (2026) overlapping the EMBA.

The WA Department of Planning, Lands and Heritage (DPLH) maintains a register of registered sites and heritage places including middens, burial, ceremonial [sites], artefacts, rock shelters, mythological [sites] and engraving sites. A search of DPLH's Aboriginal Cultural Heritage Inquiry System was undertaken, which showed 44 registered sites in the EMBA (Appendix C). These included sites along the coast of the North West Cape, Murujuga (Burrup Peninsula), and other mainland coastal areas, registered for artefacts, ceremonial, mythological, middens, and rock shelters.

No specific sites of significance within the Operational Area or EMBA were identified by Traditional Custodians during consultation in the course of preparing the EP.

4.9.1.5.3 Underwater Cultural Heritage

Further information regarding First Nations archaeological heritage in relation to the Ancient Landscape in the North-west Marine Region (NWMR) is described in the Master Existing Environment.

Archaeological material on the Ancient Landscape is a relevant matter for the GWF-4 development as there is overlap between the Operational Area and the Ancient Landscape.

To understand the potential for submerged archaeological material to be present Woodside engages a consultant to undertake a desktop review based on geophysical and bathymetric data.

A preliminary assessment associated with a broader area that encompasses the Operational Area was undertaken (Comber Consultants, 2023). The review did not identify any archaeological sites or values in Commonwealth waters that may be impacted. Certain areas were identified as having the potential to contain submerged archaeological features, and it was recommended that further assessment be undertaken once additional high-resolution data is obtained. Consistent with a staged and risk-based approach, further desktop assessment is planned prior to the Petroleum Activity.

Management controls and further assessment of the potential impacts on archaeological material by the proposed activity is discussed in Section 6.7.2.

4.9.1.5.4 Feedback received via consultation to inform Existing Environment Description

First Nations 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 2021). 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 (Table 1 in Appendix F).

Feedback received on potential cultural features and heritage values during consultation on Woodside EPs are described in Table 4-22.

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 and Revision process (see Section 7.8).

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Table 4-22: Summary of feedback received via consultation to inform Existing Environment Description

Relevant First Nations group / individuals	Consultation context	Description of value / feature / interest	Potential for overlap	
			Operational Area	EMBA
Bardi and Jawi Niimidiman Aboriginal Corporation	Consultation for this EP	*No values raised*	-	-
Bundi Yamatji Aboriginal Corporation (BYAC)	Raised during the course of consultation for another EP	Value: Migratory marine animals *"I draw your attention to the possibility that migrating marine life are part of the life inhabiting or traversing through the SCIPA area (Hutt River coastline to the Abrolhos Houtman Islands) may be impacted by the proposed activities."*	Possible	Possible
		Value: Sea Country Management	Possible (unspecified)	Possible (unspecified)
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)
Gogolayngor Aboriginal Corporation	Consultation for this EP	*No values raised*	-	-
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)

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Relevant First Nations group / individuals	Consultation context	Description of value / feature / interest	Potential for overlap	
			Operational Area	EMBA
		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). From Kariyarra Native Title documents it is clear that 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)
		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)

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Relevant First Nations group / individuals	Consultation context	Description of value / feature / interest	Potential for overlap	
			Operational Area	EMBA
		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)
		Value: Responsibility to care for Sea Country Value Marine Resources Kariyarra explained 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 Bedou	No (location specific)	No (location specific)

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Relevant First Nations group / individuals	Consultation context	Description of value / feature / interest	Potential for overlap	
			Operational Area	EMBA
	Consultation for this EP	Value: River systems are important to the food chain.	No	No
		Value: Marine Resources: Shellfish Cockles Oysters Clam shells, Con shells Mullets	Possible (all)	Possible (all)
		Sea cow (dugong)	No	
Malgana Aboriginal Corporation representing Malgana People (MAC)	Raised during the course of consultation for another EP	Interest: Shark Bay Shark Bay environment is unique and has the largest living organism in the world	No	Possible
		Feature: Stromatolites and Microbial mats Shark Bay contains stromatolites and microbial mats which are amongst the oldest living in the world.	No	Possible
		Feature: Seagrass For Shark Bay Malgana Aboriginal Corporation stated that they had observed a nearly 25% loss of seagrass from a hypersaline discharge into the bay	No	Possible
		Interest: Invasive Marine Species Queried information on Woodside's management of Invasive Marine Species.	Possible	Possible
Murujuga Aboriginal Corporation	Raised during the course of consultation for another EP	Value: Mermaid Sound (1) The ecosystem health of Mermaid Sound	No	No

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Relevant First Nations group / individuals	Consultation context	Description of value / feature / interest	Potential for overlap	
			Operational Area	EMBA
		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)
		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)

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Relevant First Nations 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
		Feature: Seagrass (1) Seagrasses provide protection for animals. (2) Locations identified during consultation include Conzinc Island; between Angel and Gidley Islands.	No	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
		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

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Relevant First Nations 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)
	Consultation for this EP	Value/s: Stingrays	Possible	Possible
		Value/s: Sharks	Possible	Possible
		Value/s: Crustaceans	Possible	Possible
		Value/s: Octopus	Possible	Possible

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Relevant First Nations 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)
Nanda Aboriginal Corporation representing the Nanda people (NAC)	Raised during the course of consultation for another EP	Value: Whales (1) Migration patterns	Possible	Possible
		Value: Significant cultural sites, including Barrow Island and Abrolhos Islands, noting the presence of artefacts and their historical significance.	No	Possible
		Value: Knowledge Sharing Nanda expressed concerns about retaining cultural knowledge and the implications of sharing cultural values.	Possible (unspecified)	Possible (unspecified)
		Value: White snow crabs, Shark Bay	No	Possible
		Value: North Island Artefacts	No	No
		Value: Food sources	Possible (unspecified)	Possible (unspecified)
		Feature: Shorelines Cultural significance of shorelines for Nanda people.	No	Possible

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Relevant First Nations group / individuals	Consultation context	Description of value / feature / interest	Potential for overlap	
			Operational Area	EMBA
		Value: Whales (1) Migration patterns. Queried what Woodside does with respect to whales that move up and down the coast.	Possible	Possible
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 (both)	Possible (both)
		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*	-	-
Nimanburr Aboriginal Corporation	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	*No values raised*	-	-
Nyul Nyul PBC Aboriginal Corporation	Consultation for this EP	*No values raised*	-	-
		Feature: Coastline	No	Possible

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Relevant First Nations group / individuals	Consultation context	Description of value / feature / interest	Potential for overlap	
			Operational Area	EMBA
Robe River Kuruma Aboriginal Corporation	Raised during the course of consultation for another EP	Feature: Underwater heritage	Possible	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)
		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 Wanparta legal representative explained 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)

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Relevant First Nations group / individuals	Consultation context	Description of value / feature / interest	Potential for overlap	
			Operational Area	EMBA
		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)
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
Wunambal Gaambera Aboriginal Corporation	Consultation for this EP	*No values raised*	-	-

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Relevant First Nations group / individuals	Consultation context	Description of value / feature / interest	Potential for overlap	
			Operational Area	EMBA
Yawuru Native Title Holders Aboriginal Corporation	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: Coastal Fishing Local communities enjoy fishing along the coast, including for (1) Shark Bay Mullet that is an important resource.	No	Possible
		Value: Ecosystem Health *Plants, animals and the environment are inexorably linked to their culture*	Possible (unspecified)	Possible (unspecified)
		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
Yued Aboriginal Corporation	Consultation for this EP	*No values raised*	-	-

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Relevant First Nations group / individuals	Consultation context	Description of value / feature / interest	Potential for overlap	
			Operational Area	EMBA
Native Title Representative Bodies				
Yamatji Marlpa Aboriginal Corporation	Consultation for this EP	*No values raised*	-	-
Yamatji Southern Regional 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 Scarborough Project activities	Feature: Songlines, dreaming and energy lines (unspecified)	Possible (unspecified)	Possible (unspecified)
		Feature: Whales – including migratory patterns	Possible	Possible
		Interest: Turtles – including migration patterns	Possible	Possible
		Interest: Dugongs - unspecified	No	Possible
		Interest: Plankton - unspecified	Possible	Possible
		Interest: Seagrass - unspecified	No	Possible

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Relevant First Nations group / individuals	Consultation context	Description of value / feature / interest	Potential for overlap	
			Operational Area	EMBA
		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)
		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)

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Relevant First Nations group / individuals	Consultation context	Description of value / feature / interest	Potential for overlap	
			Operational Area	EMBA
		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)
		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)

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Relevant First Nations group / individuals	Consultation context	Description of value / feature / interest	Potential for overlap	
			Operational Area	EMBA
		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

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Relevant First Nations 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[6] 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	Possible

[6] *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*

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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 activity through examination of publicly available information, studies and consultation with relevant persons under regulation 25 of the Environment Regulations.

The cultural features and heritage values identified in Sections 4.9.1.1 to 4.9.1.7 confirms whether there is any potential for these to exist within the Operational Area or EMBA. As previously described, topics which have been raised in the context of an interest linked to the natural environment are impact and risk assessed in Sections 6.7.2, 6.7.3, 6.7.4 and 6.7.5.

A summary of cultural features and heritage values identified through both consultation and desktop assessment is provided in Table 4-23.

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Table 4-23: Summary of cultural features and heritage values

Identified cultural features and heritage values	Context	EP source		Potential for overlap	
		Consultation feedback	Desktop literature assessment	OA	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

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Identified cultural features and heritage values	Context	EP source		Potential for overlap	
		Consultation feedback	Desktop literature assessment	OA	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)

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Identified cultural features and heritage values	Context	EP source		Potential for overlap	
		Consultation feedback	Desktop literature assessment	OA	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 First Nations and literature	✓	✓	Possible	Possible

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Identified cultural features and heritage values	Context	EP source		Potential for overlap	
		Consultation feedback	Desktop literature assessment	OA	EMBA
Marine mammals: Whales	• Generally raised in in engagement with First Nations • Thalu species of totemic importance • Linked to songlines and dreaming stories • Humpback whales in particular	✓	✓	Possible	Possible
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

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Identified cultural features and heritage values	Context	EP source		Potential for overlap	
		Consultation feedback	Desktop literature assessment	OA	EMBA
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	Yes
Benthic habitats: Seagrass	• Culturally important species • Protection of animals.	✓	✓	No	Yes
Benthic habitats: Macroalgal communities	Interest only, raised as a natural environment interest.	✓	✓	Yes	Yes
Benthic habitats: Epifauna and infauna	Interest only, subtidal soft bottom communities raised as a natural environment interest.	✓	✓	Yes	Yes
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	✓	✓	Yes	Yes

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4.9.1.7 Historic sites of significance

There are no known sites of Historic cultural heritage significance within the Operational Area. Sites within the EMBA are identified in the following sections and described in the Master Existing Environment.

4.9.1.8 Historic underwater heritage

The protection of historic underwater heritage under Commonwealth and State legislation is described in the Master Existing Environment.

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 that there are no sites within the Operational Area, however, a number of sites (shipwrecks) exist within the EMBA.

Table 4-24 lists sites identified within 50 km of the Operational Area. Shipwreck locations in the wider NWMR and descriptions of National heritage listed shipwrecks are provided in the Master Existing Environment.

Table 4-24: Underwater heritage sites within 50 km of the Operational Area

Vessel name	Year wrecked	Wreck location*	Distance and direction from Operational Area (km)
Trial	1622	Montebello Marine Park	~30 km south
Vianen	1628	Barrow Island Area	~30 km west
Wild Wave (China)	1873	Monte Bello Island	
Marietta	1905	Barrow Island	
Curlew	1911	Monte Bello Island	

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 4-25. Section 11.2 of the Master Existing Environment describes the values and sensitivities of these places.

Table 4-25: 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 (WHP)	
The Ningaloo Coast	~205 km south west
Shark Bay	~575 km south west
Murujuga Cultural Landscape	~105 km south east
National Heritage Places (NHP)	
The Ningaloo Coast	~205 km south west
Dampier Archipelago (including Burrup Peninsula)	~100 km south east
Shark Bay	~575 km south west
Dirk Hartog Landing Site 1616 - Cape Inscription Area	~656 km south west
HMAS Sydney II and HSK Kormoran Shipwreck Sites	~810 km south west

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Listed Place	Distance and direction from Operational Area to Listed Place (km)
Commonwealth Heritage Places (CHP)	
Ningaloo Marine Area - Commonwealth Waters	~225 km south west
Mermaid Reef – Rowley Shoals	~475 km north east
HMAS Sydney II and HSK Kormoran Shipwreck Sites	~810 km south west

4.9.2 Commercial Fisheries

A number of Commonwealth and State fishery management areas are located within the Operational Area and EMBA. Data from the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) were used to identify if Commonwealth managed fisheries have fished within the Operational Area and EMBA in the most recently available ten-year period of catch and effort data (2014- 2024). FishCube data was also requested from the WA Department of Primary Industries and Regional Development (DPIRD) for the most recently available five-year period of fishery catch and effort data (2019-2024) to analyse the potential for interaction of fisheries with the Operational Area. Data was reviewed from the last five years as a subset of past fishing effort. This 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 activities. Table 4-26 provides an assessment of the potential interaction and the Master Existing Environment provides further detail on the fisheries that have been identified through desk-based assessment and consultation (Section 5). There were no Commonwealth managed fisheries were identified as having being active with the Operational Area and three within the EMBA (Figure 4-17). Six State managed fisheries were identified as being active with the Operational Area and 27 within the EMBA (Figure 4-16).

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Table 4-26: Commonwealth and State commercial fishery management areas overlapping the Operational Area and EMBA

Fishery	Potential for interaction during activity[7]		Description
	Operational Area	EMBA	
Commonwealth managed fisheries			
Southern Bluefin Tuna Fishery	✓	✓	The SBTF management area covers the entire EEZ around Australia, out to 200 nm from the coast. The fishery targets southern bluefin tuna (*Thunnus maccoyii*) using longline and purse-seine fishing methods. No recent fishing effort has been recorded within the Operational Area or EMBA (ABARES 2024), therefore no interaction is expected.
Western Skipjack Fishery	✓	✓	The combined western and eastern skipjack tuna fisheries management area encompass the entire Australian EEZ. The WSTF extends westward from the SA / Victorian border across the Great Australian Bight and around the west coast of WA to the Cape York Peninsula in Queensland. The fishery targets Western skipjack tuna (*Katsuwonus pelamis*) using purse-seine gear and occasional pole and line fishing methods within water depths of 260 m (AFMA 2023). The WSTF has not been actively fished since the 2008-2009 fishing season.
Western Tuna and Billfish Fishery	✓	✓	The WTBF extends to the Australian EEZ boundary in the Indian Ocean. The fishery targets bigeye tuna (*Thunnus obesus*), Yellowfin tuna (*Thunnus albacares*), swordfish (Xiphias gladius) albacore (*Thunnus alalonga*), and striped marlin (*Kajikia audax*) using pelagic longline fishing gear to catch the targeted species. Minor line (including handline, troll, rod and reel) can be used. These species have a broad distribution and so water depths range between 150 – 600 m water depths. No recent fishing effort has been recorded within the Operational Area (ABARES 2024), therefore no interaction is expected. Recent active fishing effort intersects with the EMBA (ABARES 2024).

[7] *x indicates no spatial overlap with management area and therefore no potential for interaction with planned activities.*

✓indicates spatial overlap with management area.

✓with shading indicates spatial overlap with management area and potential for interaction with planned activities.

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Fishery	Potential for interaction during activity[7]		Description
	Operational Area	EMBA	
North West Slope Trawl Fishery NWSTF	x	✓	The NWSTF management area operates off north-western Australia from 114°E to 125°E, and from ~200 m isobath to the outer limit of the AFZ. The fishery targets Australian scampi (*Metanephrops australiensis*), with smaller quantities of velvet scampi (*M. velutinus*) and Boschma's scampi (*M. boschmai*). A quantity of prawns is also harvested each season, and squid is becoming an increasingly significant component of the catch. Mixed snappers (*Lutjanidae*) and redspot emperor (*Lethrinus lentjan*) have historically been an important component of the NWSTF catch. The fishery uses demersal trawl fishing methods typically in waters between 350 – 600 m deep. There is no potential for interaction with this fishery in the Operational Area as it is not within the management area. There has been recent fishing effort recorded in the EMBA (ABARES 2024).
Western Deepwater Trawl Fishery WDWTF	x	✓	The Western Deepwater Trawl Fishery (WDTF) is located in deep water off WA, from the line approximating the 200 m isobath to the edge of the Australian Fishing Zone (AFZ). The fishery targets More than 50 species, historically dominated by six commercial finfish species or species groups: • Orange roughy (*Hoplostethus atlanticus*) • Oreos (*Oreosomatidae*) • Boarfish (P*entacerotidae*) • Eteline snapper (*Lutjanidae: Etelinae*) • Apsiline snapper (*Lutjanidae: Apsilin*ae) • Sea bream (*Lethrinidae)* Demersal trawling is the fishing method used in water deeper than 200 m. There is no potential for interaction with this fishery in the Operational Area as it is not within the management area. There has been recent fishing effort recorded in the EMBA (ABARES 2024).

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Fishery	Potential for interaction during activity[7]		Description
	Operational Area	EMBA	
State managed fisheries			
Abalone Management Plan 1994	✓	✓	The 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. The fishery targets greenlip abalone (Haliotis laevigata), brownlip abalone (Haliotis rubra conicopora) and Roe's abalone (*Haliotis roei*) using diverse fishing methods between 5-40 m water depths. There was no fishing effort reported overlapping the Operational Area between 2019 and 2025 (DPIRD 2025), no interaction with this fishery is anticipated. Recent active fishing effort intersects with EMBA (DPIRD 2024).
Mackerel Managed Fishery Management Plan 2011	✓	✓	The commercial Mackerel Managed Fishery extends from the West Coast Bioregion to the WA/NT border. There are three managed fishing areas: Area 1: Kimberley (121° E to the WA/NT border); Area 2: Pilbara (114° E to 121° E) and Area 3: Gascoyne (27° S to 114° E) and West Coast (Cape Leeuwin to 27° S). The fishery targets: • Spanish mackerel (*Scomberomorus commerson*) • grey mackerel (S. *semifasciatus*) • other species from the genus *Scomberomorus* Using trolling, bait or lure cast, jigging methods. Recent active fishing effort intersects with the Operational Area (Figure 4-13). Recent active fishing effort intersects with EMBA (DPIRD 2024).
Marine Aquarium Fish Management Plan 2018	✓	✓	The Marine Aquarium Fish Managed Fishery can operate in all State waters. The fishery is typically active in the intertidal and nearshore waters, particularly between Esperance to Broome, Perth to Busselton, Karratha to Port Headland, the Gascoyne Region and around Albany (Smith, Newman, and Cliff 2010). The fishery targets Finfish, hard coral, soft coral, tridacnid clams, syngnathids (seahorses and pipefish), other invertebrates (including molluscs, crustaceans, echinoderms etc.), algae, seagrasses and 'live rock'. The resource potentially includes >1,500 species of marine aquarium fishes. The fishery is diver-based, which typically restricts effort to safe diving depths (<30 m). Recent active fishing effort intersects with the Operational Area and EMBA (Figure 4-16) (DPIRD 2024). The DPIRD fisheries data is recorded in 60 nm and 10 nm blocks and refers to how fishing activity is reported and monitored across different sized areas in Western Australia's waters. According to the data provided by DPIRD, fishing effort was recorded within the Operational Area within the 60 nm block.
North Coast Shark Fishing	✓	✓	North Coast shark fishery management area overlaps the Operational Area however no interaction is expected as there was no fishing effort reported within the Operational Area or EMBA between 2019 – 2024.

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Fishery	Potential for interaction during activity[7]		Description
	Operational Area	EMBA	
(Professional) Notice 1993			
Onslow Prawn Limited Entry Fishery Notice 1991	✓	✓	The Onslow Prawn Managed Fishery encompasses a portion of the continental shelf off the Pilbara coast. The fishery targets: • western king prawns (*Penaeus esculentus*) • brown tiger prawns (*Penaeus esculentus*) • blue endeavour prawns (*Metapenaeus endeavouri*). Using low-opening, otter prawn trawl systems. Recent active fishing effort intersects with the Operational Area and EMBA (Figure 4-15) (DPIRD 2024). The DPIRD fisheries data is recorded in 60 nm and 10 nm blocks and refers to how fishing activity is reported and monitored across different sized areas in Western Australia's waters. According to the data provided by DPIRD, fishing effort was recorded within the Operational Area within the 60 nm block.
Pilbara Crab Managed Fishery Management Plan 2018	✓	✓	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. 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). The fishery targets Blue swimmer crab (Portunus armatus) and uses hourglass trap fishing methods in up to 50 m deep waters (Johnston, Yeoh, and Fisher 2020) As the depths of the Operational Area are >50 m, and as there was no fishing effort reported overlapping the Operational Area between 2019 and 2024 (DPIRD 2024),no interaction with this fishery is anticipated. Recent active fishing effort intersects with EMBA (DPIRD 2024).
Pilbara Fish Trawl Interim Managed Fishery Management Plan 1997	✓	✓	The Pilbara Trawl (Interim) Managed Fishery, which is part of the Pilbara Demersal Scalefish Fisheries, is a high intensity fishery divided into two zones in 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). The fishery targets more than 50 scalefish species. The main demersal scalefish species landed by the fishery in the Pilbara region are bluespotted emperor, red emperor and rankin cod. The key species caught by the fishery include crimson snapper, bluespotted emperor trevally and threadfin bream. Fishing methods include edemersel trawl in depths of 50-200 m. As there was no fishing effort reported overlapping the Operational Area between 2019 and 2024 (DPIRD 2024), no interaction with this fishery is anticipated. Recent active fishing effort intersects with EMBA (DPIRD 2024).

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Fishery	Potential for interaction during activity[7]		Description
	Operational Area	EMBA	
Pilbara Trap Limited Entry Fishery Notice 1992	✓	✓	The Pilbara Trap Managed Fishery, which is part of the Pilbara Demersal Scalefish Fisheries, covers the area from Exmouth northwards and eastwards to the 120°S line of longitude, and offshore as far as the 200 m isobath. The fishery targets: • bluespotted emperor (*Lethrinus punctulatus*) • red emperor (*Lutjanus sebae*) • rankin cod (*Epinephelus multinotatus*). Using demersal fish traps in depths of ~30-200 m isobath. Recent active fishing effort intersects with the Operational Area (Figure 4-13). Recent active fishing effort intersects with EMBA (DPIRD 2024).
Prohibition on Fishing by Line From Fishing Boats (Pilbara Waters) Order 2006	✓	✓	The Pilbara Line Fishery is part of the Pilbara Demersal Scalefish Fisheries. Boat licences are permitted to operate anywhere within 'Pilbara waters', bounded by a line commencing 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. The fishery's catch comprises ~45–50 different 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. Fishing methods include demersal long line. Recent active fishing effort intersects with the Operational Area (Figure 4-15). Recent active fishing effort intersects with EMBA (DPIRD 2024).
Specimen Shell Management Plan 1995	✓	✓	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, and Albany. There are several closed areas where the fishery is not permitted to operate, including 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. The fishery targets collection of specimen shells for display, collection, cataloguing and sale. There is some focus of effort on mollusc families that are most popular with shell collectors, such as cowries, cones, murexes and volutes. The fishery uses collection by hand, (diver-based) this typically restricts effort to safe diving depths (<30 m) and ROV collection could enable depths up to 300 m (Hart et al. 2017). There was no fishing effort reported overlapping the Operational Area between 2019 and 2024 (DPIRD 2024), however in fishing effort in the 60 NM block, which overalps the Operational Area was reported in 2025. In addition, recent active fishing effort intersects with the EMBA (DPIRD 2025).

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Fishery	Potential for interaction during activity[7]		Description
	Operational Area	EMBA	
The South-West Coast Salmon Fishery	✓	✓	The South-west Coast Salmon Managed Fishery operates on various beaches south of the Perth metropolitan area and includes all WA waters north of Cape Beaufort (on the south coast of WA) except Geographe Bay. The fishery targets: • Western Australian salmon (*Arripis truttaceus*) Using beach seine nets. As there was no fishing effort reported overlapping the Operational Area between 2019 and 2024 (DPIRD 2024), no interaction with this fishery is anticipated. There has been no recent active fishing effort within the EMBA (DPIRD 2024).
West Coast Deep Sea Crustacean Managed Fishery Management Plan 2012	✓	✓	The West Coast Deep Sea Crustacean Managed Fishery extends north from Cape Leeuwin to the WA/NT border in water depths >150 m within the AFZ. The fishery targets deepwater crustaceans: • crystal (snow) crab (*Chaceon albus*) • giant (king) crab (*Pseudocarcinus gigas*) • champagne (spiny) crab (*Hypothalassia acerba*) Catches are dominated by crystal crabs, of which 99% of their total allowable catch was landed in 2020. The fishery uses Baited pots, or traps, are operated in long-lines in depths of >150 m (mostly 500-800 m (WAFIC 2024d)). The Operational Area does not overlap the fishery management area. Recent active fishing effort intersects with the EMBA (DPIRD 2024).
Broome Prawn Managed Fishery Management Plan 1999	x	✓	The Broome Prawn Managed Fishery operates off Broome and forms part of the North Coast Prawn Fishery. The fishery targets: • western king prawn (*Penaeus latisulcatus*) • coral prawns (*Metapenaeopsis sp.*) Using trawling methods typically between 30-60 m but can occur up to 100 m water depths (DEH 2004). The Operational Area does not overlap the fishery management area. There has been no recent active fishing effort within the EMBA (DPIRD 2024).

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Fishery	Potential for interaction during activity[7]		Description
	Operational Area	EMBA	
Exmouth Gulf Prawn Limited Entry Fishery Notice 1989	x	✓	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, 20) The fishery targets: • western king prawn (*Penaeus latisulcatus*) • brown tiger prawn (*Penaeus esculentus*) • blue endeavour prawn (*Metapenaeus endeavouri*) • banana prawn (*Penaeus merguiensis*) using low opening, otter prawn trawl systems. The Operational Area does not overlap the fishery management area. Recent active fishing effort intersects with the EMBA (DPIRD 2024).
Gascoyne Demersal Scalefish Management Plan 2010	x	✓	The Gascoyne Demersal Scalefish Managed Fishery is located between the southern Ningaloo Coast to south of Shark Bay, with a closure area from Point Maud to Tantabiddi (WAFIC 2024a). The fishery targets: • pink snapper (*Chrysophrys auratus*) • goldband snapper (*Pristipomoides multidens*) • red emperor (*Lutjanus sebae*) • cod (*Gadus morhua*) • emperor (*Lethrinus miniatus*) using mechanised handlines in depths of >20 m. The Operational Area does not overlap the fishery management area. Recent active fishing effort intersects with the EMBA (DPIRD 2024).
Kimberley Crab Managed Fishery	x	✓	The Kimberley Crab Managed Fishery is one of two small trap-based crab fisheries that operate in the North Coast Bioregion between Cambridge Gulf and Broome. The fishery targets: • brown mud crab (*Scylla olivacea*) • green mud crab (*Scylla serrata*). Using Trap fishing methods.

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Fishery	Potential for interaction during activity[7]		Description
	Operational Area	EMBA	
			The Operational Area does not overlap the fishery management area. There has been no recent active fishing effort within the EMBA (DPIRD 2024).
Nickol Bay Prawn Limited Entry Fishery Notice 1991	x	✓	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 east of the Burrup Peninsula, including within Nickol Bay. The fishery targets: • banana prawn *(Penaeus merguiensis*) • western king prawn (*Penaeus latisulcatus*) • brown tiger prawn (*Penaeus esculentus*) • blue endeavour prawn (*Metapenaeus endeavouri*) Using Trawling fishing methods. The Operational Area does not overlap the fishery management area. Recent active fishing effort intersects with the EMBA (DPIRD 2024).
Northern Demersal Scalefish Fishery Management Plan 2000	x	✓	The Northern Demersal Scalefish Managed Fishery is part of the North Coast Demersal Resource. The Northern Demersal Scalefish Managed Fishery is divided into two fishing areas: Area 1 (inshore) and Area 2 (offshore). 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 >200 m deep. The fishery targets: • goldband snapper (*Pristipomoides multidens*) • bluespotted emperor (*Lethrinus punctulatus*) • red emperor (*Lutjanus sebae*) • rankin cod (*Epinephelus multinotatus*) using line fishing, handline, dropline and fish trap fishing methods. The Operational Area does not overlap the fishery management area. Recent active fishing effort intersects with the EMBA (DPIRD 2024).
Octopus Interim Managed Fishery	x	✓	The Octopus Interim Management Fishery operates from Kalbarri Cliffs in the north to Esperance in the south. The fishery targets Octopus djinda, which is closely related to Octopus tetricus, using passive shelter pots and active traps in waters of up to 70 m.

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Fishery	Potential for interaction during activity[7]		Description
	Operational Area	EMBA	
Management Plan 2015			The Operational Area does not overlap the fishery management area. Recent active fishing effort intersects with the EMBA (DPIRD 2024).
West Coast Rock Lobster Managed Fishery Management Plan 2012	x	✓	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 fishery targets the Western rock lobster (*panullrus cygnus)* using baited pots and by hand. Operational Area does not overlap with fishery management area. No recent active fishing effort intersects with EMBA (DPIRD 2024).
Shark Bay Beach Seine and Mesh Net Management Plan 1992	x	✓	The Shark Bay Beach Seine and Mesh Net Managed Fishery operates from Denham. The fishery targets: • Whiting (yellowfin Sillago schomburgkii and goldenline S. analis), • Sea mullet (*Mugil cephalus*) • Tailor (*Pomatomus saltatrix*) • Western yellowfin bream (*Acanthopagrus australis*) Using Beach seine and mesh net methods. The Operational Area does not overlap the fishery management area. Recent active fishing effort intersects with the EMBA (DPIRD 2024).
Shark Bay Crab Managed Fishery Management Plan 2015	x	✓	The Shark Bay Crab Managed Fishery operates within the NWMR. It is based primarily in Carnarvon but operates throughout the waters of Shark Bay. The fishery targets blue swimmer crabs using trap and trawl fishing methods. The Operational Area does not overlap the fishery management area. Recent active fishing effort intersects with the EMBA (DPIRD 2024).
Shark Bay Prawn Limited Entry Fishery Notice 1993	x	✓	The Shark Bay Prawn Managed Fishery operates within inner Shark Bay. The fishery targets western king prawns (*Penaeus latisulcatus*), brown tiger prawns (*Penaeus esculentus*), endeavour (*Metapenaeus endeavouri*), coral prawns (*Metapenaeopsis s*p.) using Low-opening, otter prawn trawl systems. The Operational Area does not overlap the fishery management area. Recent active fishing effort intersects with the EMBA (DPIRD 2024).
Shark Bay Scallop	x	✓	The Shark Bay Scallop Managed Fishery operates within inner Shark Bay.

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Fishery	Potential for interaction during activity[7]		Description
	Operational Area	EMBA	
Management Plan 1994			The fishery targets Saucer scallops (Ylistrum balloti) using low-opening, otter prawn trawl systems. The Operational Area does not overlap the fishery management area. Recent active fishing effort intersects with the EMBA (DPIRD 2024).
West Coast Demersal Gillnet & Demersal Longline Interim Managed Fishery Management Plan 1997	x	✓	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. The fishery targets gummy shark (Mustelus antarcticus), dusky shark (Carcharhinus obscurus), whiskery shark (Furgaleus macki), sandbar shark (C. plumbeus) using gillnet and longline fishing methods. The Operational Area does not overlap the fishery management area. Recent active fishing effort intersects with the EMBA (DPIRD 2024).
West Coast Demersal Scalefish (Interim) Management Plan 2007	x	✓	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. The fishery targets over 100 species including Baldchin groper, Dhufish and pink snapper by lines. The Operational Area does not overlap the fishery management area. Recent active fishing effort intersects with the EMBA (DPIRD 2024).
Pearling (Declaration of Zones) Notice 1995 Item 1	✓	✓	Located in shallow coastal waters with the pearl oyster managed fishery designated by four zones extending from Exmouth to Kununurra and the seaward boundary demarcated by the 200 nm EEZ. The fishery targets Pearl oysters (Pinctada maxima) using drift diving methods. As there was no fishing effort reported overlapping the Operational Area between 2019 and 2024 (DPIRD 2024), no interaction with this fishery is anticipated. Recent active fishing effort does intersects with the EMBA (DPIRD 2025).
Pearling (Declaration of Zones) Notice 1995 Item 2	x	✓	
Pearling (Declaration of Zones) Notice 1995 Item 3	x	✓	

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Fishery	Potential for interaction during activity[7]		Description
	Operational Area	EMBA	
✓: Spatial overlap with management area			
✓ with shading: spatial overlap with management area and potential for interaction			
X: No spatial overlap and therefore no potential for interaction with planned activities however still needs to be considered for potential interaction with the EMBA/emergency response activities.			

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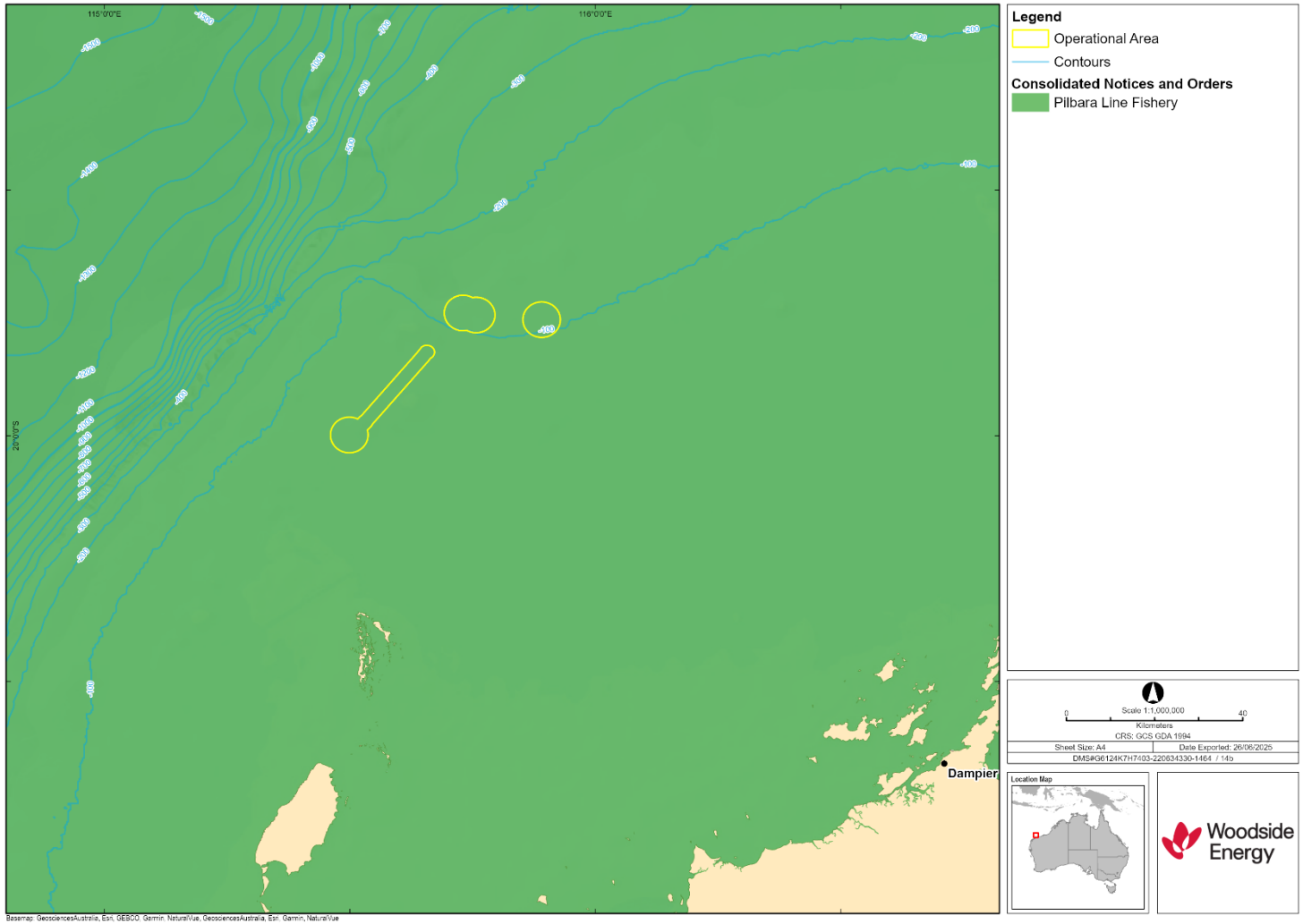


Figure 4-15: State-managed fishery, Pilbara Line Fishery, with a potential for Interaction with the Petroleum Activity

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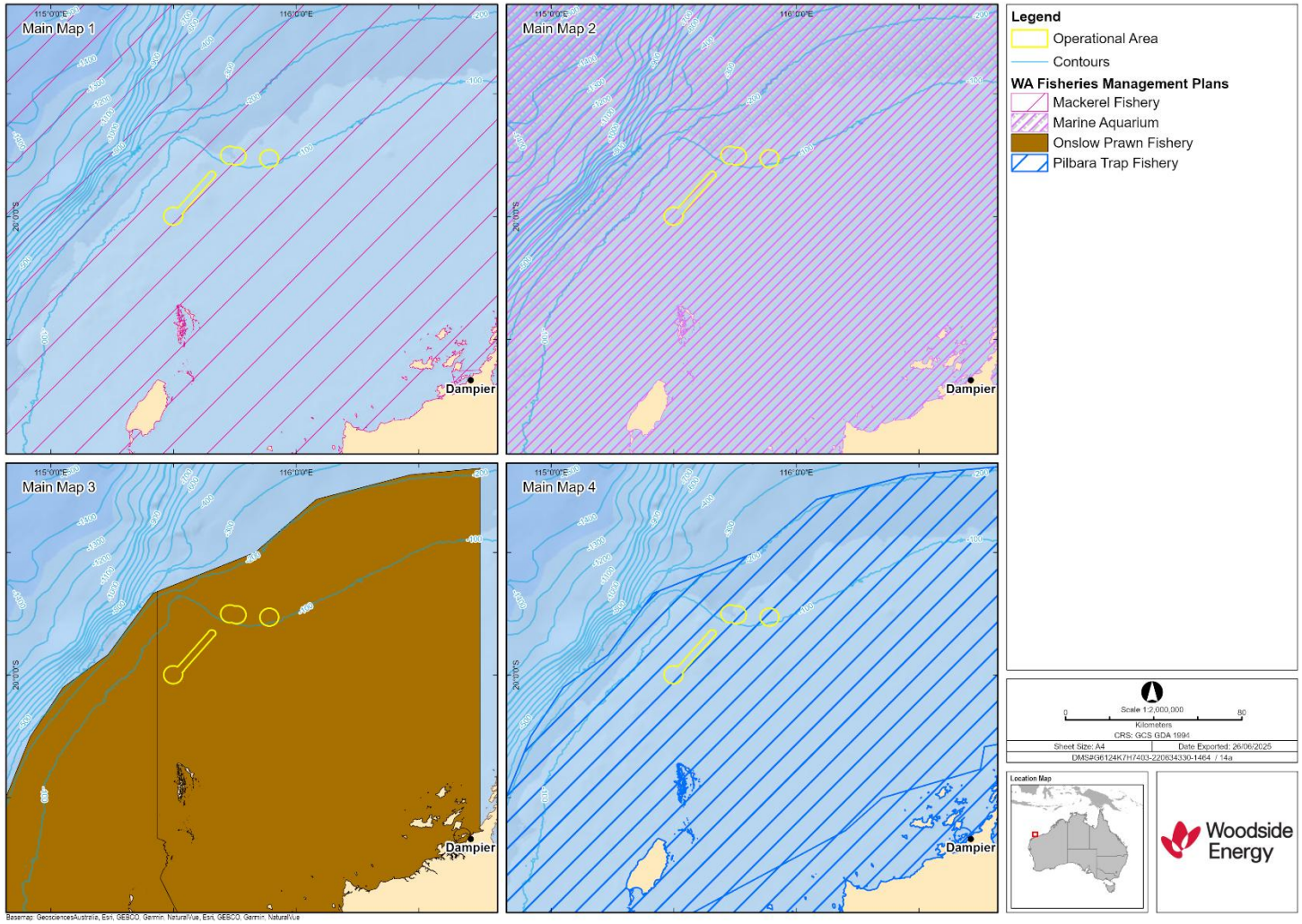


Figure 4-16: State-managed fisheries with a potential for Interaction with the Petroleum Activity

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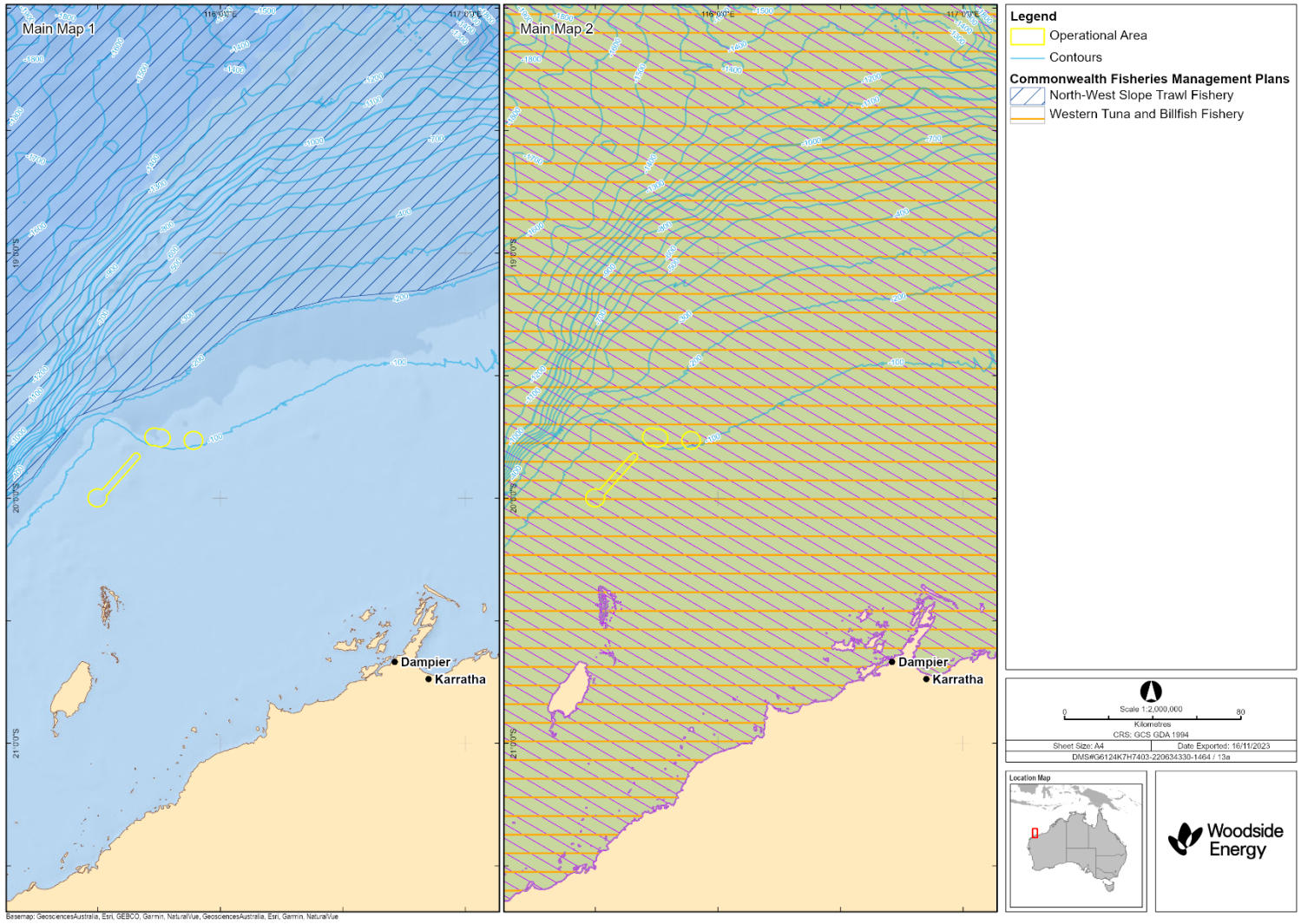


Figure 4-17: Commonwealth managed fisheries with a potential for interaction with the Petroleum Activity

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4.9.3 Traditional and customary fishing

Traditional or customary fishing is typically carried out in shallow coastal waters and/or areas with structures such as reef. The Western Australia 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.

Due to the offshore location of the Operational Area, there are no traditional or customary fisheries anticipated within the Operational Area

Refer to Section 4.9.1.2 for coastally adjacent first nations groups which may undertake traditional fishing within the EMBA.

Traditional fishing methods in the NWMR are further described in the Master Existing Environment.

4.9.4 Tourism and recreation

A survey report conducted for the 2020–2021 season by the WA DPIRD (Ryan, Lai and Smallwood 2022) identified that most boat-based recreational fishing effort occurred in nearshore habitat (46% and 54% for North Coast and Gascoyne Coast respectively), followed by inshore demersal habitats (32% and 39% for North Coast and Gascoyne Coast respectively). Most fishing effort was attributed to line fishing (87% and 91% for North-Coast and Gascoyne Coast respectively).

Tour operator fishing efforts recorded over a 10-year period (2013–2023) (DPIRD 2023) identified three vessels' operations within the Operational Area. Recreational fisheries in the wider EMBA are expected in shallow coastal waters.

The recreation and tourism industries in the Pilbara are of high social value with approximately 965,000 visitors over the last five years (Tourism Western Australia 2023). Tourism continued to grow in 2022, with over 1 million visitors (Tourism Western Australia 2023).

The Operational Area is located offshore of the North West tourism region which includes parts of the Gascoyne and Pilbara, region. Tourism is a key economic driver for the Pilbara with more than one million visitors to the region every year.

The main marine nature-based tourist activities in the Gascoyne region are concentrated around and within the Ningaloo World Heritage Area (~168 km southwest of the Operational Area). 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).

Tourism and recreation in the context of the wider NWMR is described in the Master Existing Environment.

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 one of these fairways intersect with the Operational Area

The fairway overlaps the eastern side of the Operational Area (Figure 4-18), vessel traffic within the Operational Area is relatively low. Vessel tracking data suggest vessel traffic is higher to immediately to the west and north-east, likely associated with existing oil and gas facilities (e.g. GWA, NRC, Pluto, and Wheatstone platforms). Vessel traffic is also higher further south of the Operational Area, where the increased traffic is likely associated with servicing the resource industry and ports at Barrow Island, Onslow and Dampier.

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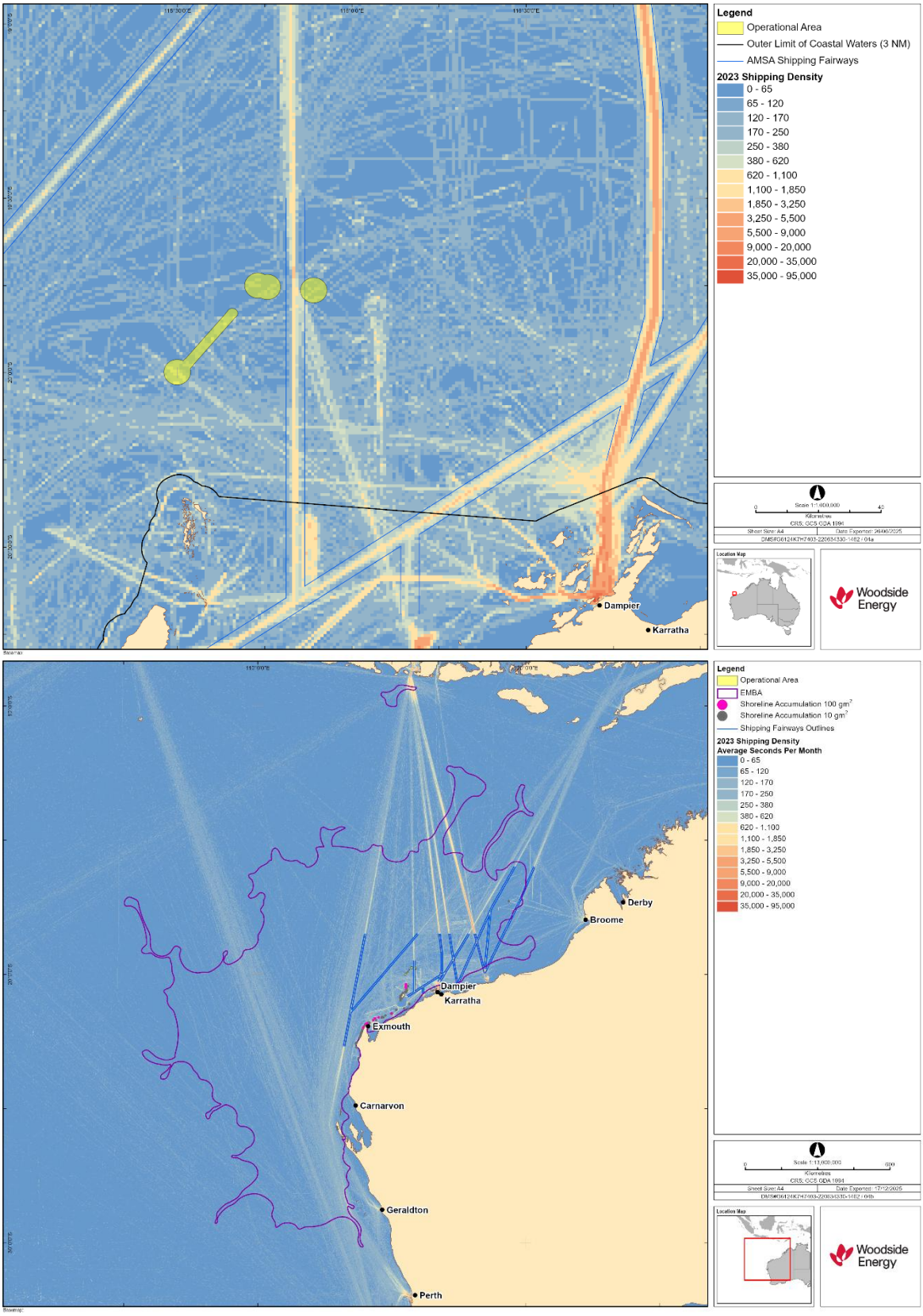


Figure 4-18: Vessel density map for the Operational Area and EMBA

Data derived from AMSA satellite tracking system data (vessels include cargo, LNG tanker, passenger vessels, support vessels, and others/unnamed

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4.9.6 Oil and gas facilities, infrastructure and other industries

Table 4-27 details other facilities, assets and infrastructure located within 50 km of the Operational Area

The Master Existing Environment describes current oil and gas development within the EMBA, also shown in Figure 4-19.

Table 4-27: Other oil and gas facilities, infrastructure and other industries within 50 km of the Operational Area

Facility or asset	Operator	Distance and direction from Operational Area (km)
Facilities		
GWA platform	Woodside	~8 km north-east
Wheatstone platform	Chevron	~9 km west
Pluto platform	Woodside	~10 km west
North Rankin Complex	Woodside	~30 km north-east
Reindeer	Santos	~50 km south-east
Subsea Infrastructure		
GWF subsea infrastructure	Woodside	Overlaps
Pluto export trunkline	Woodside	~1 km south
Two fibre-optic cables	Telstra	The Wilcox flowline will cross both fibre-optic cables[8]

[8] As part of the consultation process for this EP woodside engaged with Telstra with, a Pipeline Crossing Contract between Telstra and Woodside currently being negotiated, noting that the flowline will be installed in accordance with the Agreement.

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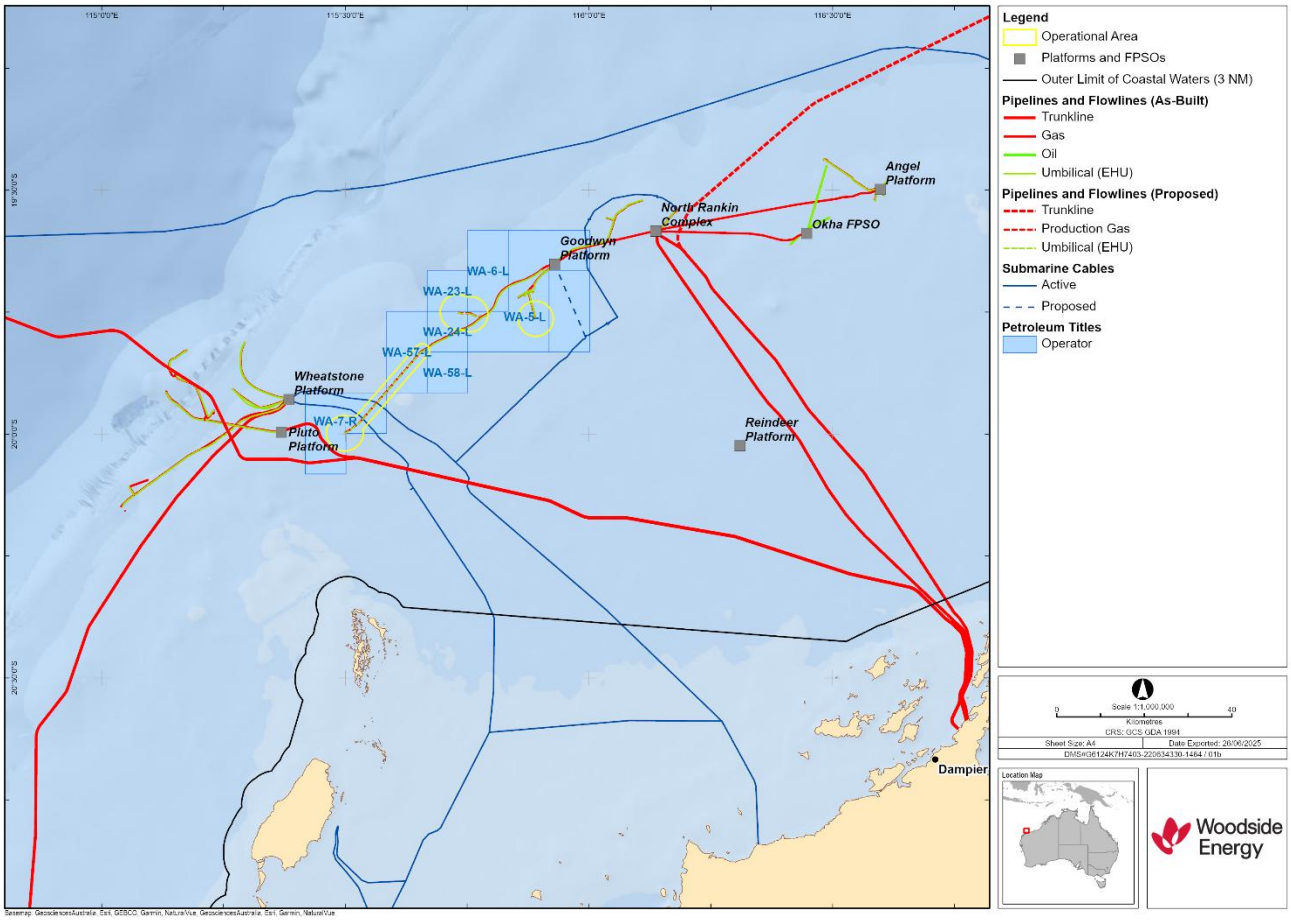


Figure 4-19: Location of Petroleum activities, infrastructure and other industries in relation to the Operational Area

4.9.7 Defence

No defence areas overlap the Operational Area. The offshore training area associated with RAAF Learmonth base and the Point Murat Navy Pier do intersect with the EMBA as illustrated in Figure 4-20.

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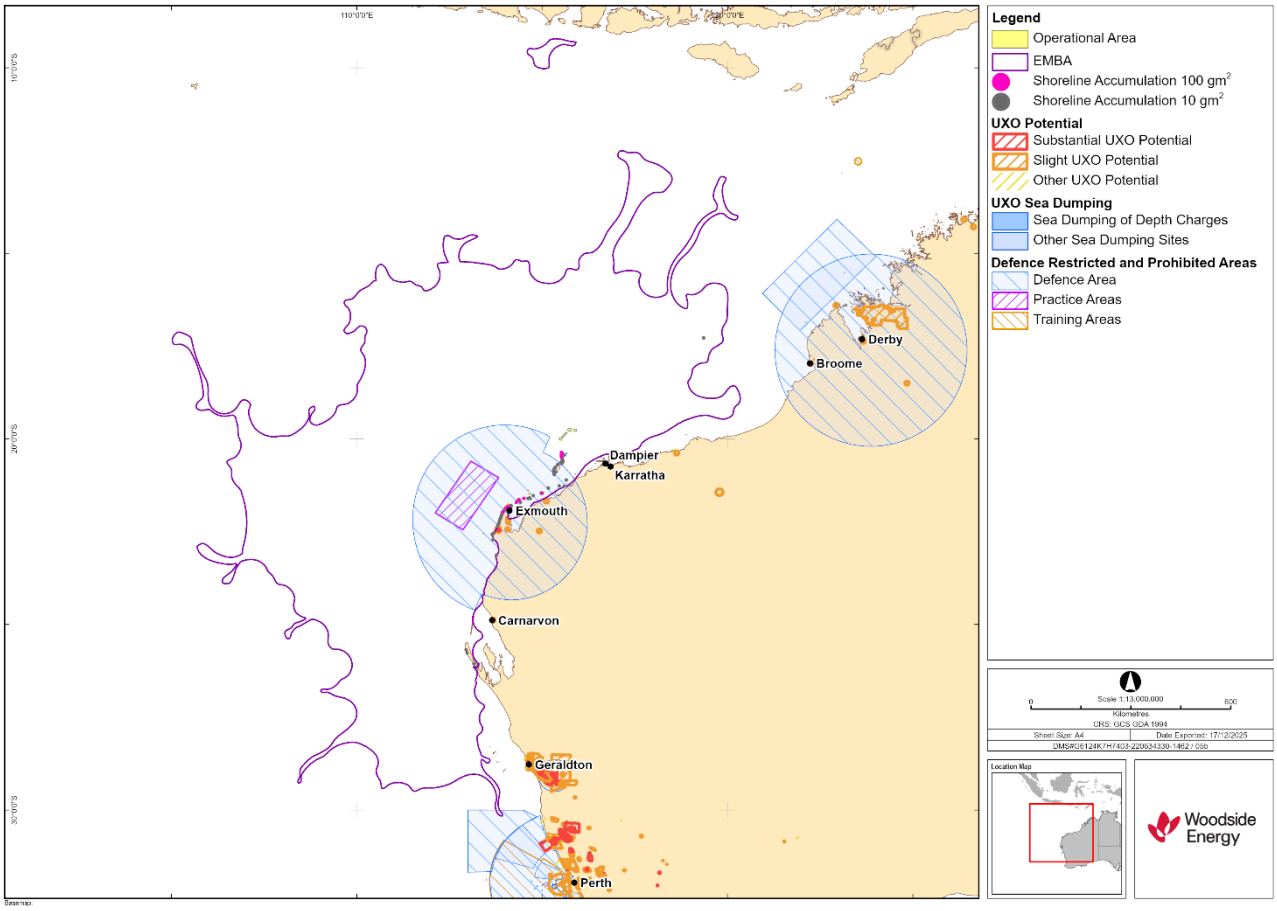


Figure 4-20: Defence areas in the vicinity of the Operational Area and EMBA

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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 stakeholders 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 5.3.4)
- opportunities provided to persons or organisations to participate in consultation.

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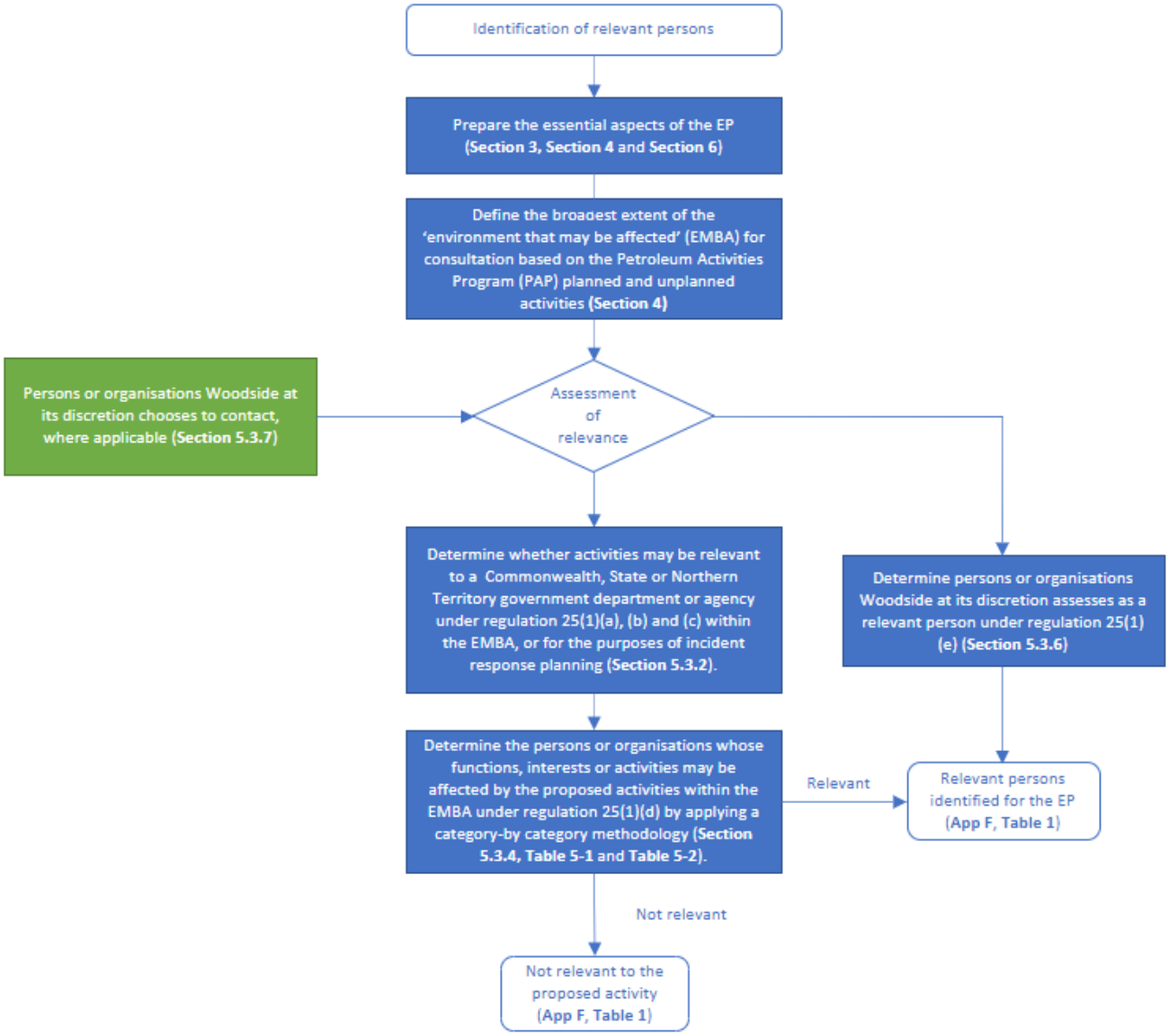


Figure 5-1: Overview of Woodside's methodology to identify relevant persons

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.

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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 First Nations' 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 3.4)
- 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 6.8).

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:
    - each Commonwealth, State or Northern Territory agency or authority to which the activities to be carried out under the EP may be relevant
    - if the plan relates to activities in the offshore area of a State – the Department of the responsible State Minister
    - if the plan relates to activities in the Principal Northern Territory offshore area – the Department of the responsible Northern Territory Minister
    - a person or organisation whose functions, interests or activities may be affected by the activities to be carried out under the EP
    - 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:

- is consistent with the principles of ecologically sustainable development (ESD) set out in section 3A of the EPBC Act – see Section 2

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- 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.

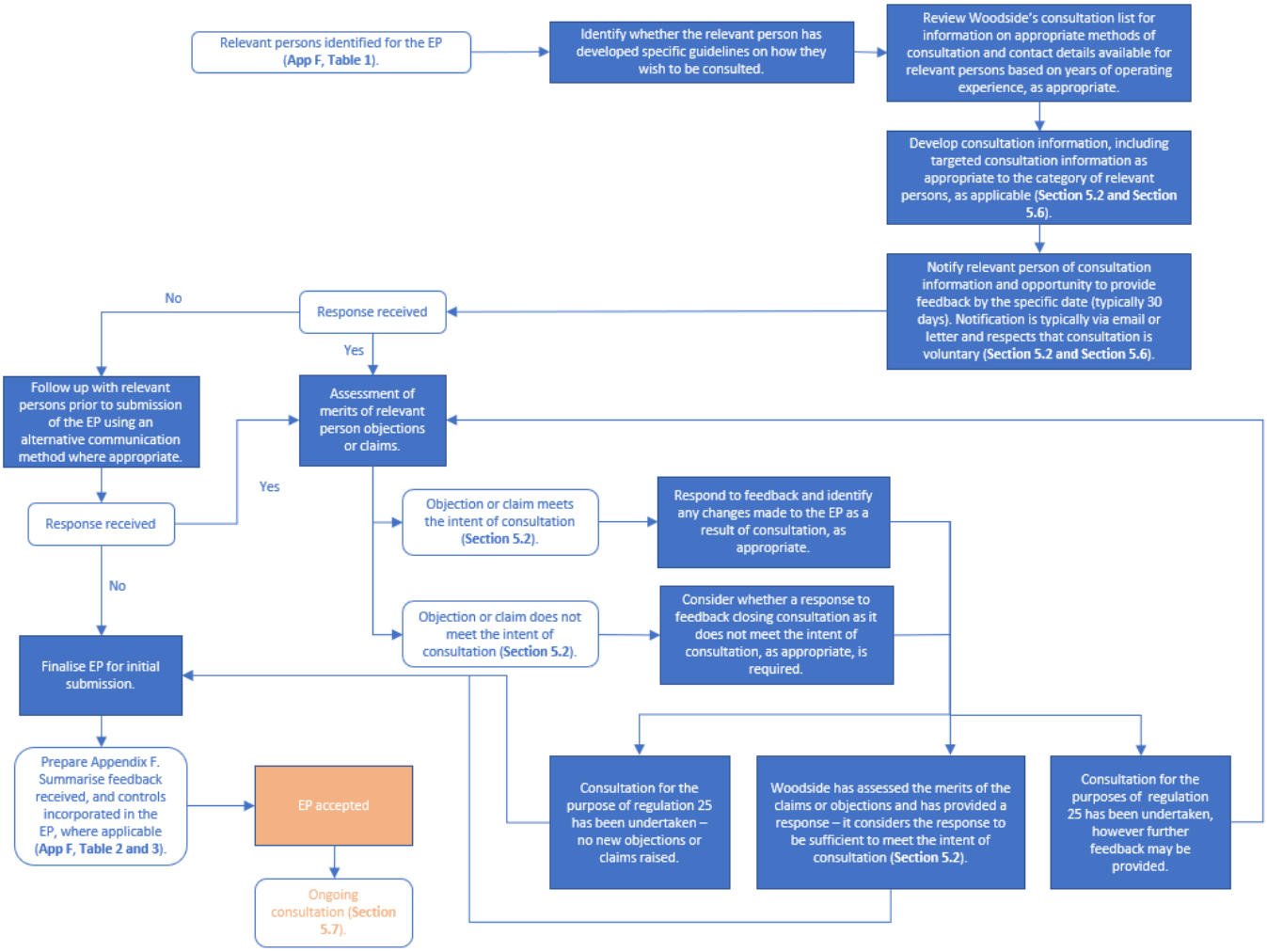


Figure 5-2: Overview of Woodside's consultation approach

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

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

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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:

Table 5-1: Government department or agency categorisation

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 Priority Protection Area (PPA) 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 Activity 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).

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):

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Table 5-2: Woodside's relevant persons identification methodology

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.

On the topic of consulting outside of Australia's jurisdiction, when assessing potential impacts from planned and unplanned activities for this EP, it was determined there was an extremely low probability of an unplanned hydrocarbon release entering international waters (Section 4) specifically Indonesian waters. Consideration has been given to the functions, interests or activities that may be affected by the activities to be carried out, should a worst-case scenario eventuate, noting that modelling completed to predict the extent of potential impact is based on there being no mitigative controls in place. The more realistic scenario is that appropriate mitigation controls set out in Woodside's Oil Spill Preparedness and Response Mitigation Assessment and Oil Pollution First Strike Plans would be in place or will be implemented.

The obligation to consult must be construed in a practical and pragmatic way that makes this process reasonable and workable,[9] and capable of being discharged within a reasonable time.[10] The obligation to identify relevant persons for the purpose of consultation must be capable of practicable and reasonable discharge. The Regulations require relevant persons, and their interests, to be readily ascertainable to the Titleholder[11].In the case of Indonesia, which comprises extensive coastlines and potentially remote communities, Woodside considers potential relevant persons within these communities are not readily ascertainable, for reasons including that there are limited electronic records and public records which allow for the identification of potential functions, interests or activities e.g. fisheries, tourism licences and permits.

For example, there are no known licencing requirements either in Australia or in Indonesia for traditional Indonesian fishers, therefore, no publicly available information to identify and make contact with persons for consultation purposes. The logistics of access to these fishers, the nature of their activities and distance and remoteness from the Operational Area of this activity makes international consultation impractical to discharge from a reasonable time and efforts perspective.

Given the extremely low probability of potential impacts, the difficulty of identifying international individuals, and the impracticality of engaging where feedback on unplanned impacts is highly unlikely to inform proposed activities, consultation with international individuals is not required for the activities described in this EP.

Having regard to nature and scale and given the extremely low probability of potential impacts (which are the highly unlikely occurrence of spill traversing international waters), the current processes in place with Department of Foreign Affairs and Trade (DFAT) and the processes and consultation triggers set out in the Woodside's Oil Spill Preparedness and Response Mitigation Assessment and Oil Pollution First Strike Plans provide a mechanism for consultation in international waters that will be complied with at the appropriate

[9] *Santos NA Barossa Pty Ltd v Tipakalippa [2022] FCAFC 193 [89], [109], [136], [138], [141]*

[10] *Santos NA Barossa Pty Ltd v Tipakalippa [2022] FCAFC 193 [136].*

[11] *Santos NA Barossa Pty Ltd v Tipakalippa [2022] FCAFC 193 [136], [147], [153]*

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time, if an incident occurs. In such circumstances, consultation with the DFAT discharges the requirement for consultation with international persons.

Woodside will continue to consult the DFAT for proposed activities outside of Australia's jurisdiction including in the event of a hydrocarbon spill that is likely to traverse international waters as described in the Oil Pollution Emergency Plan –Appendix G of this EP. The process for working with DFAT to manage activities and consultation in the highly unlikely event of a hydrocarbon spill that may traverse international waters is described in the Oil Pollution Emergency Plan – Appendix G of this EP.

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 2.1)
- 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 5-3 below and identification methodology applied as set out in Table 5-4.

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, as appropriate.

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.

Table 5-3: 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.

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Category	Explanation
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 First Nations Australians with cultural rights and interests or cultural functions or who perform cultural activities over particular lands and waters. Where a First Nations 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 elected Parliamentary representatives and recognised local community reference/liaison groups or organisations	Local government body formed under the *Local Government Act 1995 (WA)* and elected Parliamentary representatives which are responsible for representing the local community. 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.

Table 5-4: 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**

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Category	Relevant person identification methodology
	• Woodside acknowledges WAFIC's consultation guidance[12], 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 • 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. • Based on advice from AFMA, a Commonwealth fishery's representative body is assessed as relevant where the EMBA overlaps the fishery's management area, even if the fishery itself has been assessed as not relevant based on potential for interaction. This approach recognises the representative body's role in representing fishing entitlements within the management area and the use of that area for stock assessment, management strategies and other fisheries management purposes. Recognised Commonwealth fishery representative bodies are identified by AFMA through information published on its website. For State fisheries, representative bodies are assessed as relevant where the fishery they represent is assessed as relevant. 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: • 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.

[12] Consultation Approach for Unplanned Events - WAFIC

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Category	Relevant person identification methodology
	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 4.9.1, to identify Traditional Custodian groups or individuals, Woodside: • Uses existing systems of recognition to identify Traditional Owner 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 Traditional Owner groups or entities) • Notifies and invites consultation with Indigenous Peoples 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 • 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 Traditional Owner groups or individuals that should be consulted • Advertises widely so as to invite self-identification and consultation by Traditional Owner 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.

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Category	Relevant person identification methodology
	Where appropriate, contacting the relevant Native Title Representative Body to request a list of any Traditional Owner 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. Traditional Owner 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 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.
Historical heritage groups or organisations	Woodside assesses relevance for groups or organisations whose responsibilities are focused on historical heritage using the following steps in its methodology: • Using the Australasian Underwater Cultural Heritage Database to assess known records Maritime Cultural Heritage sites (shipwrecks, aircraft and relics) within the EMBA (see Section 4.9.1). Assessment of relevance: • Where there is a known underwater heritage site (shipwrecks, aircraft and relics) within the EMBA, the relevant group or organisation that manages the site will be assessed 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

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Category	Relevant person identification methodology
	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: • 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.

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Category	Relevant person identification methodology
	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.

Persons or organisations that Woodside assessed as 'not relevant' but chose to contact at its discretion in accordance with Section 5.3.4, 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

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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 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

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- 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.

Table 5-5: Typical forms of communications for categories of relevant persons

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 2023 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 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.
Recreational marine users and peak representative bodies	
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.

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Category of relevant person	Typically accepted form of communication
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 2023) 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 (GL1887 – Consultation with Commonwealth agencies with responsibilities in the marine area – January 2023) 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 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

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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.
- While repealed, guidance taken from the *Aboriginal Cultural Heritage Act 2021—Consultation Guidelines* (Government of Western Australia, 2023) suggests that up to 12 weeks may be a reasonable period to allow identification, contact and response from First Nations peoples (subject to any alternative timeframe being agreed through co-design of consultation).

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*..."[13]

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.

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.

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

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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).[14] Consultation is a "*real world activity*" and must be capable of reasonable discharge.[15] 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.[16]

When the Titleholder demonstrates that it has provided sufficient information and a reasonable period for consultation, then regulation 25 consultation requirements are met.[17] 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.[18]

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.[19] 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 Custodians

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).

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 *Native Title Act 1993 (Cth*) requiring "*all*" members of a group to be contacted for

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

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

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

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

[18] *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].*

[19] *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].*

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communal approval are interpreted by courts in a "*reasonable*", "*pragmatic*" and "*not so literal*" way,[20] 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 *Native Title Act 1993 (Cth*) vauthorities 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." [21]

"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"[22] (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" [23] (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.[24] 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 5.5.2).

Consistent with the *Tipakalippa Appeal*, Woodside considers *Native Title Act 1993 (Cth*) -style "*full group*" meetings are not required for there to be compliance with regulation 25. Nominated representative corporations (such as PBCs established under the *Native Title Act 1993 (Cth*)) 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.

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

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

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

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

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

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

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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.[25] 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 5.5.4), 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 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 First Nations people] than the national average across all geographical locations*" (Social media mob: being Indigenous online, Professor Bronwyn Carlson (2018)).
- carrying out ongoing consultation post regulation 25 consultation, where Woodside supports ongoing engagement with Traditional Custodians. Woodside is committed to ongoing engagement and support to 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 direction as to cultural protocols, structure of consultation and who to appropriately consult with (such as Elders).

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

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- 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*"[26]. 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[27]. 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 First Nations 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 5.5.7). 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 5.5.7 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 First Nations peoples, rather than requiring members to be notified via a formal authorisation process which seeks, from members, authorisation of agreements and Native Title/compensation claims under the *Native Title Act 1993* (*Cth*)[28].

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

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

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

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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). 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.

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

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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 stakeholders 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 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.

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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 Sections 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 Review process as appropriate (see Section 7.8).

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6. ENVIRONMENTAL IMPACT AND RISK ASSESSMENT, PERFORMANCE OUTCOMES, STANDARDS AND MEASUREMENTS 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 chapter.

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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 Interaction with other marine users	Section 6.7.1	F	No lasting effect. localised impact not significant to environmental receptors	-	-	Broadly acceptable (see Section 2.3.2)
Physical Presence Seabed Disturbance from Drilling Operations, Subsea Infrastructure, MODU Anchoring and ROV Operations	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	-	-	Broadly acceptable (see Section 2.3.2)
Routine Light Emissions: External Lighting on MODU and Project Vessels	Section 6.7.3	F	No lasting effect. localised impact not significant to environmental receptors	-	-	Broadly acceptable (see Section 2.3.2)
Routine Acoustic Emissions: sound emissions from MODU and Project Vessels	Section 6.7.4	E	Slight and low-level impact on environmental feature/s or area/s of low significance attributes.	-	-	Broadly acceptable (see Section 2.3.2)
Routine Emissions: Atmospheric and GHG emissions	Section 6.7.5	F	No lasting effect. localised impact not significant to environmental receptors	-	-	Broadly acceptable (see Section 2.3.2)
Routine and Non-Routine Discharges: Hydrocarbons and Chemicals	Section 6.7.6	F	No lasting effect. localised impact not significant to environmental receptors	-	-	Broadly acceptable (see Section 2.3.2)

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Aspect	EP section	Risk rating				Acceptability of impact/risk
		Impact/ consequence	Potential impact/consequence level	Likelihood	Current risk rating	
Routine and Non-Routine Discharges: Vessels	Section 6.7.7	F	No lasting effect. localised impact not significant to environmental receptors	-	-	Broadly acceptable (see Section 2.3.2)
Routine and Non-Routine Discharges: Drill Cuttings and Drilling Fluids	Section 6.7.8	D	Minor impact on environmental feature/s or area/s such as impact on feature of low significance with some ability to recover	-	-	Broadly acceptable (see Section 2.3.2)
Routine and Non-Routine Discharges: Cement, Cementing Fluids, Subsea Well Fluids, Produced Water, Unused Bulk Product	Section 6.7.9	E	Slight and low-level impact on environmental feature/s or area/s of low significance.	-	-	Broadly acceptable (see Section 2.3.2)
Unplanned activities (accidents, incidents, emergency situations)						
Unplanned Hydrocarbon Release: Gas and Condensate – loss of well integrity	Section 6.8.2	B	Major impact on environmental feature/s or area/s, such as impact on feature/area of national importance with limited ability to recover	1	M	Acceptable if ALARP (see Section 2.3.2)
Unplanned Hydrocarbon Release: Vessel Collision	Section 6.8.3	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	Broadly acceptable (see Section 2.3.2)
Unplanned Release: Hydrocarbon and Chemicals (Minor Loss of Containment)	Section 6.8.4	E	Slight and low-level impact on environmental feature/s or area/s of low significance	1	L	Broadly acceptable (see Section 2.3.2)
Physical Presence (Unplanned): Collision with Marine Fauna	Section 6.8.5	E	Slight and low-level impact on environmental feature/s or area/s of low significance	1	L	Broadly acceptable (see Section 2.3.2)

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Aspect	EP section	Risk rating				Acceptability of impact/risk
		Impact/ consequence	Potential impact/consequence level	Likelihood	Current risk rating	
Physical Prescence (Unplanned): Accidental Introduction and Establishment of Invasive Marine Species	Section 6.8.6	E	Slight and low-level impact on environmental feature/s or area/s of low significance	0	L	Broadly acceptable (see Section 2.3.2)
Physical Presence (Unplanned): Seabed Disturbance from Dropped Objects and Loss of Station Keeping Leading to Anchor Drag	Section 6.8.7	E	Slight and low-level impact on environmental feature/s or area/s of low significance.	1	L	Broadly acceptable (see Section 2.3.2)
Physical Presence (Unplanned): Interaction with Live Infrastructure	Section 6.8.8	E	Slight and low-level impact on environmental feature/s or area/s of low significance	1	L	Broadly acceptable (see Section 2.3.2)
Unplanned Release: Hazardous and Non-Hazardous Wastes	Section 6.8.9	F	No lasting effect. localised impact not significant to environmental receptors	2	L	Broadly acceptable (see Section 2.3.2)

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

The ENVID identified environmental risks that were assessed as not being applicable within or outside the Operational Area as a result of the Petroleum Activity and, therefore, were determined to not form part of this EP. These are described in the next sections for information only:

6.2.1 Shallow/Near-shore Activities

The Petroleum Activity is located in water depths typically greater than 70 m, noting that water depths at the unnamed shoal are ~40 m, and at a distance of about 30 km to the nearest landfall (Montebello Islands). Consequently, risks associated with shallow/ near-shore activities such as heavy lift activities, vessel anchoring, and risks of grounding were assessed as not credible.

6.2.2 Underwater Noise Emissions from Flaring, Helicopters and ROV

It is not credible that airborne noise from helicopter transfers and flaring would add to levels of underwater noise emanating from the MODU, project vessels and positioning equipment. Similarly, it is not credible that noise from ROV operations at the seabed in 55 – 130 m water depth would add to levels of noise emanating from the MODU and project vessels just below the sea surface, or noise emissions from transponders on the seabed. Noise emissions from these other sources would not add to cumulative sound fields from MODU, project vessel and transponders to any discernible extent. As such noise emissions from these sources has not been considered in Section 6.7.4.

6.2.3 Loss of Containment from Abandoned Wellheads

Several existing wellheads occur in the Operational Area for this EP that have been plugged and abandoned in accordance with applicable legislation at the time of the activity. Barriers are in place down the wells, so if a wellhead was inadvertently damaged or removed through dropped objects or anchor drag, no loss of containment would occur. Therefore, the scenario of loss of containment from existing wellheads on abandoned wells is not considered credible and is not assessed further.

6.3 Cumulative impacts

Woodside has assessed the cumulative impacts of the Petroleum Activity in relation to other relevant development activities which could potentially result in overlapping temporal and spatial extents. In particular, IMR work at existing GWF operating subsea infrastructure may occur while the Petroleum Activity is underway. Additionally, where relevant the cumulative impacts of activities associated with undertaking multiple concurrent or parallel activities associated with this Petroleum Activity have been assessed for cumulative impacts as relevant. Cumulative impacts are addressed where relevant in Sections 6.7 and 6.8.

Given that unplanned activities are not intended to occur during the life of the infrastructure, no reasonable estimate of the frequency, intensity or duration of such activities can be made. If these activities are undertaken, they will be discrete events and any impacts will be localised. As such, Woodside has reasonably assessed unplanned events are not credible, with no consideration of cumulative impacts of repeated unplanned events from the Petroleum Activity or compounding impacts from other petroleum facilities within the region.

6.4 Indirect impacts from activities outside the Operational Area

For the Petroleum Activity, the potential 'indirect' environmental impacts and risks evaluated are those associated with mobilisation/demobilisation of the MODU and project vessels to the Operational Area, such as those considered in the environmental impact assessment in Sections 6.7.1, 6.7.3, 6.7.5 and 6.7.7.

Due to the nature and scale of these potential indirect environmental impacts and risks (such as fuel usage, interaction with other marine users and usual vessel discharges), and the regulatory frameworks and applicable maritime regulations in place to manage them, Woodside considers the potential impacts and risks from mobilisation and demobilisation of the MODU and project vessels to be inherently ALARP. Therefore, Woodside considers that standard vessel and MODU operations are appropriate to manage the potential impacts and risks from mobilisation and demobilisation of the MODU and project vessels to a level that is acceptable.

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GWF-4 well fluids will be processed on the Goodwyn A Platform; all activity, environmental impacts and risks associated with the processing of GWF-4 well fluids are excluded from the scope of this EP and are described in the Goodwyn A Operations EP.

Normal operational discharges from the Goodwyn A Platform arising from production of hydrocarbons from the Petroleum Activity commingled with other production wells are included in the scope of the Goodwyn A Operations EP.

6.5 Environmental performance outcomes, standards and measurement criteria

Regulation 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 activity to ALARP and acceptable levels.

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 codes and standards, good industry practice and professional judgement outlined in Section 0 as part of the acceptability and ALARP justification process.

As defined in Regulation 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'.

EPOs are set so that 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 2.3.2), which is applied to the aspects in Section 6, taking into consideration the principles of ESD. The EPOs have been set at a level of environmental performance that is proportionate to the identified environmental impact or risk.

Impact based EPOs, where qualitative terms (e.g. 'prevent', 'limit') are used in EPOs, are supported by detailed impact assessment in Section 6 such that they can be interpreted as meaning 'impact and risk greater than that predicted in this EP'.

A risk-based EPO ties in with Woodside's risk management processes so that risk is maintained within a level that has been evaluated as being appropriate to the nature and scale of the risk. WMS and relevant controls are used to identify and treat potential step-outs (resulting in an increased likelihood) from expected controls performance or integrity envelopes.

EPSs and MC are defined to measure environmental performance against the EPOs. EPSs are statements of performance required of a control so as to manage risk and/or impacts to ALARP and to an acceptable level. EPSs are used as the basis for environmental performance reporting and demonstrate compliance against the EPO.

MC are outlined defining how environmental performance is measured and they set the criteria to determine whether the EPOs and EPSs have been met during the activity.

For planned activities, where the activity is undertaken as described and the relevant EPS are implemented, it confirms that the EPOs are being met. A breach of the EPOs or EPSs constitutes a 'recordable incident' under the Environment Regulations.

6.6 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 Regulations and/or this EP.

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Context Description of the context for the impact/risk. Regulation 21(1), 21(2) and 21(3)		
Description of the Activity – Regulation 21(1)	Description of the Environment – Regulations 21(2)(3)	Consultation – Regulation 25 and 24(b)

Impact and risk evaluation summary Summary of ENVID outcomes													
	Environmental value potentially impacted ***Regulations 21(2)(3)***						***Evaluation*** Regulations 21(5)(6)						
Source of impact/risk Regulation 21(1)	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 risk/ impact													

Description of source of impact or risk
Description of the identified risk/impact including sources or threats that may lead to the impact/risk or identified event. Regulation 21(1).

Impact or consequence assessment
Environmental value(s) potentially impacted
Discussion and assessment of the potential impacts to the identified environment value/s in accordance with Regulation 21(5) and 21(6). Description of potential impacts to environmental values aligned to Woodside impacts and risk classifications (Section 2.2.7).

Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)[29]***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
ALARP/hierarchy of control tools used – Section 2.2.6				
Summary of control considered to ensure the impacts and risks are continuously reduced to ALARP. Regulation 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.

[29] *Qualitative measure*

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)[29]***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
ALARP statement: Made on the basis of the environmental impact/risk assessment outcomes, use of the relevant tools appropriate to the decision type (Section 2.2.5.2) and a proportionality assessment in accordance with Regulation 34(b).				

Demonstration of acceptability
Acceptability statement: Made on the basis of applying the process described in Section 0 in accordance with Regulation 34(c)

EPOs, EPS and MC			
Environmental performance outcomes	***Controls***	***Performance standards***	***Measurement criteria***
EPO No. S: Specific performance that 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[30] 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. Regulation 21(5) (c).	PS No. Statement of the performance required of a control measure. Regulation 21(7)(a).	MC No. Measurement criteria for determining whether the outcomes and standards have been met. Regulation 21(7)(c).

[30] Where impact/consequence descriptors are presented within EPOs the descriptors are aligned with the definitions provided in the Woodside Risk Matrix (refer Section 2.2.7).

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6.7 Planned activities (routine and non-routine)

6.7.1 Physical Presence: Interaction with Other Marine Users

Context		
Relevant Activities Project Vessels – Section 3.11 Project-Vessel based activities – Section 3.11.5 Drilling Activities – Section 3.7 Subsea Installation Activities – Section 3.8.3	***Existing Environment*** Socio-economic Environment – Section 4.9	***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 other marine users – proximity of MODU and project vessels interfering with or displacing third party vessels (commercial fishing, oil and gas operators and commercial shipping)						X	A	F	-	-	LCS GP PJ	Broadly Acceptable	EPO 1, 2a, 2b
Presence of subsea infrastructure interfering with or displacing third party vessels (commercial fishing)						X							

Description of source of impact

MODU and Vessel Operations

Drilling, subsea installation and contingency activities

Woodside proposes to drill up to five new production wells and may also intervene any of the new production wells, if required. The MODU will be present for up to approximately 90 days per new production well, including mobilisation and demobilisation activities. Therefore, a MODU and support vessels may be present within the Operational Area for up to 15 months. When underway, activities will be 24 hours per day, seven days per week. SIMOPS activities may occur.

An IMR vessel may be used to install Xmas trees if the MODU is unavailable or not deemed suitable. Installation of the Xmas trees by IMR vessel will be up to 3 days per Xmas tree per well (1 day for installation, 2 days for weather standby if required), with no consecutive days occurring as the IMR vessel will be required to return to port following each installation.

The PIV, IMR and support vessels will be used to install and pre-commission the flowlines and subsea infrastructure. The initial campaign for nearfield infill will take ~3 months with a second campaign planned for Wilcox subsea installation activities which is anticipated to take ~4 months. IMR activities can occur at any time during the Petroleum Activities.

The MODU and relevant vessels will have a 500 m safety exclusion zones within the Operational Area for the duration of the Petroleum Activities.

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Description of source of impact
Other vessels are also required during the Petroleum Activities, including an anchor handling tugs and support vessels (Table 3-3). Some vessels will need to transit in and out of the Operational Area to port for routine, non routine and emergency operations. The Petroleum Activities is not planned to be executed in a single campaign or in a consecutive sequence. Therefore, the presence of the MODU, subsea installation vessels and other support vessels may occur at any time in the three to four year period for the EP. ***Physical presence of subsea infrastructure*** All installed subsea infrastructure will be located within the Operational Area and will remain for the duration of field life. Wellheads and Xmas trees take up a small area of the seabed (~0.005 km^2) and will rise several meters above the seabed. Subsea infrastructure may take up to approximately 0.023 km^2 of the seabed. For technical reasons, the lower section of the wells may be abandoned, prior to sidetracking, or in the event that a re-spud is required (Section 3.10.1). This is considered a contingent activity and if a well is abandoned due to re-spud, every reasonable attempt to remove the wellhead will be made. However, the wellhead assembly may be left in situ if routine removal techniques are unsuccessful (Section 3.10.6). If a wellhead is left in situ, it could potentially interfere with third party activities (particularly fishing activities).

Impact assessment
Environmental value(s) potentially impacted
MODU and Vessel Operations **Commercial Fisheries** No Commonwealth and only five State-managed fisheries are considered to have limited potential for interaction with project activities (within 10 nm grid blocks) in the Operational Area (Table 4-26). Potential impacts to commercial fishers depends on the use of the area by fishers, and the temporal and spatial extent of the presence of vessels. Potential impacts to commercial fisheries include loss of commercial catch due to displacement from fishing grounds. Fishing effort in the Operational Area is typically low—during the last five seasons (2019–2024), the Pilbara Line Fishery had <3–6 vessels within the 60 nm fishery grid blocks that intersect with the Operational Area, and the Mackerel Managed Fishery recorded ≤6 vessels present within the 10 nm fishery grid blocks that intersect with the Operational Area. Fisheries that target pelagic species (e.g. Pilbara Line Fishery) use lines and fishing effort is focused in the upper part of the water column and therefore are highly unlikely to be impacted by additional seabed infrastructure. Fisheries that target demersal species (e.g. Pilbara Trap Managed Fishery) use long lines and seabed traps which may be impacted by additional seabed infrastructure, however, given the low number of vessels, and if required, only minor deviation around MODU or project vessels, the physical presence of the MODU and support vessels is not expected to substantially affect the functions, interests, or activities of the commercial fisheries. In addition, while the Specimen Shell fishery was identified as being active in the Operational Area, this was based on the 60 nm grid block which also covers the Montebello Islands, Barrow Island and is within 10 km of the mainland. Based on the unlikely presence of the fishery within the Operational Area and the fact that drilling and subsea installation activities will typically be in water depths of greater than 90 m (expect around unnamed shoal) only minor deviation around MODU or project vessels is expected, if required and the physical presence of the MODU and support vessels is not expected to substantially affect the functions, interests, or activities of the commercial fisheries. ***Cultural values and heritage*** In line with Woodside's First Nations Communities Policy (Woodside, 2022), 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 impacts by consulting with First Nations communities and Traditional Custodians. Sea Country includes marine ecosystems and species (refer to following sub sections for specific impact assessments relevant to marine fauna) which may hold both cultural and environmental value, with cultural and environmental values intrinsically linked (DCCEEW 2023, MAC 2022 as cited in Woodside 2023a). The Petroleum activity may impact rights and obligations to care for Sea Country. Excluding Traditional Custodians from Sea Country (e.g. by restricting access) or decision-making processes (e.g. by not conducting ongoing consultation) is another potential source of impact. While operational safety exclusion zones will apply, these are spatially limited and temporary, and therefore not expected to prevent Traditional Custodians from maintaining cultural connections to Sea Country or fulfilling obligations to care for Country. Ongoing consultation is intended to facilitate access arrangements where feasibly safe to do so, and to support appropriately informed decision-making processes. Intangible values associated with Sea Country may potentially be impacted where they are physically interrupted by disturbance activities. Songlines can become lost, fragmented, or broken when there is a loss of Country or forced removal from Country (Neale & Kelly, 2020). 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. It is noted that oil and gas activities exist in many areas of the NWS, and songlines are still acknowledged

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Impact assessment
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). Ongoing connection to Sea Country is maintained by Traditional Custodians 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 stakeholders to ensure this connection is uninterrupted by the Petroleum Activity. Any potential impacts to cultural values (both tangible and intangible) associated with Sea Country are not expected. ***Tourism and Recreation*** Tourism and recreational activities are expected to be limited in the Operational Area by the distance offshore and water depths (generally >70 m, except around the unnamed shoal). Some fishing tour operators may be active within the Operational Area, but recent effort is low (typically <3 active licences; Section 4.9.4). Charter fishing that did occur was within the southern part of the Operational Area in the vicinity of the Montebello Marine Park and within fishery grid blocks known to contain shallow bathymetric features (such as banks and shoals). Given the limited tourism and recreation activities, and if required, only minor deviation around MODU or project vessels, the physical presence of the MODU and other project vessels would likely be a minor interference (i.e. navigational hazard) and temporary, localised displacement and/ or avoidance. ***Commercial Shipping*** The potential for interactions with commercial shipping may occur from the physical presence of MODUs and vessels. The number of vessels in the Operational Area will vary depending on activity (e.g. drilling or installation). Although the vessels will move within the Operational Area, the MODU will be stationary during active drilling operations (~90 days per well). A 500 m safety exclusion zone around the MODU and installation vessel may result in minor course deviation for commercial shipping vessels. One of the NWS shipping fairways intersects with the eastern part of the Operational Area, commercial shipping vessel activity within the remainder of the Operational Area is relatively low compared to elsewhere on the NWS (Section 4.9.5). There are higher densities of vessel activities just to the east and west of the Operational Area, where the GWA and Pluto platforms are located. Given the number of commercial shipping vessels, and if required, only minor deviation around MODU or project vessels, the physical presence of the MODU and/or project vessels is not expected to substantially affect the functions, interests, or activities of these commercial shipping vessels. Therefore, the physical presence of the MODU and vessels within the Operational Area is only expected to result in a small interference ((i.e., navigational hazard) with localised displacement and / or avoidance by shipping. ***Oil and Gas and other Industries*** As discussed in Section 4.9.6, the Wilcox flowline and umbilical with cross two telecommunication fiber optic cables. Mattresses installed over existing infrastructure will be placed in a controlled manner, with positioning guidance from an ROV. The trunkline touchdown point will be continually monitored during installation over third party asset crossings to ensure correct instalment and no damage to infrastructure. Activities associated with the physical presence of vessels may result in localised, temporary interference to industry vessels requiring minor course alteration or readjustment in asset management while the Petroleum activity is active in the area. However, impacts are not expected to have lasting effect. ***Physical presence of subsea infrastructure*** Of the active State-managed commercial fisheries within the Operational Area, only one (Pilbara Trap Managed Fishery) uses a fishing method that would interact with the seafloor. Subsea infrastructure has been in place within the Operational Area since the 1990s when production for the GWA Facility commenced. Consequently, the addition of new subsea infrastructure within a similar area is not expected to result in an impact to commercial trap fishing operations (e.g. via loss of catches or damage to fishing equipment). Any deviation required for trap deployment around the subsea infrastructure is not expected to substantially affect to the functions, interests, or activities of the commercial fishery.
Summary of Potential Impacts to environmental values(s)
Given the adopted controls, it is considered that physical presence of the MODU, project vessels and subsea infrastructure will not result in an impact greater than localised, temporary displacement of shipping and commercial/recreational fishing interests with no lasting effect (i.e. Socio - Economic Impact – F).

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Impact assessment				
Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)31***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
Legislation, codes and standards				
Vessels to adhere to the navigation safety requirements including the *Navigation Act 2012* and any subsequent Marine Orders.	F: Yes. CS: Minimal cost. Standard practice.	The Navigation Act regulates ship related activities and invokes certain requirements of MARPOL. Vessels (relevant to class) will adhere to requirements.	Benefits outweigh cost/sacrifice. Control is also Standard Practice.	Yes C 1.1
Establishment of a 500 m safety exclusion zone around MODU and relevant vessels and communicated to marine users.	F: Yes. CS: Minimal cost. Standard practice.	Establishment of a 500 m safety exclusion zone around MODU and relevant vessels reduces the likelihood of interaction with other marine users.	Benefits outweigh cost/sacrifice. Control is also Standard Practice	Yes C 1.2
Mooring systems (chains/wires and anchors) will be removed.	F: Yes CS: Additional cost. Standard Practice.	In accordance with OPGGS Act Section 572.	Benefits outweigh cost/sacrifice.	Yes C 1.3
Reasonable attempts at removal of wellhead(s) will be made in the event of a respud.	F: Yes. CS: Additional cost. Standard practice	In accordance with OPGGS Act Section 572	Benefits outweigh cost/ sacrifice. Control is also standard practice.	Yes C 1.4
Good practice				
Australian Hydrographic Office (AHO) will be notified of activities and movements no less than four working weeks prior to commencement of the Petroleum Activity.	F: Yes. CS: Minimal cost. Standard practice.	Notification of AHO will enable them to update maritime charts thereby reducing the likelihood of interaction with other marine users.	Benefits outweigh cost/sacrifice. Control is also Standard Practice.	Yes C 1.5
Notify relevant government departments, fishing industry representative bodies and licence holders of activities prior to commencement and upon completion of activities.	F: Yes. CS: Minimal cost. Standard practice.	Communication of the Petroleum Activity to other marine users ensures they are informed and aware, thereby reducing the likelihood of interference with other marine users.	Benefits outweigh cost/sacrifice. Control is also Standard Practice.	Yes C 1.6
Notify AMSA Joint Rescue Coordination Centre (ARC) of activities and movements 24 to 48 hours before operations commence.	F: Yes. CS: Minimal cost. Standard practice.	Communicating the Petroleum activity to other marine users ensures they are informed and aware should emergency response be required.	Benefits outweigh cost/sacrifice. Control is also Standard Practice.	Yes C 1.7

[31] *Qualitative measure*

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Impact assessment				
Notify relevant persons for activities within the Petroleum Activity that commence more than a year after EP acceptance.	F: Yes. CS: Minimal cost. Standard practice.	Communication of the Petroleum Activity to other marine users ensures they are informed and aware, thereby reducing the likelihood of interference with other marine users.	Benefits outweigh cost/ sacrifice. Control is also Standard Practice.	Yes C 1.8
SIMOPS Plan in place when MODU working in vicinity of other facilities, vessels or live infrastructure i.e. during Xmas tree installation. SIMOPS Plan will contain information on: • Minimum separation distances • Communications • MODU / vessels / activities involved in SIMOPS • Exclusion zone entry and exit processes • ROV operations • Helicopter operations • Key roles, responsibilities and emergency contacts • PTW arrangements • Incident reporting and investigation • Management of Change	F: Yes CS: Minimal cost.	The SIMOPS plan will include protocols for entering titles not owned by Woodside, allowing other operators, particularly Chevron, to plan for the Petroleum Activity's presence.	Benefits outweigh cost/sacrifice.	Yes C 1.9
Notify DNP on EP acceptance and 10 days prior to activities occurring within the Montebello Multiple Use Zone (excluding transiting) and following completion of activities.	F: Yes CS: Minimal cost.	In accordance with request made by DNP during consultation.	Benefits outweigh cost/sacrifice.	Yes C1.11

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Impact assessment				
Apply a 'living heritage[32]' management approach. Woodside seeks advice and incorporates Traditional Custodian cultural knowledges across our activities. Cultural safety considerations are factored for our workforce and the Traditional Custodian community.	F: Yes CS: Minimal	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 2.1
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 2.2
Use of cultural heritage monitors on vessels to oversee implementation of controls protecting cultural values	F: No CS: Not feasible	Primary Installation Vessels are POB constrained with no ability to facilitate additional personnel	Not considered – control not feasible.	No
Project 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	Ensures workforce is suitably aware of cultural features and heritage values in the area they are operating.	Benefits outweigh cost/sacrifice.	Yes C2.3
The Petroleum activity will be carried out in accordance with protection declarations relevant to the PAA, under Sections 9,10,12 of the ATSIHP Act.	F: Yes CS: Minimal	Ensures workforce is suitably aware of cultural features and heritage values in the area they are operating.	Benefits outweigh cost/sacrifice.	Yes C2.4

[32] *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.*

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Impact assessment				
Professional judgement – Eliminate				
Limit the Petroleum Activity to avoid peak shipping and commercial fishing activities.	F: No. Shipping occurs year-round and cannot be avoided. SIMOPS with fishing seasons cannot be eliminated as exact timings for all activities are not confirmed. CS: Not considered – control not feasible	Not considered – control not feasible.	Not considered – control not feasible.	No
Professional judgement – Substitute				
No additional controls identified				
Professional judgement – Engineered Solution				
Over-trawl protection on subsea infrastructure.	F: Yes. Over-trawl protection could mitigate against the potential for commercial fishing trawl gear to damage subsea infrastructure and/or result in loss of trawl gear. CS: Significant additional cost	Reduce the potential for snagging of trawl nets if a wellhead is left in situ following abandonment during drilling. However, given there is no currently active trawling fisheries occurring in the Operational Area the benefit is low	Disproportionate. Significant additional costs.	No
ALARP statement: On the basis of the environmental risk assessment outcomes and use of the relevant tools appropriate to the decision type, Woodside considers the adopted controls appropriate to manage the impacts and risks of the physical presence of the MODU/PIV, project vessels and subsea infrastructure on other users, such as commercial fisheries and shipping. As no reasonable additional/alternative controls were identified that would further reduce the impacts without grossly disproportionate sacrifice, the impacts and risks are considered ALARP.				

Demonstration of acceptability
Acceptability statement: The impact assessment has determined that, given the adopted controls, physical presence of the Petroleum Activity on other users is unlikely to result potential impact greater than no Lasting Effect to commercial fishing and shipping. Further opportunities to reduce the impacts and risks have been investigated above. The adopted controls are considered good oil-field practice/industry best practice and meet requirements of Australian Marine Orders, and expectations of AMSA and AHS provided during consultation. In addition, the Petroleum Activity is within the acceptable level of impact determined through the Goodwyn Area Infill OPP as the impact consequence level is consistent with the level rated in the OPP and the EPOs and controls from the OPP that are relevant to the interaction with other users have been adopted. On the basis of the assessment outcomes, use of the relevant tools appropriate to the decision type (i.e. Decision Type A; Section 2.2.5.2) and Woodside's criteria for demonstrating acceptability (Section 2.3.2), Woodside considers the adopted controls appropriate to manage the impacts/risks to be managed to a level that is broadly acceptable, and compliance with those controls demonstrates that the EPOs are met.

EPOs, EPS and MC			
EPO	***Controls***	***PS***	***MC***
EPO 1	C 1.1	PS 1.1	MC 1.1.1

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EPOs, EPS and MC			
EPO	***Controls***	***PS***	***MC***
No interference with other marine users to a greater extent than is necessary for the exercise of rights and performance of duties as conferred to the titleholder.	Vessels to adhere to the navigation safety requirements including the *Navigation Act 2012* and any subsequent Marine Orders.	MODU and project vessels compliant with Navigation Act and Marine Order 21 (Safety of navigation and emergency procedures) 2012	Marine assurance inspection records demonstrate compliance with standard maritime safety procedures
	C 1.2 Establishment of a 500 m safety exclusion zone around MODU and relevant vessels and communicated to marine users.	PS 1.2 No entry of unauthorised vessels within the 500 m safety exclusion zone.	MC 1.2.1 Daily operations reports and incident records demonstrate breaches by unauthorised vessels within the safety exclusion zone are recorded.
			MC 1.2.2 Consultation records demonstrate that AHO has been notified prior to commencement of the activity to allow generation of navigation warnings (Maritime Safety Information Notifications (MSIN) and Notice to Mariners (NTM (including AUSCOAST warnings where relevant)), which communicate safety exclusion zones to marine users.
	C 1.3 Mooring systems (chains/wires and anchors) will be removed.	PS 1.3 Mooring systems (chains/wires and anchors) will be removed.	MC 1.3.1 Records demonstrate mooring systems (chains/wires and anchors) were removed
	C 1.4 Reasonable attempts at removal of wellhead(s) will be made in the event of a respud.	PS 1.4 Removal of wellheads attempted during the Petroleum Activity in the event of a respud.	MC 1.4.1 Records demonstrate reasonable attempts at wellhead removal were made.
	C 1.5 Australian Hydrographic Office (AHO) will be notified of activities and movements no less than four working weeks prior to commencement of the Petroleum Activity.	PS 1.5 Notification to AHO of activities and movements to allow generation of navigation warnings (MSIN and NTM (including AUSCOAST warnings where relevant)).	MC 1.5.1 Consultation records demonstrate that AHO has been notified before commencing an activity to allow generation of navigation warnings (MSIN and NTM (including AUSCOAST warnings where relevant)).

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EPOs, EPS and MC			
EPO	***Controls***	***PS***	***MC***
	C 1.6 Notify relevant government departments, fishing industry representative bodies and licence holders of activities prior to commencement and upon completion of activities.	PS 1.6 Notification to AFMA, CFA, DAFF – Fisheries, DPIRD, WAFIC, Recfishwest at least 10 days before activity commences, and following completion of activities.	MC 1.6.1 Consultation records demonstrate that AFMA, CFA, DAFF – Fisheries, DPIRD, WAFIC, Recfishwest have been notified prior to commencement and following completion of activities.
	C 1.7 Notify AMSA Joint Rescue Coordination Centre (JRCC) of activities and movements 24 to 48 hours before operations commence.	PS 1.7 Notification to AMSA JRCC to prevent activities interfering with other marine users. AMSA's JRCC will require the MODU's details (including name, callsign and Maritime Mobile Service Identity (MMSI)), satellite communications details (including INMARSAT-C and satellite telephone), area of operation, requested clearance from other vessels and need to be advised when operations start and end.	MC 1.7.1 Consultation records demonstrate that AMSA JRCC has been notified prior to commencement of the activity within required timeframes.
	C 1.8 Notify relevant persons for activities within the Petroleum Activity that commence more than a year after EP acceptance, if no previous activities have occurred.	PS 1.8 Notification to relevant persons if activities within the Petroleum Activity commence more than a year after EP acceptance, if not previous activities have occurred.	MC 1.8.1 Consultation records demonstrate relevant persons notified if activities within the Petroleum Activity commenced more than a year after EP acceptance.
	C 1.9 SIMOPS Plan in place when MODU working in vicinity of other facilities, vessels or live infrastructure i.e. during Xmas tree installation. SIMOPS Plan will contain information on: • Minimum separation distances • Communications • MODU / vessels / activities involved in SIMOPS • Exclusion zone entry and exit processes • ROV operations • Helicopter operations	PS 1.9 MODU and applicable vessels compliant with SIMOPS Plan, when relevant.	MC 1.9.1 Up-to-date and approved SIMOPS Plan in place

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EPOs, EPS and MC			
EPO	***Controls***	***PS***	***MC***
	• Key roles, responsibilities and emergency contacts • PTW arrangements • Incident reporting and investigation • Management of Change		
	C 1.10.1 Notify Defence of activities no less than five weeks before the scheduled activity commencement date.	PS 1.10.1 Notification to Defence five weeks prior to the scheduled commencement date.	MC 1.10.1 Consultation records demonstrate that Defence has been notified prior to commencement of the Petroleum Activity within the required timeframes.
	C 1.11 Notify DNP on EP acceptance and 10 days prior to activities occurring within the Montebello Multiple Use Zone (excluding transiting) and following completion of activities.	PS 1.11.1 Notification to DNP once the EP is accepted	MC 1.11.1 Consultation records demonstrate that DNP has been notified of EP acceptance.
		PS 1.11.2 Notification to DNP least 10 days before activity commences, and following completion of activities. In the Montebello Marine Park	MC 1.11.2 Consultation records demonstrate that DNP has been notified as required.
EPO 2a No adverse impact to cultural features and heritage values without a permit. EPO 2b Woodside supports ongoing engagement and consultation with Traditional Custodians for the purpose of assessing and avoiding impacts to cultural heritage values.	C 2.1 Apply a 'living heritage' management approach. Woodside engages with Traditional Custodians and seeks to incorporate cultural knowledge where appropriate across activities. Cultural safety considerations are factored for our workforce and the First Nations community.	PS 2.1.1 Woodside will continue to invite Traditional Custodians to identify interests, transmit information and express concern through ongoing consultation as identified in Section 5.7.	MC 2.1.1 Records demonstrate Change Management and Management of Knowledge processes have been followed where new controls or management measures identified.
		PS 2.1.2 Woodside will assess and, where deemed practicable, implement appropriate cultural protocols where requested by Traditional Custodians.	MC 2.1.2 Records demonstrate Woodside implemented cultural protocols as requested.
	C 2.2 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.	PS 2.2. 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	MC 2.2.1 Records demonstrate Change Management and Management of Knowledge processes have been followed where new controls or management measures identified (Section 7.6)

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EPOs, EPS and MC			
EPO	***Controls***	***PS***	***MC***
		prioritised and demonstrated through a written options analysis/ALARP to an acceptable level of impact. This will be documented through Woodside's Management of Change and Management of Knowledge processes.	
	C 2.3 Project inductions to relevant personnel, prior to the individual commencing the activity, will include information on cultural features and heritage values, including tangible and intangible cultural heritage.	PS 2.3 Relevant personnel have completed Project inductions that include information on cultural values, including tangible and intangible cultural heritage for awareness.	MC 2.3.1 Records demonstrate relevant personnel have completed inductions that include cultural awareness.
	C 2.4 The Petroleum Activity will be carried out in accordance with protection declarations relevant to the PAA, under Sections 9,10,12 of the ATSIHP Act.	PS 2.4 Where an object or Significant Aboriginal Area is protected by a declaration under Section 12 or Sections 9/10 respectively of the ATSIHP Act, no work inconsistent with that declaration will be conducted for the duration of that declaration.	MC 2.4.1 No non-compliances with protection declarations relevant to the PAA, under Sections 9,10,12 of the ATSIHP Act.

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6.7.2 Physical Presence: Seabed Disturbance from Drilling Operations, Subsea Infrastructure, MODU Anchoring and ROV Operations

Context		
Relevant Activities Project Vessels – Section 3.11 Drilling Activities – Section 3.7 Subsea Installation and precommissioning Activities – Section 3.7.11 ROV activities – Section 3.11.5 Wellhead Assembly Left In-situ – Section 3.10.6	***Existing Environment*** Physical environment – Section 4.3 Habitats and Biological Communities – Section 4.5 Protected species – Section 4.6	***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
Disturbance to seabed from drilling operations	X	X		X		X	A	D	-	-	LCS GP PJ	Broadly Acceptable	EPO 3a, 3b, 3c, 2a, 2b
Disturbance to seabed from subsea installation of infrastructure (flowlines, umbilicals, flying leads, etc.) and span rectification (concrete mattresses etc.)	X	X		X		X							
Disturbance to seabed from ROV operation	X	X		X		X							
Disturbance to seabed from mooring installation (including anchor hold testing)	X	X		X		X							
Disturbance to seabed from wellhead remaining in situ (if required)	X	X		X		X							
Placement and retrieval of seabed transponders and temporary installation aids	X	X		X		X							

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Description of Source of Impact
Subsea Installation Activities Subsea installation of the infrastructure components described in Table 3-5 will result in temporary disturbance and suspension of sediment causing increased turbidity and impacts to benthic habitats during the installation process. The installation of subsea infrastructure (including wellheads, flowlines, umbilicals, flowline and umbilical termination assemblies, flying leads, manifold), supporting structures (e.g. concrete mattresses) and installation aids (clump weights, concrete mattresses, sandbags, bulkabags and rigging) will result in disturbance to benthic habitats where the infrastructure is laid and over time it may be disturbed in the immediate vicinity due to scour and/or build up around the infrastructure. Commencement of the flowline, jumper and umbilical installation generally requires tension to be maintained as it transitions from the installation vessel to the seabed. Therefore, the commencement of installation may start with landing the end of flowline / jumper / umbilical termination head either on the manifold or on the seabed attached to an initiation anchor (suction pile, drag anchor or clump weight/dead anchor). This will cause localised and temporary impacts to water quality in the vicinity of flowline landout. **Span rectification** Optimum flowline and umbilical routes will be selected by considering seabed bathymetry, preinstallation surveys and installation risk management, including dropped object risks and buckling/walking impacts. This reduces the potential for spanning and therefore the need for span rectification, while avoiding potential hard substrate habitats where practicable. Where span rectification is required concrete mattresses or grout bags may be positioned at the identified free span location by the use of the vessel crane and ROV. The dimensions for each concrete mattress are expected to be 6 m x 3 m x 0.3 m. Post-lay span rectification may involve placing grout bags (multiple ~25 kg) or concrete mattresses on the seabed, with the extent of any impact limited to the footprint of the installed flowline. **Stabilisation** Stabilisation is a post lay activity to ensure light items, such as flying leads, remain at their installed positions, i.e., not being shifted due to strong seabed current, by installing sand bags on top at a predetermined spacing. Sand bags generally come in a standard size with 20 kg to 40 kg weight. Concrete mattresses at regular spacings may also be used for stabilisation of some sections of the flexible jumpers, flowlines or umbilicals, subject to detailed design. ***Drilling and MODU Operations*** Drilling activities may result in intermittent or discontinuous direct physical or mechanical disturbance to the seabed up to an approximate 100 m radial distance around each well location due to the installation of the BOP and conductor. The generation and discharge of cuttings and drilling fluids are not considered in this section; refer to Section 6.7.8 for an assessment of drill cuttings and drilling fluids and Section 6.7.9 for an assessment of cement and cementing fluids. ***Mooring Installation and Anchor Hold Testing*** Seabed disturbance may result from the MODU anchor mooring system (for either a moored or hybrid MODU) including placement of anchors and chain/wire on the seabed, potential dragging during tensioning, and recovery of anchors. Mooring may require a 12-point pre-laid mooring system, depending on the time of year; however, for drilling activities outside of cyclone season, a standard eight-point mooring system is more likely. Suction piling may be required for installing the anchors. A hybrid MODU will have either an eight- or 12-point anchoring system which results in seabed disturbance between ~13,000 m² (0.013 km²) and ~19,000 m² (0.019 km²), including allowances for the anchor footprint and disturbance from anchor chains. In addition, there could be a further ~1,000 m² if the anchor does not embed as required and another attempt is required. The seabed disturbance footprint associated with a moored MODU may occur up to ~4 km from the proposed drilling location. At the Wilcox drill centre the anchor installation mooring systems will only be installed once and the MODU will kedge between WCA01 and WCA02. ***ROV Operations*** The use of a ROV during drilling and subsea installation activities as described in Section 3.11.5 may result in temporary seabed disturbance and suspension of sediment as a result of working close to, or occasionally on, the seabed. ROV use close to or on the seabed is limited to that required for effective and safe subsea activities. The footprint of a typical ROV is about 2.5 m × 1.7 m (4.25 m²). Additionally, the ROV may be used to relocate small amounts of sediment material (Section 4.5), for example to create a stable, level surface or to reduce the potential for scouring from subsea equipment (e.g. BOP). This will cause localised and temporary impacts to water quality from increased turbidity and may cause localised and temporary impacts to benthic habitats. ***Marine Growth Removal*** Excess marine growth and calcareous deposits may need to be removed following return to well after a period of suspended drilling. Removing marine growth and calcareous deposits is undertaken via a high-pressure water and/or brushes or acid, by ROV.

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Description of Source of Impact

Underwater Acoustic Positioning

Accurate positioning of mattresses, rock berms or structures on the seabed is required as well as for DP station keeping for the MODU and therefore long base line (LBL) and/or ultra short baseline (USBL) acoustic positioning may be required in some instances. Transponders may be moored 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 kilogram (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.

Contingency Activities – Wet Parking

In the event that mud mats are required to be deployed to allow infrastructure to be temporarily wet parked (Section 3.8.5), an additional temporary seabed disturbance of 3.5 m by 3.5 m per mud mat near the location of the well would occur. Mud mats would be recovered following recovery of infrastructure.

Contingency Activities

Woodside may need to intervene or workover wells within the Operational Area. Any seabed disturbance would be the same as those described for drilling operations and MODU operations. In addition, in the event of a respud of a well the base case would be to remove the wellhead. However, if reasonable attempts at wellhead removal are unsuccessful, a wellhead may remain in situ until the end of field life. If a wellhead is left in-situ, there would be localised seabed disturbance at the wellhead location.

A BOP tether system may be required. This system may consist of clump weights approximately 6 m x 3 m, weighing up to about 75 tonnes each. There would be around four to eight clump weights used, though this may change once seabed and current conditions are better understood. The clump weights would be placed about 20 to 40 m from the wellhead, then the tether would be connected and tensioned using an ROV. The BOP tether system will result in localised seabed disturbance.

Seabed Disturbance Summary

Table 6-2 provides details on the expected total seabed disturbance from the installation of the flowline and subsea infrastructure for this petroleum activity. As detailed within Section 5.2.1 of the Goodwyn Area Infill Development OPP (A1806RH0000003, Rev 7), the estimated infrastructure footprint is ~0.05 km^2 with an estimated infrastructure disturbance of ~2.2 km^2 based on the development of eight wells. This disturbance area takes into consideration that displacement of the flowlines and/or EHUs may occur over time (no displacement of other infrastructure is expected to occur). The proposed disturbance from this activity is well within the estimated disturbance footprint in the Goodwyn Area Infill Development OPP.

The total expected disturbance from the installation of the anchor mooring system is expected to be 0.078 km^2 noting that additional disturbance may occur if more than one attempt is required to embed the anchor. Up to six anchors may be installed in the Montebello Marine Park equating to approximately 0.02 km^2. As detailed in Section 9.2.2.4 of the Goodwyn Area Infill Development OPP (A1806RH0000003, Rev 7) seabed disturbance is limited to 0.11 km^2 in the Montebello AMP.

Table 6-2: Estimated subsea infrastructure footprint and infrastructure disturbance area

Description	***Expected Footprint (km^2)***	***Expected Disturbance Area (km^2)***
Flowlines, EHUs and associated structures (e.g. UTA, FLET)	0.016	1.320
Manifold and associated connections/equipment (e.g. universal connection system termination head, EFLs, HFLs, rigid spools, pressure protection systems)	0.002	0.002
Wellheads, Xmas trees, and associated connections/equipment (e.g. universal connection system termination heads, EFLs, HFLs, well jumpers)	0.005	0.005
Total	**0.023**	**1.327**

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Impact Assessment

Potential impacts to environmental values

Water and Sediment Quality

Seabed disturbance has the potential to result in a localised and temporary decline in water quality due to an increase in suspended sediment. After a period, suspended sediments settle and the turbidity in the water column returns to pre-disturbance levels. Any reduction in water quality will be temporary and will be limited to the waters close to the seabed immediately surrounding the disturbance area.

Epifauna and Infauna

Seabed disturbance and potential impacts to epifauna and infauna can occur as a result of the mobilisation and/or displacement of sediments along the flowline and through the placement of the subsea infrastructure. Disturbance to the seabed can alter the physical seabed habitat conditions, resulting in epifauna and infauna community changes (Newell et al., 1998). Potential impacts include:

- Direct impacts, including physical removal and loss of benthic communities and habitat and temporary alteration of the existing hydrodynamic regime within the direct footprint of activities.
- Indirect impacts caused by reduced water quality or increased sedimentation, including indirect effects on filter feeder-sponge habitat through reduced light availability for photosynthesis of the sponges' symbionts and reduced filtering and feeding (Abdul Wahab et al., 2019).

Subsea infrastructure

The installation of the subsea infrastructure will result in the localised loss of epifauna and infauna within the infrastructure footprint.

As detailed in Section 4, the Operational Area includes a variety of benthic communities depending on the substrate type. An assessment of the Operational Area determined that the substrate around the nearfield wells is comprised of soft sediments which are associated with infauna benthic communities. Typically, these communities are characterised by burrowing infauna such as polychaetes, and sessile and mobile epifauna such as crustacea (shrimp, crabs and squat lobsters) and echinoderms (starfish, sea cucumbers). These infauna communities are representative of the Northwest Shelf Province—low abundance and dominated by polychaetes and crustaceans (RPS 2012b). For the nearfields wells seabed disturbance is estimated to be 0.01 km^2 for subsea infrastructure. This estimated extent of direct seabed disturbance is considered small in relation to the extent of the soft sediment benthic communities in the Operational Area and the NWMR. Furthermore over time, sessile benthic biota (e.g. sponges, gorgonians) are expected to colonise this hard substrate, which may then support higher biodiversity benthic fauna than soft sediment habitats. Therefore, the presence of subsea infrastructure may lead to ecological communities establishing in this area that would not have existed here otherwise. For example, pipeline infrastructure has been shown to support more diverse fish assemblages and benthic biota (McLean et al. 2017); these communities are relatively diverse compared to the open water and soft sediment habitats.

At the Wilcox field (in the south-west) consolidated pavement occurs which provides habitat for patchy filter feeder communities. As described in Section 4, environmental surveys have been undertaken by AIMS to characterise the seabed habitats around Rankin bank and the Lady Nora Permberton (LNP) manifold (AIMS 2014) and the characterisation of the seabed habitats was extended in 2024 through surveys for GWF4 to include areas around the Wilcox drill centre and also along the flowline corridor (Worley 2025[33]). The installation of the Wilcox flowline and umbilical is expected to result in the direct loss of ~1 km^2 of benthic habitat and communities. Based on the habitat mapping undertaken in 2024, It is predicted that the footprint of the flowline and umbilical will intercept with bare substrate (sand, gravel etc; ~47%) and filter feeder communities (octocorals and porifera; ~53%), and avoid mapped stony coral habitat. . The filter feeder communities mapped as part of the 2024 survey had a patchy distribution with low cover (typically less than 10% biotic cover) in the flowline corridor route where water depths were greater than 55m.

Conservatively assuming direct loss of benthic communities within the footprint will also occur either side of the flowline and umbilical due to displacement throughout operations, these habitats are well represented throughout the area (See Table 6-3). In addition, as the subsea infrastructure provides hard substrate it is expected that the adjacent benthic biota (e.g. sponges, gorgonians) would recolonise the flowline and umbilical, which would allow the filter feeders communities to re-establish.

Table 6-3: Mapped habitat types and the percentage of disturbance from the installation of the Wilcox flowline and umbilical (Worley 2025)

Habitat Types	Mapped Habitat Types(km^2)	Percentage of habitat lost (%)
Filter feeder communities	56.42	1.25

[33] *Habitats were mapped using a predictive model based on geophysical data and ROV imagery.*

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Impact Assessment		
Bare substrate (rock veneer, unconsolidated gravel and sand)	37.63	0.94
Coral habitats	5.27	0

MODU Mooring

Mooring installation activities are likely to result in localised physical modification to a small area of the seabed and disturbance to soft sediment and hard substrates, where present. Impacts from mooring activities (including anchor hold testing) for the nearfield wells are expected to be confined to sediment burrowing infauna and surface epifauna invertebrates, particularly filter feeders, inhabiting the seabed directly around the anchor test location (Hughes et al., 2010; Gates and Jones, 2012). Impacts to these broadly represented communities are expected to be highly localised with no significant impact to environment receptors. Literature suggests recovery from physical disturbance can range from weeks to over five years (Kraus and Carter 2018). The recovery of the physical environment is variable and dependent on a number of factors, including sediment supply, wave and current activity, and water depth. It is expected that benthic communities will recover at rates similar to physical restoration.

The proposed mooring pattern for the wells is still unknown however there will only be one mooring installation systems installed for the WCA01 and WCA02 wells and therefore it is expected that approximately up to 0.03 km^2 of seabed may be disturbed. The area around the drill centre is in water depths of 60-75 m and is mostly characterised by bare sand. There are areas of rock veneer with scattered biota consisting of filter feeder communities (e.g. octocorals and porifera) though biotic cover was generally low (2.73 to 13.9%) (Worley 2025). Assuming that the installation of the mooring system resulted in the direct loss of these community types this would represent less than 0.07% of mapped filter feeder communities.

Therefore, seabed disturbance within the Operational Area is not expected to result in a consequence greater than minor disturbance to habitats or biological communities, or affect ecosystem function, and thus the consequence level is ranked as D.

Key Ecological Features

The potential for changes to a KEF may occur from either temporary seabed disturbance (e.g. sampling or positioning) or the physical presence of subsea infrastructure. The nearfield wells overlap the ancient coastline at 125 m depth contour KEF. Therefore, seabed disturbance in this area is expected to be limited to 0.07 km^2 which is a negligible area for the KEF, which is 16,190 km^2.

As described in Section 4.7, the values of this KEF include providing areas of hard substrate that may result in higher diversity and enhanced species richness relative to surrounding areas of predominantly soft sediment. However, assessment of the geophysical data did not identify any hard substrate. Furthermore, while physical habitat modification is listed as a pressure within the Marine Bioregional Plan for the NWMR, but has not been identified a pressure of concern for this KEF (DSEWPaC 2012b).

Therefore, seabed disturbance within the KEF is not expected to result in a consequence greater than minor disturbance to habitats or biological communities, or affect ecosystem function.

Cultural heritage values

The Operational Area partially overlaps the ancient landscape, which is defined as the area from the WA coast to the Ancient Coastline at 125 m Depth Contour KEF. This area has been identified as having the potential for First Nations archaeological heritage material to exist on the seabed. Therefore, seabed disturbance from subsea installation and mooring activities has the potential to impact on underwater Cultural Heritage Values, if present, that could include either First Nations cultural material or unidentified shipwrecks.

Known Indigenous heritage places, 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. Woodside understands there is no Indigenous archaeology known to exist within the Operational Area and no areas subject to declarations or prescriptions under these Acts are located within the Operational Area.

No sites of significance were identified by Traditional Custodians during consultation while preparing this EP. Controls (See Control 2.5) have been adopted to help further understand the potential for underwater cultural heritage before seabed is disturbed.

Australian Marine Parks

No top-hole sections for production wells or other subsea infrastructure will occur within the boundary of the marine park, but it is possible that the MODU mooring system may extend within the marine park boundary for activities at the Wilcox drill centre. Therefore, while the Operational Area partially overlaps the Montebello Marine Park (Figure 4-13) seabed disturbance, from MODU anchoring, is predicted to be 0.02 km^2, which represents less than 0.0006% of the marine park.

The values of the Montebello Marine Park (as described in Section 4.8.1) include ecosystems representative of the Northwest Shelf Province, including areas of ancient coastline. Benthic habitats and potential impacts would be as described above for the Wilcox wells. Therefore, seabed disturbance within the Montebello Marine Park is not

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Impact Assessment
expected to result in a consequence greater than minor and short-term disturbance to habitats or biological communities, or affect ecosystem function.
Summary of Potential Impacts to environmental values(s)
Given the adopted controls, seabed disturbance from the Petroleum Activity will result in minor and short-term disturbance to benthic habitat and communities (i.e. Environment Impact – D).

Demonstration of ALARP				
Control Considered	***Control Feasibility (F) and Cost/Sacrifice (CS)[26]***	***Benefit in Impact/Risk Reduction***	***Proportionality***	***Control Adopted***
Legislation, Codes and Standards				
Reasonable attempt(s) at removal of wellhead(s) will be undertaken in the event of a respud.	F: Yes CS: Additional cost. Standard practice.	In accordance with OPGGS Act Section 572	Benefits outweigh cost/ sacrifice.	Yes C 1.4
Mooring systems (chains/wires and anchors) will be removed	F: Yes CS: Additional cost. Standard Practice.	In accordance with OPGGS Act Section 572	Benefits outweigh cost/sacrifice.	Yes C 1.3
Good Practice				
Subsea infrastructure will be positioned within planned footprint to reduce seabed disturbance.	F: Yes. CS: Standard practice.	Ensures risks appropriately addressed for seabed disturbance and use of positioning technology to position infrastructure on the seabed with accuracy will reduce seabed disturbance.	Benefits outweigh cost/sacrifice.	Yes C 3.1
Project-specific Basis of Well Design, which includes an assessment of seabed sensitivity.	F: Yes. CS: Minimal cost. Standard practice.	Reduces the likelihood of anchoring occurring in areas of high sensitivity. Assessment of seabed topography reduces the likelihood of anchor drag leading to seabed disturbance.	Benefits outweigh cost/sacrifice.	Yes Adopted as part of the project description
Project-specific Mooring Design Analysis.	F: Yes. CS: Additional costs associated with upgraded MODU mooring design.	The mooring design analysis determines the number and spread of anchors required based on sediment type and seabed topography, reducing the likelihood of anchor drag leading to seabed disturbance.	Benefits outweigh cost/sacrifice.	Yes C 3.2
Subsea installation activities and MODU anchoring will not occur on identified	F: Yes. CS: Minimal costs	Ensuring that activities of the Petroleum Activity are spatially removed from shoals to avoid impacts to	Benefits outweigh cost/sacrifice.	Yes C 3.3

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Demonstration of ALARP				
Control Considered	***Control Feasibility (F) and Cost/Sacrifice (CS)[26]***	***Benefit in Impact/Risk Reduction***	***Proportionality***	***Control Adopted***
shoals within the Operational Area		potential sensitive benthic habitats (e.g. coral reef tops).		
Top hole locations will not occur within 500 m of identified shoals within the Operational Area.	F: Yes. CS: Minimal costs	Ensuring that activities of the Petroleum Activity are spatially removed from shoals to avoid impacts to potential sensitive benthic habitats (e.g. coral reef tops).	Benefits outweigh cost/sacrifice.	Adopted See top hole locations in Table 3-3 and Figure 4-3 C 3.4
Seabed Disturbance from anchor infrastructure within the Montebello Marine Park will be limited to less than 0.11 km^2.	F: Yes. CS: Minimal costs	Minimize the seabed disturbance to will in turn minimize the impact on Montebello Marine Park.	Benefits outweigh cost/sacrifice.	Yes C 3.5
Apply a 'living heritage[34]' management approach. Woodside seeks advice and incorporates Traditional Custodian cultural knowledges across our activities. Cultural safety considerations are factored for our workforce and the Traditional Custodian community.	F: Yes CS: Minimal	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 2.1
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 2.2

[34] 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.

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Demonstration of ALARP				
Control Considered	***Control Feasibility (F) and Cost/Sacrifice (CS)[26]***	***Benefit in Impact/Risk Reduction***	***Proportionality***	***Control Adopted***
Use of cultural heritage monitors on vessels to oversee implementation of controls protecting cultural values	F: No CS: Not feasible	Primary Installation Vessels are POB constrained with no ability to facilitate additional personnel	Not considered – control not feasible.	No
Project 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	Ensures workforce is suitably aware of cultural features and heritage values in the area they are operating.	Benefits outweigh cost/sacrifice.	Yes C2.3
The Petroleum Activity will be carried out in accordance with protection declarations relevant to the PAA, under Sections 9,10,12 of the ATSIHP Act.	F: Yes CS: Minimal	Meets legislative requirements and community expectations	Benefits outweigh cost/sacrifice.	Yes C2.4
Review of existing survey data by a suitably qualified maritime archaeologist to inform areas of seabed to avoid or where not possible, minimise physical impacts to cultural heritage areas or prospective areas.	F: Yes. CS: Minimal costs associated with review of data and avoidance or minimisation options.	Review of data by suitably qualified maritime archaeologist will inform 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 for working in the near and offshore environment to protect Underwater Cultural Heritage (DCCEEW, 2025).	Benefits outweigh cost/ sacrifice.	Yes C2.5
Undertake an environmental survey to characterise the benthic habitats in the vicinity of subsea infrastructure and well locations, where hard substrate is identified and disturbance may occur	F: Yes CS: Minimal	May identify potential environmental sensitivities in the vicinity of subsea infrastructure and a requirement of the OPP	Benefits outweigh cost/sacrifice.	Yes adopted; See Section 4.5.1

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Demonstration of ALARP				
Control Considered	***Control Feasibility (F) and Cost/Sacrifice (CS)[26]***	***Benefit in Impact/Risk Reduction***	***Proportionality***	***Control Adopted***
Undertake an ALARP demonstration for identified filter feeder communities that will be adversely impacted by subsea infrastructure. The ALARP demonstration shall assess the options in consideration of factors such as the technical feasibility, costs and health/safety, in the context of the mitigation hierarchy.	F: Yes CS: Substantial; more than $ 4M USD	See below	Control grossly disproportionate.	Yes, the adopted Wilcox flowline route results in no direct impacts to mapped stony coral benthic communities.
Hard substrate was identified in the vicinity of the Wilcox well locations and extended intermittently to the LPA tie-in point for the Wilcox flowline. Therefore, to understand the seabed and potential benthic communities a study was undertaken using geophysical and ROV data to characterise and map the benthic habitats and communities in the Wilcox field (Worley, 2025; Section 4.5.1.1). The proposed Wilcox flowline route was then overlaid on the habitat map to identify the potential disturbance to the different mapped habitats. During this assessment it was noted that the planned route included moderate-high rock with stony corals and mixed biota. As it was considered that these coral habitats have potentially longer recovery time the flowline route was rerouted, extending the proposed length of the route by 10s of metres, to avoid these mapped sensitive stony coral habitats. Avoidance of all mapped filter feeder habitat is not possible due to its intermittent and widespread distribution along the Wilcox flowline route. However, further assessment was undertaken to consider additional optimisation of the route to reduce overlap of the flowline corridor with filter feeder communities, octocorals and porifera. The environmental surveys (Worley 2025) identified that in water depths of 60-70 m the substrate type was mostly rock and sand veneer with a low cover of biota. Therefore, an assessment was undertaken to consider a flowline route that remained within water depths greater than 70 m, resulting in the flowline extending directly west of the Wilcox drill centre before turning north to connect to the LPA PLET. This route was as per the nominal flowline route presented in Figure 5-2 of the Goodwyn Area Infill Development OPP, however extending the route an additional 1.3 km in length to the east only resulted in reduction of 0.02 km^2 of filter feeder habitat. Furthermore, the distribution of filter feeders within this area is patchy with low biotic cover (Worley 2025; Jones et al 2021) and considered to be well represented in the area (Table 6-3; Worley 2025). Therefore, the increased length of a flowline route (~1.3 km) that avoids these habitats is not considered proportionate to the benefits as it results in additional installation time, increasing H&S exposure hours and increased emissions from vessel use and results in a substantial increase in costs.				
Professional Judgement – Eliminate				
Do not use ROV close to, or on, the seabed.	F: No. The use of ROVs (including work close to or occasionally landed on the seabed) is critical as the ROV is the main tool used to guide and manipulate equipment during drilling. 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 close to the seabed is	Not assessed, control not feasible.	Not assessed, control not feasible.	No

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Demonstration of ALARP				
Control Considered	***Control Feasibility (F) and Cost/Sacrifice (CS)[26]***	***Benefit in Impact/Risk Reduction***	***Proportionality***	***Control Adopted***
	avoided unless necessary. CS: Not assessed, control not feasible			
Professional Judgement – Substitute				
No additional controls identified.				
Professional Judgement – Engineered Solution				
No additional controls identified.				
ALARP statement: On the basis of the environmental risk assessment outcomes and use of the relevant tools appropriate to the decision type, Woodside considers the adopted controls appropriate to manage the impacts of benthic habitat disturbance from MODU station holding, drilling and subsea installation activities and ROV operations. As no reasonable additional/alternative controls were identified that would further reduce the impacts without grossly disproportionate sacrifice, the impacts and risks are considered ALARP.				

Demonstration of Acceptability
Acceptability statement: The impact assessment has determined that, given the adopted controls, disturbance to benthic habitats within the Operational Area is not expected to result in a consequence greater than minor disturbance to habitats or biological communities, or affect ecosystem function. Further opportunities to reduce the impacts and risks have been investigated above. The adopted controls are considered good oil-field practice/industry best practice and meet the requirements of Woodside's relevant systems and procedures. In addition, the Petroleum Activity is within the acceptable level of impact determined through the Goodwyn Area Infill Development OPP as the impact consequence level is consistent with the level rated in the OPP and the EPOs and controls from the OPP that are relevant to potential seabed disturbance have been adopted. The potential impacts and risks are considered broadly acceptable if the adopted controls are implemented. Therefore, Woodside considers the adopted controls appropriate to manage the impacts and risks of seabed disturbance to a level that is broadly acceptable, and compliance with those controls demonstrates that the EPOs are met.

Environmental Performance Outcomes, Standards and Measurement Criteria			
Outcomes	***Controls***	***Standards***	***Measurement Criteria***
Petroleum Activity EPO 3a Planned disturbance to the benthic habitat from subsea infrastructure installation will be limited to within approximately 50 m of the subsea infrastructure EPO 3b Planned disturbance to the benthic habitat from MODU anchor installation will be within the mooring design footprint. EPO 3c	C 1.4 Reasonable attempt(s) at removal of wellhead(s) will be undertaken in the event of a respud.	PS 1.4 Refer Section 6.7.1	MC 1.4.1 Refer Section 6.7.1
	C 1.3 Mooring systems (chains/wires and anchors) will be removed	PS 1.3 Refer Section 6.7.1	MC 1.3.1 Refer Section 6.7.1
	C 3.1 Subsea infrastructure will be positioned within planned footprint to reduce seabed disturbance.	PS 3.1 All infrastructure will be placed within the design footprint within the Operational Area	MC 3.1.1 As built survey reports verify location installation of equipment within the design footprint within the Operational Area

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Environmental Performance Outcomes, Standards and Measurement Criteria			
Outcomes	***Controls***	***Standards***	***Measurement Criteria***
No long-term adverse effects to the values of Australian Marine Parks from the petroleum activity		PS 3.1.2 Transponder equipment, including clump weights/ frames, will be removed at the end of the Petroleum Activity.	MC 3.1.2 As left survey reports confirm temporary equipment is removed.
	C 3.2 Pre-lay survey undertaken prior to installation of flowlines.	PS 3.2 Pre-lay survey will be undertaken prior to the installation of flowlines.	MC 3.2.1 Records demonstrate a pre-lay survey was undertaken prior to installation of flowlines.
	C 3.3 Project specific Mooring Design Analysis.	PS 3.3 Seabed disturbance from MODU mooring limited to that required to ensure adequate MODU station holding capacity.	MC 3.3.1 Records demonstrate Mooring Design Analysis approved and implemented during anchor deployment.
	C 3.4 Subsea installation activities and MODU anchoring will not occur on identified shoals within the Operational Area	PS 3.4 No subsea installation or anchoring on identified shoals	MC 3.4.1 Records demonstrate Subsea installation activities and MODU anchoring did not occur on identified shoals within the Operational Area
	C 3.5 Seabed Disturbance from anchor infrastructure within the Montebello Marine Park will be limited to less than 0.11 km^2	PS 3.5 Seabed disturbance in the Montebello Marine Park will be less than 0.11 km^2	MC 3.5.1 Records demonstrate that anchor seabed disturbance associated infrastructure within Montebello Marine Park as less than 0.11 km^2
EPO 2a No adverse impact to cultural features and heritage values without a permit. EPO 2b Woodside supports ongoing engagement and consultation with Traditional Custodians for the purpose of assessing and avoiding impacts to cultural heritage values.	C 2.1 Refer Section 6.7.1	PS 2.1.1 Refer Section 6.7.1	MC 2.1.1 Refer Section 6.7.1
		PS 2.1.2 Refer Section 6.7.1	MC 2.1.2 Refer Section 6.7.1
	C 2.2. Refer Section 6.7.1	PS 2.2.1 Refer Section 6.7.1	MC 2.2 Refer Section 6.7.1
	C 2.3 Refer Section 6.7.1	PS 2.3.1 Refer Section 6.7.1	MC 2.3.1 Refer Section 6.7.1
	C.2.4 Refer Section 6.7.1	PS 2.4.1 Refer Section 6.7.1	MC 2.4.1 Refer Section 6.7.1
	C 2.5 Review of existing survey data by a suitably qualified maritime archaeologist to inform areas for survey activities and/or installation of equipment that may cause seabed disturbance (in areas not previously disturbed) to avoid or where not possible,	PS 2.5.1 Existing survey data reviewed by a suitably qualified maritime archaeologist to inform areas for seabed disturbance activities.	MC 2.5.1 Records demonstrate review of existing survey data completed prior to commencement of seabed disturbance activities.

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Environmental Performance Outcomes, Standards and Measurement Criteria			
Outcomes	***Controls***	***Standards***	***Measurement Criteria***
	minimise physical impacts to cultural heritage areas or prospective areas.		

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6.7.3 Routine Light Emissions: External Lighting on MODU and Project Vessels

Context		
Relevant Activities Project Vessels – Section 3.11	***Existing Environment*** Regional Context – Section 4.2 Protected Species – Section 4.6	***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
External light emissions on board MODU and project vessels						X	A	F	-	-	GP	Broadly Acceptable	EPO 3c, 4, 2a°, 2b
Flaring						X							

Description of source of impact

MODU and Vessel Operations

The MODU and project vessels will have external lighting to support safe navigation and safe operations at night. This lighting typically consists of bright white (i.e. metal halide, halogen, fluorescent) lights, and is not dissimilar to lighting used for other offshore activities, including fishing and shipping. The spectral signatures associated with MODU lighting are estimated as 530 to 620 nanometres (SKM and ERM 2008). Lighting is required for the safe operation of the MODU and project vessels and cannot be reasonably eliminated.

During drilling and completion activities, artificial light will be emitted from flaring during well unloading to the MODU. Noting that nearfield wells are planned to be unloaded to host (i.e. to the GWA platform outside the scope of this EP) and the Wilcox wells to the MODU. Flaring during well unloading at the MODU will be of short duration (typically occurs for about one to two days per well), with a maximum flow rate of 75 MMscfd.

Measurements of natural gas flares have shown peak spectral signatures typically within the invisible infrared range (750 to 900 nanometres), with lower levels of light emitted within the lower (and visible) wavelength ranges (Hick 1995; Pendoley 2000). Flow rates did not appear to change the spectral signature of gas flares (Hick 1995; Pendoley 2000).

Cumulative light sources

Cumulative light impacts have the potential to occur from multiple vessels in the Operational Area, if an IMR vessel is being utilised for Xmas tree installation or subsea installation activities occur concurrently during drilling activities. This scenario would include the MODU, the IMR or subsea installation vessel and two OSVs on standby and resupplying the rig resulting in slightly elevated ambient light levels. Cumulative impacts from light during this scenario would be limited to a short duration. Light emissions from the adjacent vessels/MODU sources would result in a slightly greater overall spatial area being exposed, as well as cumulative emissions in the area between the MODU/vessels (noting that light intensity is inversely proportional to the distance from the source, and therefore the overlap in emissions is typically not occurring for the highest light intensities).

Additionally, IMMR activities on the subsea infrastructure associated with the Goodwyn A Operations EP may occur which may result in slightly elevated ambient light levels.

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Impact assessment

Environmental value(s) potentially impacted

Light modelling

The largest sources of artificial light (MODU and installation vessel operation) were selected for modelling because they represent the greatest spatial extent of potential impacts. Based on Woodside's previous modelling and monitoring campaigns for similar activities on the NWS, these lighting analogues were selected to inform the impact assessment of light emissions from the GWF4 drilling and installation activities:

- a drilling rig during drilling activities at the Torosa field (Pendoley Environmental 2022)
- a pipelay vessel associated with the Scarborough trunkline (Pendoley Environmental 2020b; Woodside 2020b).

The ILLUMINA model was used for both studies and is a well-documented, open-source model selected for its ability to represent light across large areas and distances and equally across the entire visible spectrum, including biologically meaningful light from 350 nm to 700 nm. The model is a three dimensional (3D) model and accounts for both line of sight and atmospheric scattering, allowing light attenuation over distance and light glow extent to be modelled. The following scenarios were included

Drilling Scenarios

- Light modelling from the MODU included two scenarios one included operational light and the other also included flaring. Specifics of the MODUs light inventories were input into the ILLUMINA model.

Vessel Scenarios

- The study included two scenarios for the pipelay vessel, both near the Dampier Archipelago. Specifics of the vessels' light inventories were input into the ILLUMINA model.

In the absence of any published or generally accepted units of measurement, or scale, for measuring the impact of artificial light on marine fauna, moonlight was selected as a proxy and the light model output (radiance, in units of W/m²/sr) was converted to units of full moon equivalents (Pendoley Environmental 2020b). Table 6-4 lists the potential impact criteria for marine turtles based on radiance thresholds relative to moon radiance.

Table 6-4: Potential impact criteria for marine turtles to artificial light emissions

Proportion of Radiance of a Full Moon[1]	Impact to potential to Marine Turtles
1 to 10	Light or light glow visible and impact likely; represents a very bright light equivalent to up to 10 times the radiance of one moon. This light radiance will override the moderating influence of the ambient full moon at the time of exposure.
0.1 to 1	Light or light glow visible and behavioural impact possible, depending on ambient moon phase at the time of exposure, which will influence the visibility of the artificial light sources. Artificial lights will be more visible to marine turtles under a first quarter moon than under a full moon.
0.01 to 0.1	Light or light glow visible but behavioural impact unlikely (i.e. not biologically relevant). Equivalent to the light output from the first quarter moon to new moon.
<0.01	Light or light glow is considered ambient and no impact expected; equivalent to a new moon.

1. Where 10 equals the radiance of ten full moons and 0.01 equals a 100th the radiance of one full moon

MODU light modelling results

Modelling predicted that illuminance levels from the MODU were:

- 0.001 x full moon for operational lighting at 20 km from the MODU
- 0.020 x full moon for well clean up flaring at 23 km from the MODU

The results show that at 20 km from the MODU, radiance from operational light is reduced to ambient conditions and at 23 km from the MODU, radiance from flaring is visible but behavioural impacts are unlikely.

Vessel light modelling results

Modelling for the pipelay vessel predicted the following illuminance levels

- 10 × full moon ~0.2 km from the vessel
- 1 × full moon ~0.6 km from the vessel
- 0.1 × full moon ~1.8 km from the vessel
- 0.01 × full moon ~5.7 km from the vessel.

The results show that ~5.7 km from the pipelay vessel, radiance has reduced to ambient conditions. At distances ~1.8 to 5.7 km from the pipelay vessel, light may be visible, but is not expected to be biologically relevant and result in

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Impact assessment

behavioural impacts. At distances of less than ~1.8 km from the pipelay vessel, the level of radiance is considered biologically important and behaviour impacts may occur (Pendoley Environmental 2020b).

Artificial Light Exposure Areas

A conservative approach has been adopted regarding consequence evaluation, with a 23 km buffer applied around the Operational Area for use in the impact assessment for turtles. This same approach has been taken to inform the impact assessment for seabirds; however, the buffer around the Operational Area is 20 km, which is based on the recommendations of the National Light Pollution Guideline (DCCEEW, 2023k).

Light emissions can affect fauna in two main ways:

- Behaviour: Many organisms are adapted to natural levels of lighting and the natural changes associated with the day and night cycle, as well as 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: Species 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.

The fauna within the Operational Area are predominantly pelagic fish and zooplankton, with a low abundance of transient species such as marine turtles, whale sharks, whales and migratory seabirds. The Operational Area overlaps with Habitat critical for survival of flatback turtles as well as BIAs for flatback turtle internesting, whale shark foraging, and wedge-tailed shearwater breeding (Section 4.6).

Marine Turtles

Artificial light may result in behavioural changes to marine turtles, particularly around nesting beaches—adult females and emerging hatchlings use different light cues to orient to nesting and/or ocean locations (CoA 2017b; DCCEEW 2023k; Marangoni et al. 2022).

The Recovery Plan for Marine Turtles in Australia (CoA 2017b) identifies light emissions as a key threat to marine turtles because it can disrupt critical behaviours, such as nesting, hatchling orientation, sea finding, and dispersal behaviour. The Recovery Plan (CoA 2017b) defines the habitat critical to the survival of a species for nesting for each species at a stock level. The closest nesting habitat critical to the survival of flatback turtles is the Montebello Islands—at its closest, the Operational Area is ~30 km from these islands. Because the predicted light exposure area from the MODU and vessels is expected to range from ~1.8 to 23 km, no coastal areas (and therefore no adult nesting turtles or turtle hatchlings) are expected to be exposed. In addition, the predicted light exposure would only extend to the worst-case distance of 23 km for one to two days per well while flaring from the MODU.

While studies have indicated it is unlikely flatback turtles would aggregate within the Project Area during their internesting period, the Recovery Plan (CoA 2017b) defines the habitat critical to the survival of a species for internesting as a distance 60 km seaward from nesting habitat critical to the survival of flatback turtles. This means internesting habitat associated with nesting at the Montebello Islands may result in an overlap with the Operational Area and exposure to artificial light. However, Pendoley Environmental (2020a) found no published or anecdotal evidence to suggest internesting turtles are impacted by light from offshore vessels. Therefore, no changes to internesting behaviour due to light emissions from the MODU and vessels are expected.

Additionally, peak spectral emissions from MODU or vessel lighting and flaring from the Petroleum Activity are not within the most sensitive range for turtle species.

Seabirds

High levels of marine lighting can attract and disorient seabird species resulting in species behavioural changes (e.g. circling light sources or disrupted foraging), injury or mortality near the light source (e.g. Longcore and Rich, 2004; Gaston et al., 2014; Rich and Longcore, 2006; Commonwealth of Australia, 2022). As the Operational Area is offshore and away from islands or other emergent features, any presence of seabirds or shorebirds is considered likely to be of a transient nature only. A breeding BIA for the wedge-tailed shearwater does overlaps the Operational Area and the nearest emergent land that could be used for roosting or nesting habitat is the Montebello Islands (about 30 km from the Operational Area).

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 (Commonwealth of Australia, 2020a, 2020b, 2020c). For shearwater species, fledglings 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; Telfer et al., 1987). Artificial light can also impact important behaviour of nesting adults (e.g. adult nest attendance, maintaining nest sites) or confuse shearwater species, resulting in injury or mortality as a result of birds colliding with structures (Cianchetti-Benedetti et al., 2018; Rodriguez et al., 2017). As the Operational Area is about 30 km from the nearest emergent land and noting that modelling predicts light or light glow is likely to be ambient at 20 km (unless the MODU is flaring which would be limited to two to four days) artificial light from the MODU or project vessels is not predicted to disrupt critical breeding behaviours within important nesting habitat or displace seabirds from nesting habitat.

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Impact assessment

Wedge-tailed shearwaters forage either relatively close to breeding islands or over a large area, depending on prey availability. Therefore, foraging wedge-tailed shearwaters may be present in the Operational Area and exposed to artificial light from the MODU and vessels. While foraging wedge-tailed shearwaters may be attracted to sources of light emissions to feed on fish drawn to the light, the species reportedly feeds predominantly during the day (Catry et al. 2009; Ravache et al 2020). Most foraging trips are short, with single-day foraging trips significantly more common than any other length, with birds returning to nesting/roosting sites between trips. The number of wedge-tailed shearwaters present 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.

Migratory shorebirds may be present in or fly through the region between July and December, and again between March and April as they complete migrations between Australia and offshore locations (Department of Environment, 2015). The risk associated with collision from seabirds and shorebirds attracted to the light (Commonwealth of Australia, 2022) is considered to be low, based on the localised nature of the activities in the Operational Area, as well as the distance offshore. However it is recognised that nocturnally active migratory shorebirds may be affected by light spill and alter their normal behaviour as a result. How birds are attracted to light is not proven, but it is proposed that artificial lighting may override the internal magnetic compass of migratory shorebirds or nocturnal seabirds (Gauthreaux and Belser 2006). However, Marquenie et al. (2013) estimated that a change in migratory behaviour of birds was limited to <5 km from the source. Therefore, this type of impact is expected to be spatially restricted to the immediate vicinity of the MODU and vessels and affect only individuals, not populations. Impacts are expected to be limited to temporary behavioural disturbance to isolated individuals and is not expected to disrupt important migration patterns of migratory seabirds.

Fish, Sharks and Rays

Artificial light may result in varied ecological changes to fish, including:

- changing predatory behaviour and abundance (Bolton et al. 2017; Marangoni et al. 2022)
- altering hatching success (Fobert, Burke da Silva, and Swearer 2019)
- acting as an attractant for plankton (Keenan, Benfield, and Blackburn 2007)
- altering circadian behavioural rhythms (Marangoni et al. 2022).

As identified above, the Operational Area overlaps with a foraging BIA for whale sharks. Whale sharks are known to aggregate at Ningaloo between March and July. Following this aggregation period, they migrate. Three potential migration routes have been identified, including one passing through the NWS along the shelf break and continental slope (Meekan and Radford 2010). This route corresponds to the foraging BIA and an expected seasonal presence during spring (DCCEEW 2016). Light is not identified as a key threat for the whale shark (TSSC 2015f).

Commercially targeted species that may occur within the Operational Area include pelagic (e.g. mackerel) and demersal species (e.g. emperors) (Section 4.9.2). Because the source of artificial light is above the surface and the waters are relatively deep, where drilling and subsea activities are planned to occur (generally >70 m, except around unnamed), demersal fish species are not expected to be exposed to artificial light sources.

Artificial light within the Operational Area is not expected to affect whale shark or pelagic fish (including mackerel) species in significant numbers because no known aggregation areas occur within the Operational Area and the presence of these species would be seasonal, transitory, and/or of a short duration. Lighting from a MODU or vessel may result in aggregations of fish, but these aggregations are localised and temporary, and no long-term changes to fish species composition or abundance are expected to occur.

Marine Protected Areas

The southern extent of the Operational Area intersects the Montebello AMP. The values of the Montebello AMP include species listed as threatened, migratory, marine, or cetacean under the EPBC Act, as well as any identified BIAs for regionally significant marine fauna.

The potential for changes to the values of the marine park from artificial light emissions within the Operational Area may occur as an indirect consequence of an impact to the marine fauna identified as a value of the Montebello Marine Park. However, as described in the consequence evaluations for the marine fauna groups above, artificial light emissions within the Operational Area are not expected to result in a lasting effect to marine fauna. Therefore, the consequence of potential changes to the values of the Montebello Marine Park has been ranked as F.

Cultural Values and Heritage

Through consultation and review of available literature (Section 4.9.1), Woodside understands that marine fauna that may be affected by light emissions, such as turtles, are culturally important to Traditional Custodians. Recognising that First Nations communities do not distinguish environment from culture, Woodside manages environmentally based cultural values by using the environmental management measures outlined in Section 6.7.

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

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Impact assessment
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. For example, activities that impact turtle populations and their marine environment may have an indirect impact on some Indigenous communities, as this can limit access to cultural sites or deplete hunting areas and 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 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). As described above, 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. As such, cultural values and intangible cultural heritage associated with these species are expected to be maintained. ***Concurrent Activities*** As detailed in Section 2.1, there is the potential for concurrent MODU and vessel operations within the Operational Area For concurrent MODU/vessel activities not occurring within proximity of each other, multiple individual (i.e. not overlapping) light exposure areas may occur. However, given the offshore location of the Operational Area (~30 km north of the Montebello Islands) and the seasonal and transitory nature of the presence of marine fauna within the Operational Area, the cumulative impact of multiple light exposure areas is not expected to adversely affect the biological behaviours of marine fauna within the Operational Area to an extent greater than already assessed above. For concurrent MODU/vessel activities occurring within proximity of each other, a slightly larger overall light exposure area may occur for the duration of the activity. For example, if single installation vessel has a ~3.6 km diameter (i.e. 1.8 km radius) biologically relevant light exposure area, then two vessels within ~0.5 km of each other, could create up to a ~4.1 km diameter exposure area. Within the area of overlap light intensity would also be slightly higher (noting that light intensity is inversely proportional to the distance from the source). Concurrent activities within proximity of each other (and therefore the overlapping light exposure areas) would only occur for a short duration. Given the offshore location of the Operational Area (~30 km north of the Montebello Islands) the seasonal and transitory nature of the presence of marine fauna within the Operational Area, and the limited duration of concurrent activities within close proximity, the cumulative impact of slightly larger light exposure areas and/or areas of increased light intensity is not expected to adversely affect the biological behaviours of marine fauna within the Operational Area to an extent greater than already assessed above.
Summary of Potential Impacts to environmental values(s)
Artificial light emissions from the MODU and vessels within the Operational Area is expected to be limited to temporary behavioural disturbance with no lasting effect on marine turtles, seabirds, migratory shorebirds or fish (i.e. Environment Impact – F).

Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)35***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
Legislation, codes and standards				
No additional controls identified				
Good practice				
Lighting will be limited to the minimum required for navigational and safety requirements, with the exception of emergency events.	F. Yes. Lighting is typically appropriate for navigation and safety.	Given the potential impacts to turtles during this activity is insignificant, implementation of this control would not result in a reduction in consequence.	While the control does not result in significant reduction of impacts, it is good practice and not at significant cost.	Yes C 4.1

[35] *Qualitative measure*

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)35***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
Well unloading acceptance criteria that define the well objectives will be established.	F: Yes. CS: Standard practice.	Eliminates unnecessary flared volumes and corresponding emissions (light and GHG).	Benefits outweigh cost/ sacrifice.	Yes C 4.2
Implement a Seabird Management Plan that 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 negative light impacts to nocturnal seabirds be detected	F: Yes. The Seabird Management Plan is an internal Woodside process developed to manage the impacts of artificial light emissions. CS: Minimal cost/ sacrifice.	Implementing a Seabird Management Plan allows for standardised data collection to better understand seabird interactions with project vessels, provide guidance on seabird management for the best outcome for grounded birds and facilitate escalation and adoption of management actions within 24 hrs, preferably before next nightfall, should triggers be met.	While the control does not result in significant reduction of impacts, it is good practice and not at significant cost.	Yes C 4.3
During the EP process, review inputs to the OPP modelling to confirm assumptions continue to be valid for the proposed activity and undertake additional modelling where inputs are no longer considered representative	F: Yes. CS: Minimal cost / sacrifice.	Ensure that light emissions associated with the Petroleum Activity described in this EP does not result in a larger environmental impact than described in the OPP. As per the modelling undertaken in the OPP the specific type of MODU is not known at this stage, therefore the application of a typical MODU, as per modelling undertaken by Pendoley (2022), is still representative and appropriate to support the impact assessment for artificial light emissions.	Benefits outweigh cost/ sacrifice.	Yes No additional modelling was undertaken as modelling from the OPP considered representative.

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)35***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
		The light modelling undertaken for the installation vessel is still considered a conservative estimate, as the modelling is based one of the largest pipeline installation vessels available, at 330 m in length, and the primary installation vessel used for GWF4 will be smaller.		
Apply a 'living heritage[36]' management approach. Woodside seeks advice and incorporates Traditional Custodian cultural knowledges across our activities. Cultural safety considerations are factored for our workforce and the Traditional Custodian community.	F: Yes CS: Minimal	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 2.1
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 2.2
Use of cultural heritage monitors on vessels to oversee implementation of controls protecting cultural values	F: No CS: Not feasible	Primary Installation Vessels are POB constrained with no ability to facilitate additional personnel	Not considered – control not feasible.	No
Project inductions to all relevant marine crew, prior to the individual commencing the	F: Yes CS: Minimal	Ensures workforce is suitably aware of cultural features and heritage values in the	Benefits outweigh cost/sacrifice.	Yes C2.3

[36] 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.

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)35***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
activity, will include information on cultural features and heritage values, including tangible and intangible cultural heritage.		area they are operating.		
Petroleum Activity will be carried out in accordance with protection declarations relevant to the PAA, under Sections 9,10,12 of the ATSIHP Act.	F: Yes CS: Minimal	Meets legislative requirements and community expectations	Benefits outweigh cost/sacrifice.	Yes C2.4
Professional judgement – Eliminate				
Substitute external lighting with ‘‘turtle friendly’’ light sources (reduced emissions in turtle visible spectrum).	F: Yes. Replacement of external lighting with turtle friendly lighting is technically feasible, although it is not considered to be practicable. CS: Significant cost sacrifice. The retrofitting of external lighting on the MODU and vessels, etc., would result in considerable cost and time expenditure. Considerable logistical effort to source sufficient inventory of the range of light types onboard the MODU.	Given the potential impacts to turtles during this activity is insignificant, implementation of this control would not result in a reduction in consequence.	Grossly disproportionate. Implementation of the control requires considerable cost sacrifice and provides minimal environmental benefit. The costs/sacrifices outweigh the benefit gained.	No
Variation of the timing of the Petroleum Activity to avoid peak turtle internesting periods (December to January).	F: Yes CS: Significant cost and schedule impacts due to delays in securing vessels/MODU for specific timeframes.	Not considered – control not feasible.	Not considered, control not feasible.	No
Professional judgement – Substitute				
No additional controls identified				
Professional judgement – Engineered Solution				
No additional controls identified				

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)35***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
ALARP statement: On the basis of the environmental risk assessment outcomes and use of the relevant tools appropriate to the decision type, Woodside considers the adopted controls appropriate to manage the impacts and risks of acoustic light. As no reasonable additional/alternative controls were identified that would further reduce the impacts without grossly disproportionate sacrifice, the impacts and risks are considered ALARP.				

Demonstration of acceptability
Acceptability statement: The impact assessment has determined that, given the adopted controls, routine light emissions from external lighting on the MODU and project vessels will not result in impacts greater than localised and temporary behavioural disturbance to species within the Operational Area, with no lasting effect. BIAs within the Operational Area include the flatback turtle internesting, whale shark foraging, and wedge-tailed shearwater breeding areas. Regard has been given to relevant conservation advice and wildlife conservation plans during the assessment of potential impacts and the NLPG were taken into consideration during the impact evaluation. The Petroleum Activity is not considered to be inconsistent with the overall recovery objectives and actions of these recovery plans and conservation advice (Section 6.9). In addition, the Petroleum Activity is within the acceptable level of impact determined through the Goodwyn Area Infill OPP as the impact consequence level is consistent with the level rated in the OPP and the EPOs and controls from the OPP that are relevant to light emissions have been adopted. The potential impacts are considered broadly acceptable if the adopted controls are implemented. Therefore, Woodside considers the adopted controls appropriate to manage the impacts of light emissions to a level that is broadly acceptable, and compliance with those controls demonstrates that the EPOs are met.

EPOs, EPS and MC			
EPO	***Controls***	***PS***	***MC***
EPO 3c No long-term adverse effects to the values of Australian Marine Parks from the Petroleum Activity EPO 4a No adverse effects greater than a change to behaviour, with no lasting effect to marine fauna from artificial light emissions during the Petroleum Activity. EPO 4b 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.	C 4.1 Lighting will be limited to the minimum required for navigational and safety requirements, with the exception of emergency events.	PS 4.1 Lighting will be limited to that required for safe work/navigation.	MC 4.1.1 Inspection verifies no excessive light being used beyond that required for safe work/ navigation.
	C 4.2 Well unloading acceptance criteria that define the well objectives will be established	PS 4.2 Clear definition of well unloading acceptance criteria	MC 4.2.1 Records demonstrate that well unloading acceptance criteria have been established and are adhered to,
	C 4.3 Implement a Seabird Management Plan that includes: • Standardisation and maintenance of record keeping and reporting of seabird interactions	PS 4.3.1 Implementation of the Woodside Offshore Seabird Management Plan by MODU and the installation vessel to minimise potential impact should nocturnal seabird groundings occur (Section 7.5.1.1).	MC 4.3.1 Records demonstrate the Woodside Offshore Seabird Management Plan is implemented.

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EPOs, EPS and MC			
EPO	***Controls***	***PS***	***MC***
	• 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 negative light impacts to nocturnal seabirds be detected		
EPO 2a No adverse impact to cultural features and heritage values without a permit. EPO 2b Woodside supports ongoing engagement and consultation with Traditional Custodians for the purpose of assessing and avoiding impacts to cultural heritage values.	C 2.1 Refer Section 6.7.1	PS 2.1.1 Refer Section 6.7.1	MC 2.1.1 Refer Section 6.7.1
		PS 2.1.2 Refer Section 6.7.1	MC 2.1.2 Refer Section 6.7.1
	C 2.2. Refer Section 6.7.1	PS 2.2 Refer Section 6.7.1	MC 2.2 Refer Section 6.7.1
	C 2.3 Refer Section 6.7.1	PS 2.3 Refer Section 6.7.1	MC 2.3.1 Refer Section 6.7.1
	C.2.4 Refer Section 6.7.1	PS 2.4 Refer Section 6.7.1	MC 2.4.1 Refer Section 6.7.1

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6.7.4 Routine Acoustic Emissions: Generation of sound emissions from MODU and Project Vessels

Context		
Relevant Activities Project Vessels - Section 3.11 Drilling Activities – Section 3.7 Subsea Installation Activities - Section 3.7.11 Contingent Activities – Section 3.10	***Existing Environment*** Regional Context – Section 4.2 Protected Species – Section 4.6 Socio-economic Environment – Section 4.9	***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
Generation of acoustic signals from project vessels activities (e.g. machinery operation, onboard equipment vibrations etc..)					X	X	A	E	-	-	LCS GP	Broadly Acceptable	EPO 3c, 4, 5
Generation of acoustic signals from DP systems on project vessels					X	X							
Generation of noise from contingency activities					X	X							

Description of source of impact

MODU and Vessel Operations

All activities of the Petroleum Activity (drilling, installation, contingency activities) will be supported by various vessels and/or a MODU. Vessels used for the Petroleum Activity are detailed in Section 3.11, and include a number of DP capable vessels. The sound levels and frequencies generated by vessels varies with the size of the vessel, speed, engine type and the activity being undertaken. Vessels produce low frequency sound (i.e. below 1 kHz) from the operation of machinery, hydrodynamic flow sound around the hull and from propeller cavitation, which is typically the dominant source of sound (Ross, 1987, 1993). These noise sources will contribute to and have the potential to 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 1µPa (rms SPL) under windy conditions (McCauley, 2005).

The vessels and MODU will operate on DP, and therefore will generate underwater sound from using propellors and thrusters, which is expected to be the largest noise source.

Vessels in the 50-100 m size class (e.g. supply ships, crew boats, research vessels) produce broadband source levels in the 165–180 dB re 1 µPa SPL range (Gotz et al., 2009). While in comparison, underwater sound levels generated by large ships can produce levels exceeding 190 dB re 1 µPa (Gotz et al., 2009), and small vessels up to the 20 m size class typically produce sound at source levels of 151 to 156 dB re 1µPa (Richardson et al., 1995). A typical broadband source level for a stationary MODU using DP has been estimated at ~187 dB re 1 µPa while 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; it is expected that similar noise levels will be generated by support and IMR vessels used for this Petroleum Activity.

Sound Transmission Loss Modelling

Woodside commissioned JASCO (JASCO 2025) to undertake sound transmission loss modelling for the GWF4 activities to consider cumulative noise emissions from drilling and subsea installation activities. The scenarios

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Description of source of impact

considered included several permutations of support vessels and the MODU undertaking drilling activities, there are used to inform the typical credible noise propagation scenarios (including concurrent activities).

Additionally, Woodside commissioned JASCO (Muellenmeister, et al, 2023) to undertake sound transmission loss modelling at the Wilcox well location for a construction vessel operating under DP. This provides an indication of noise emissions for when the subsea installation activities occur without concurrent (e.g. MODU) activities.

Source levels representative of drilling and subsea installation scenarios

Source levels for relevant vessels that were used to inform the sound transmission loss modelling are presented in Table 6-5. The source sound levels were applied to the modelling scenarios for drilling and subsea installation activities.

Table 6-5: Vessel source levels used in the acoustic modelling for the Petroleum Activity

Vessel	**Sound** Level (dB re 1 µPa².m².s)
Hybrid MODU on DP	186.7
Hybrid MODU moored	170.6
OSV stationary under DP (resupply scenario)[1]	187.6
Anchor Handling tug	194.1
Installation Vessel under DP	181.0
Large Installation Vessel under DP	193.2

Sound Transmission Loss Modelling Scenarios

The acoustic modelling scenarios used in this assessment are presented in Table 6-6 and Table 6-7.

Table 6-6: Summary of modelled scenarios (JASCO 2025)

Scenario Number	Location	Description
1	Yodel	A MODU drilling under DP at Yodel, being supplied by an OSV, with a second OSV on stand-by in the field and an installation vessel conducting subsea installation ~3km away.
2	Wilcox	A moored MODU drilling at Wilcox, being supplied by an AHT vessel, with a second OSV on stand-by in the field and an installation vessel conducting subsea installation in close proximity (500m away).

Table 6-7: Modelled scenario at Willcox for a construction vessel (source: Muellenmeister, et al, 2023)

Scenario Number	Description
3	Large installation vessel under DP (24 hr)

The acoustic modelling studies assessed distances from operations where underwater sound levels were predicted to drop below thresholds corresponding to behavioural response and injury (temporary reduction in hearing sensitivity or TTS and permanent threshold shift or PTS) for marine fauna. The marine fauna considered included marine mammals, turtles, and fish. Due to the variety of species considered, several different thresholds were used for evaluating effects.

The modelling methodologies considered scenario specific source levels and range-dependent environmental properties. Estimated underwater acoustic levels for non-impulsive (continuous) noise sources presented as sound pressure levels (SPL, Lp), and as accumulated sound exposure levels (SEL, LE) as appropriate for different noise effect criteria, behavioural response and injury (TTS and TPS), respectively. In this report, the duration of the SEL accumulation is defined as integrated over a 24-hour period.

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Description of source of impact
The SEL_{24h} is a cumulative metric that reflects the dosimetric impact of noise levels within 24 hours based on the assumption that an animal is consistently exposed to such noise levels at a fixed position. The corresponding SEL_{24h} radii represent an unlikely worst-case scenario. More realistically, marine mammals (as well as pelagic fish and turtles) would not stay in the same location for 24 hours. Therefore, a reported radius for SEL_{24h} criteria does not mean that marine fauna travelling within this radius of the source will be injured, but rather that an animal could be exposed to the sound level associated with injury (TTS or PTS) if it remained in that location for 24 hours. ***Contingency Activities (Respud, Sidetrack, Intervention, Well Removal)*** Contingency activities include a well respud or sidetrack and well intervention, which will involve the use of a MODU and vessels, plus drilling operations. Any acoustic emissions generated will be the same as those expected from the planned activities described above. In the event a wellhead is removed under this EP scope, additional noise from the cutting of the surface casing and conductors is likely to be generated. Underwater noise associated with cutting (diamond wire) of subsea infrastructure is generally indistinguishable above background noise levels at lower frequencies, primarily detected at noise frequencies above 5 kHz (Pangerc et al., 2016). Quijano and McPherson (2021) estimated the source level of a diamond wire saw cutter at 169 dB re 1 µPa at 1 m. The casings and conductors will be cut below the mudline to enable wellhead recovery using either abrasive water jet cutting method, or mechanical cutting method. ***Helicopters*** Helicopters will likely be used during the Petroleum Activity (Section 3.13). These will generate sound within the atmosphere, which may penetrate into the ocean. Sound emitted from helicopter operations is typically <500 Hz (Richardson et al. 1995). Richardson et al. (1995) report that helicopter sound is audible in air for four minutes before it passed over underwater hydrophones, but detectable underwater for only 38 seconds at 3 m depth and 11 seconds at 18 m depth. Estimates of SPL for helicopters range from 149–162 dB re 1 µPa @ 1 m (Richardson et al. 1995; WDCS 2004). ***Generation of Underwater Noise from Positioning Equipment*** An array of long baseline (LBL) and/or ultra-short baseline (USBL) transponders may be installed on the seabed for metrology and positioning. An array of transponders is proposed within a radius of 500 m from the proposed location of the wells for the duration of the activity. During xmas tree installation activities ultra-short baseline transponders (USBL) may be installed on the seabed or mounted to the wellhead as required by the subsea installation activities. Transmissions from USBL transponders are similar to LBL transponders. Transponders typically emit pulses (impulsive noise) of medium frequency sound, generally within the range 21 to 31 kHz. The estimated SPL would be 180 to 206 dB re 1 µPa at 1 m (Jiménez-Arranz et al., 2017). 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 required for general positioning they will emit one chirp every five seconds (estimated to be required for four hours at a time). When required for precise positioning they will emit one chirp every second (estimated to be required for two hours at a time). An array of transponders will be active whilst a DP MODU is on location. ***Rig Anchor Release system*** A hybrid MODU ustilises Rig Anchor Release (RAR) moorings which are installed to allow the DP capable rig to rapidly disengage from a mooring system. An RAR device will couple each of the moorings to the MODU (8 – 12 devices depending on mooring spread). RAR devices typically emit pulses (impulsive noise) of low frequency, in the range of 9-11 kHz. Transmissions are expected to be limited to short pulses with a duration of minutes, during weekly testing. When activated to release moorings, they are expected to emit pulses of ~two minutes duration for each RAR. ***Suction Piling*** Suction piling may be required as a contingent activity for mooring installation. Unlike driven piles, suction piles greatly reduce noise generation, which is expected to be similar to continuous operational noise of a MODU when not actively drilling due to the noise only being generated from high rate pumps on the ROV conducting the suction piling. ROVs may also be used for other operations during the petroleum activity (e.g. localised sediment removal around infrastructure and cleaning of infrastructure) resulting in lower levels of noise emissions, which are also temporary in nature. ***Concurrent Activities*** During routine drilling operations, a MODU, two support vessels (one standby vessel, and another resupply vessel) and the installation vessel may be present in-field. The vessel undertaking resupply is only present for a short duration (e.g. ~8 hours) and intermittent (e.g. 1–2 times per week, depending on the frequency of resupply required). Non-routine combinations of project vessels together with a MODU may occur in the Operational Area concurrently for relatively short durations from time to time. The underwater sound emissions from these concurrent activities are described below. The indicative schedule for the Petroleum Activity may have drilling and subsea installation activities occurring concurrently (Section 3.7.11). When there is MODU mooring connection/disconnection, both drilling and subsea

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Description of source of impact
installation activities occurring within the Operational Area, the MODU (and support vessels) may not always be in close proximity to the installation vessel (i.e. the ensonified areas from sound emissions from the vessels would not overlap), or where they are in close proximity, the activity overlap would only occur for a short duration. For example, during connection/disconnection of MODU moorings an additional support vessel may be required, or if an installation vessel (rather than the MODU) was used to install the Xmas tree, these concurrent mooring, drilling and installation activities are expected to take ~2–3 days where vessels may be in close proximity of each other. Underwater sound emissions from the adjacent MODU and project vessels would result in a slightly greater overall spatial area being ensonified, as well as cumulative emissions in the area of overlap.

Impact assessment
Environmental value(s) potentially impacted
Receptors The Operational Area is located in water depths of approximately 74 – 150 m with depths decreasing to <40m surrounding the unnamed (refer to Section 3.3, Section 4.5.1). Anthropogenic noise interference is a key threat to a number of migratory and threatened cetaceans, marine turtles and whale sharks identified as potentially occurring within the Operational Area, including the pygmy blue whale. Relevant actions included in recovery plans for these species are outlined in Section 6. One marine protected area is located within the area where noise is expected to be above thresholds for behavioural impact and TTS impact to low-frequency cetaceans, this is the Montebello AMP. No other marine protected areas are expected to overlap areas where impact thresholds would be exceeded. ***Potential Impact of Noise*** Elevated underwater noise can affect marine fauna, including cetaceans, marine turtles, fish, 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 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); and • 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. ***Sound Propagation*** Increasing the distance from the noise source results in the level of noise reducing, due primarily to the spreading of the sound energy with distance. The way that the noise spreads (geometrical divergence) will depend upon several factors such as water column depth, pressure, temperature gradients, and salinity, as well as surface and bottom conditions. ***Cetaceans*** <u>Species Sensitivity and Thresholds</u> Marine mammals and especially cetaceans rely on sound for important life functions including individual recognition, socialising, detecting predators and prey, navigation and reproduction (Weilgart, 2007; Erbe et al., 2015; Erbe et al., 2018). Underwater noise can affect marine mammals in various ways including interfering with communication (masking), behavioural changes, a shift in the hearing threshold (PTS and TTS) and physical damage and stress (Erbe, 2012; Rolland et al., 2012). The thresholds that could result in a behavioural response, TTS and PTS for cetaceans as a result of continuous and impulsive noise sources are presented in Table 6-8. These thresholds have been adopted by the United States National Oceanic and Atmospheric Administration (NOAA) (National Marine Fisheries Service [NMFS], 2014, 2018; Southall et al., 2019; NOAA, 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. The Muellenmeister et al. (2023) study was undertaken prior to the NOAA (2024) revised thresholds being published. The revised thresholds related to changes for low-frequency (LF) and high-frequency (HF) cetaceans, PTS (auditory injury) and TTS onset thresholds, while behavioural response thresholds remaining the same.

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Impact assessment

Table 6-8: Thresholds for PTS, TTS and behavioural response onset for low-frequency (LF),high-frequency (HF) and very high frequency (VHF) cetaceans for continuous noise.[37]

Hearing group	Continuous		
	PTS onset thresholds: SEL_{24h} (dB re 1 µPa².s)	TTS onset thresholds: SEL_{24h} (dB re 1 µPa².s)	Behavioural response (dB re 1 µPa)
LF cetaceans	197	177	120
HF cetaceans	201	181	120
VHF cetaceans	181	161	120

Source: NOAA 2024

Predicted Underwater Noise Impacts to Cetaceans

Results – Modelling of MODU and Project Vessels

A sound transmission loss modelling study was conducted by JASCO for representative scenarios (JASCO, 2025). 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 activities at Yodel and 0.68 km and 5.17 km, respectively, for activities at Wilcox (Table 6-9). 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 (Table 6-9).

These scenarios are representative of concurrent activities with the MODU, support vessels and subsea installation activities (see Table 6-6).

As described above, the 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. It is not expected that individual LF and HF cetaceans that may pass through the Operational Area during these would experience PTS or TTS, given individuals would need to remain within 680 m (PTS) and 5.17 km (TTS) for a period of 24 hours. Similarly, it is highly unlikely that any VHF cetaceans would experience PTS or TTS.

The study indicates that the behavioural response threshold for cetaceans may be exceeded to a distance of 14.9 km (Table 6-9).

Table 6-9: Modelled horizontal distances (R_{max}) from Yodel and Wilcox drill locations

Hearing group	Scenario 1 – Yodel	Scenario 2 - Wilcox
	R_{max} (km)	
PTS		
Low-Frequency (LF) cetaceans	0.17	0.68
High-frequency (HF) cetaceans	0.04	0.06
Very High- frequency (VHF) cetaceans	0.10	0.06
Marine Turtles	0.14	0.16
TTS		
Low-Frequency (LF) cetaceans	4.33	5.17
High-frequency (HF) cetaceans	0.50	0.69
Very High- frequency (VHF) cetaceans	1.49	1.24
Marine Turtles	3.89	2.91
Behavioural response		
Cetaceans	14.9	11.5

Source: JASCO, 2025

Results – Modelling of a Construction Vessel under DP at Wilcox

The sound transmission loss modelling study by JASCO for an installation vessel under DP (Muellenmeister, et al, 2023) is a conservative application as the noise levels from the planned installation vessel are substantially quieter

37

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Impact assessment

than from the large installation vessel (Table 6-5). The modelling indicated that the PTS and TTS thresholds for low frequency (LF) cetaceans may be exceeded out to a maximum of 0.17 km and 3.89 km, respectively (Table 6-10). For HF cetaceans, PTS threshold was not exceeded and TTS thresholds was exceeded at 0.09 km, while for VHF cetaceans, PTS and TTS thresholds were exceed at maximum distances of 0.1 km and 1.19 km respectively

As described above, the radii that represent potential for PTS and TTS onset are based on a 24 hour period of exposure and therefore represent an unlikely worst-case scenario since, more realistically, cetaceans would not stay in the same location or at the same range for 24-hours. It is not expected that individual LF, HF and VHF cetaceans that may pass through the Operational Area during subsea installation, would experience PTS, given individuals would need to remain within 170 m of the drilling activity for a period of 24 hours. TTS onset is also considered highly unlikely given the known movement behaviour of cetaceans including key migrating LF whale species such as the pygmy blue whale and humpback whale transiting through the Operational Area The Operational Area is not known to represent significant foraging/aggregation habitat for cetaceans and individuals are not expected to linger within the Operational Area for extended periods.

Note that the modelling results in Muellenmeister et al. (2023) used thresholds from NOAA (2018), with PTS and TTS thresholds for HF and VHF cetaceans being revised. The new thresholds for LF cetaceans predict TTS onset at 177 dB re 1 µPa².s, previously this value was 179 dB re 1 µPa².s. The distance from source to TTS/PTS SEL24h noise effect criteria for the updated thresholds cannot be extrapolated from the acoustic modelling however it can be assumed to marginally increase. This means that there is a greater area over which LF cetaceans could be exposed to PTS/TTS associated with continuous noise emissions. However, it continues to remain unlikely that cetaceans will spend 24hrs in close proximity to noise generating activities within the Operational Area, as any cetacean activity in the Operational Area, or vicinity, would be migratory in nature therefore the conclusion of the impact assessment conducted based on results of the original modelling remain valid for all scenarios

The study indicates that the behavioural response threshold for cetaceans may be exceeded to a distance of 10.4 km Table 6-10).

Table 6-10: Modelled horizontal distances (R_{max}) from the construction vessel to reach noise effect criteria for cetaceans and marine turtles for continuous sound

Hearing group	Scenario 3
	R_{max} (km)
PTS	
Low-Frequency (LF) cetaceans	0.17
High-frequency (HF) cetaceans	0-
Very High- frequency (VHF) cetaceans	0.10
Marine Turtles	-
TTS	
Low-Frequency (LF) cetaceans	3.89
High-frequency (HF) cetaceans	0.09
Very High- frequency (VHF) cetaceans	1.19
Marine Turtles	0.13
Behavioural	
Cetaceans	10.4

Source: Muellenmeister, et al, 2023

Impact Assessment – Behavioural

Acoustic modelling indicated that the R_{max} from the source to SPL noise effect criteria for all marine mammals was predicted to be 14.9 km during drilling and subsea installation activities (or conservatively 10.4 km during installation activities only).

As identified in Section 4.6.3, several marine mammal species listed as either threatened and/or migratory under the EPBC Act have the potential to occur within the Operational Area The threatened and/or migratory cetaceans that may be present within the Operational Area are low-frequency and high-frequency cetaceans. Very-high-frequency cetaceans (e.g. *Kogia* spp.) were identified as species or species habitat that may occur within the Operational Area but are not listed as threatened and/or migratory under the EPBC Act (Section 4.6.3).

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Impact assessment

- the pygmy blue whale migration BIA is ~25 km (at its closest) from the Operational Area and therefore the predicted ensonified area is not expected to extend into the pygmy blue whale BIA
- the humpback whale migration BIA is ~15 km (at its closest) from the Operational Area and the predicted ensonified area (at its closest ~11.5 km) is not expected to extend into the BIA

All cetacean species (for all hearing groups) transit through the area; however no areas of known aggregation within or around the ensonified area have been identified. Migrating pygmy blue whales are likely to occur in the Exmouth to Montebello Islands region from April to August (northern migration) and November to December (southern migration); humpback whales are typically present from June to October. Opportunistic cetacean sighting data from Woodside's facilities on the NWS indicate that humpback whales are the most commonly observed cetacean species.

Marine mammal presence within the Operational Area are not expected to comprise significant numbers because no known aggregation areas occur there, and their presence would be seasonal, transitory, and of a short duration. There are no constraints (e.g. shallow embayments or shorelines) that prevent marine mammals from moving away from MODUs or vessels, including within the BIAs. Because continuous sound emissions will only occur during specific activities (e.g. drilling and installation) they are not a continual or prolonged sound, and no significant change to marine mammal behaviours is expected within the Operational Area or BIAs.

Transponders used for positioning have the potential to cause some temporary behavioural disturbance to cetaceans; however, noise levels will be well below injury thresholds. Based on empirical spreading loss estimates measured by Warner and McCrodan (2011), received levels from USBL transponders are expected to exceed the cetacean behavioural response threshold for impulsive sources out to about 42 m. Given the short-duration chirps and the mid frequencies used by positioning equipment, the acoustic noise from a single transponder is unlikely to have any substantial effect on the behavioural patterns of marine fauna. Therefore, potential impacts from transponder noise are likely to be restricted to temporary and localised avoidance behaviour of individuals transiting through the Operational Area, and therefore are considered localised with no lasting effect.

Therefore, sound emissions within the Operational Area are not expected to result in a consequence greater than temporary changes in behaviour to individuals or a small proportion of the population.

Impact Assessment – Auditory impairment (TTS) or injury (PTS)

LF cetaceans

Acoustic modelling indicated that the R_{max} from the source to TTS and PTS SEL_{24h} noise effect criteria during concurrent activities for low-frequency cetaceans was 4.33-5.17 km and 0.17-0.68 km respectively (Table 6-9).

As identified in Section 4.6.3, several marine mammal species listed as either threatened and/or migratory under the EPBC Act have the potential to occur within the Operational Area No BIAs for regionally significant marine mammals intersect with the Operational Area, however, two migration BIAs occur nearby—humpback whale (south) and pygmy blue whale (north-west). The pygmy blue whale migration BIA is ~25 km (at its closest) from the Operational Area; exposure of this BIA to continuous sound emissions at levels associated with TTS or PTS is not predicted to occur during drilling or installation activities. Similarly, the humpback whale migration BIA is ~15 km (at its closest); exposure of this BIA to continuous sound emissions at levels associated with TTS or PTS is not predicted to occur during drilling or installation activities.

Marine Turtles

Species Sensitivity and Thresholds

There is a paucity of data regarding responses of marine turtles to underwater noise. However, turtles have been shown to respond to low frequency sound, with indications that they have the highest hearing sensitivity in the frequency range 100–700 Hz (Bartol and Musick, 2003). Lenhardt (1994) observed marine turtles avoiding low-frequency sound.

Acute noise, or temporary exposure to loud noise, may result in the avoidance of important habitats and in some situations physical damage to marine turtles. The thresholds that could result in a behavioural response, TTS and PTS for marine turtles as a result of continuous and impulsive noise sources are presented in Table 6-11. These thresholds are based on best data available and published in peer- reviewed literature and represent conservative internationally accepted and applied impact evaluation thresholds (Accomando etl al 2025). No numerical thresholds have been developed for behavioural impacts of continuous sources (e.g. vessel noise) on marine turtles. A Popper et al. (2014) review assessed thresholds for marine turtles and found qualitative results that the risk of behavioural disturbance was high for near field exposure, moderate for intermediate exposure and low for far field exposure (Popper et al., 2014).

Sound exposure thresholds and criteria for continuous sound sources applicable to marine turtles are summarised in Table 6-11.

Table 6-11: Thresholds for PTS, TTS and behavioural response onset for marine turtles for continuous noise

Hearing group	Continuous

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	PTS onset thresholds: SEL_{24h} (dB re 1 µPa².s)	TTS onset thresholds: SEL_{24h} (dB re 1 µPa².s)	Behavioural response (dB re 1 µPa)#
Marine Turtles	178	198	(N) High (I) Moderate (F) Low

Source: PTS and TTS thresholds (Accomando et al., 2025), # behavioural response threshold (continuous) (Popper et al. 2014),

Note: The sound units provided in the table above for continuous noise include: relative risk (high, medium and low) is given 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).

Impact Assessment

The Recovery Plan for Marine Turtles (Commonwealth of Australia, 2017) notes there is limited information available on the impact of noise on marine turtles and that the impact of noise on turtle stocks may vary depending on whether exposure is short (acute) or long-term (chronic). However, given the thresholds outlined in Table 6-11, it is reasonable to expect that marine turtles may demonstrate avoidance or attraction behaviour to the noise generated by the Petroleum Activity. Sound transmission loss 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.

Given the offshore distance from shore, the Operational Area does not represent suitable internesting habitat. The Operational Area overlaps a flatback turtle internesting Habitat Critical, which is also designated a BIA. However, it is noted that the defined BIA and Habitat Critical are considered very conservative as they are based on the maximum range of internesting females rather than direct studies that show marine turtles are more likely to remain near their nesting beaches. For example, tracking studies at Barrow and Thevenard islands suggest internesting flatback turtles remain in shallow water, close (< 3 km) to nesting beaches (Whittock et al., 2014). There is no available data to indicate flatback turtles swim out into deep offshore waters during the internesting period. Hence it is considered highly unlikely that the Operational Area is utilised by internesting flatback turtles.

Marine turtle presence in general is expected to be infrequent, and potential impacts from predicted noise levels from the project vessels (including MODU and support vessels) are expected to be short-term, intermittent and localised, if they occur and are not considered to be ecologically significant at a population level.

Fish, Sharks and Rays

Species Sensitivity and Thresholds

Fish perceive sound through the ears and the lateral line, which are sensitive to vibration. Some species of teleost or bony fish (e.g. herring) have a structure linking the gas-filled swim bladder and ear, and these species usually have increased hearing sensitivity. These species are considered to be more sensitive to anthropogenic underwater noise sources than species such as cod (Gadus sp.), which do not possess a structure linking the swim bladder and inner ear. Fish species that either do not have a swim bladder (e.g. elasmobranchs (sharks and rays) and scombrid fish (mackerel and tunas)) or have a much-reduced swim bladder (e.g. flat fish) tend to have a relatively low auditory sensitivity.

Considering these differences in fish physiology, Popper et al. (2014) developed sound exposure guidelines for fish; these are presented in Table 6-12 and are considered appropriate to assess continuous acoustic discharges to fish from the Petroleum Activity.

Table 6-12: Impact thresholds to fish, sharks and rays for continuous noise.

Hearing Group	Mortality and potential mortal injury	PTS	TTS	Masking	Behaviour
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 involving hearing	(N) Low (I) Low (F) Low	170 dB rms SPL for 48- hours	158 dB rms SPL for 12- hours	(N) High (I) High (F) High	(N) High (I) Moderate (F) Low

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Impact assessment					
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 the table above include relative risk (high, medium and low) is given 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) (after Popper et al. 2014).

Impact Assessment

Given the thresholds outlined in Table 6-12 it is reasonable to expect that fish, sharks and rays may demonstrate avoidance or attraction behaviour to the noise generated by the Petroleum Activity. However, potential impacts from predicted noise levels from the project vessels (including MODU and support vessels) are not considered to be ecologically significant at a population level.

Maximum-over-depth horizontal distances to PTS and TTS thresholds for fish with a swim bladder involved in hearing as a result of underwater noise from a support vessel are approximately 40 and 80 m, respectively, from the source based on modelling (Warner et al. 2026). For fish with a swim bladder not involved in hearing, and fish without a swim bladder (including whale sharks) the likelihood of PTS or TTS is low. It is expected that potential impact to demersal and pelagic fish and sharks/rays will be limited to a behavioural response. Behavioural responses are expected to be short-lived, with duration of effect less than or equal to the duration of exposure.

Whale sharks do frequent the wider NWS outside their seasonal aggregation period (peak: April and May) within the high density prey foraging BIA at Ningaloo. The Operational Area overlaps a foraging BIA for whale sharks (Section 4.6.1.1), however it is over 250 km from the Ningaloo high density prey foraging BIA and therefore whale shark encounters are likely to be limited to individuals. Acoustic detections of tagged whale sharks at the North Rankin A and Goodwyn A platforms during two periods—June to July and October to January were recorded (Thomson et al. 2021) and supported anecdotal evidence of whale shark presence on NWS. Behavioural disturbance to whale sharks as a result of vessel noise may result in a temporary deviation on their migration route, however given the wide bounds of the route and its open nature, this should not result in altered movement patterns outside of the norm.

Given the thresholds outlined in Table 6 12, it is reasonable to expect that fish, sharks and rays may demonstrate avoidance or attraction behaviour to the noise generated by the Petroleum Activity. However, potential impacts from predicted noise levels from the project vessels (including MODU and support vessels) are not considered to be ecologically significant at a population level.

Rankin Bank and Wilcox shoal are known to support diverse fish assemblages (Section 4.5.1). While the Unnamed shoal does occur within the Operational Area; given the bathymetry of this shoal and its known benthic communities, it is expected to also support site attached fish communities. Noting the location of subsea infrastructure is off the shoals (where water depths are shallower) and because the risk of behavioural changes is expected to occur up to hundreds (not thousands) of metres from the sound source, the site-attached fish assemblages at these features are not predicted to be exposed.

Marine Protected Areas

Sound modelling showed that acoustic emissions from the Petroleum Activity could be above impact thresholds as far as 14.9 km from the source. Within 14.9 km of the noise source there is one marine protected area, the Montebello AMP. The values of the Montebello AMP are listed in the North-west Marine Parks Management Plan and those that are relevant to impacts from acoustic emissions are:

- Natural Values:
  - Humpback whale migration BIA
  - internesting, foraging, mating and nesting for marine turtle (flatback turtles)
  - whale shark foraging BIA
  - diverse fish communities.
- Cultural Values
  - none specifically relevant to acoustic emissions, beyond cultural values associated with the species listed under “Natural Values”.
- Heritage Values
  - None specifically relevant to acoustic emissions.
- Social and Economic Values
  - - None specifically relevant to light emissions.

Each of the relevant natural values of the Montebello AMP have been assessed in the sections above. For the reasons outlined above, it is expected that there will be localised impacts with no lasting effects on cetaceans from the Petroleum Activity and therefore the Petroleum Activity is not inconsistent with the values of the Montebello AMP

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Impact assessment
Cultural Values and Heritage Through consultation and review of available literature (Section 4.9.1), Woodside understands that marine fauna that may be affected by noise emissions, such as marine mammals and turtles, are culturally important to Traditional Custodians. 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 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. For example, activities that impact turtle populations and their marine environment may have an indirect impact on some Indigenous communities if they deplete hunting areas and threaten local food security (Delisle, et al., 2018). Whale species are subject of First Nations' increase ceremonies/rituals which are performed to enhance or maintain populations. As these Thalu ceremonies are performed to maintain and increase populations of marine species, it is considered that management applies at the species/population level and not to individuals. For example, it is anticipated 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. 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. Inter-generational transmission of cultural knowledge (including songlines) relating to marine reptiles may be impacted where changes 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. As described, 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 ecologically 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 these species are expected to be maintained.
Summary of Potential Impacts to environmental values(s)
Given the adopted controls, it is considered that continuous noise emissions is unlikely to result in an impact greater temporary changes in marine fauna behaviour with no lasting effect (F).

Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)38***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
Legislation, codes and standards				
EPBC Regulations 2000 – Part 8 Division 8.1 Interacting with cetaceans, including the following measures[35:] • Project vessels will not travel greater than 6 knots within 300 m of a cetacean (caution zone) and not approach closer than 100 m from a whale. • Project vessels will not approach closer than 50 m for a dolphin and/or 100 m for a whale (with	F: Yes. CS: Minimal cost. Standard practice.	Implementation of controls for reduced vessel speed around cetaceans can potentially reduce the underwater noise footprint of a vessel and lower the likelihood of interaction above significant thresholds	Controls based on legislative requirements – must be adopted.	Yes C 5.1

[38] *Qualitative measure*

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)38***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
the exception of animals bow riding). • If the cetacean shows signs of being disturbed, project vessels will immediately withdraw from the caution zone at a constant speed of less than 6 knots.				
Good practice				
Project vessels will not travel greater than 6 knots within 300m 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 of controls for reduced vessel speed around cetaceans can potentially reduce the underwater noise footprint of a vessel and lower the likelihood of interaction above significant thresholds	Benefits outweigh cost/ sacrifice.	Yes C 5.2
Project vessels will not travel greater than 6 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.	Implementation of controls for reduced vessel speed around cetaceans can potentially reduce the underwater noise footprint of a vessel and lower the likelihood of interaction above significant thresholds	Benefits outweigh cost/ sacrifice.	Yes C 5.3
Implement adaptive management procedure during the pygmy blue whale southbound migration period.	F: Yes. CS: Time/ Cost associated with person used for observations. Schedule delays associated with waiting on pygmy blue whale activity to cease/ move on.	Implementation of adaptive management where pygmy blue whales (or large unidentified whales) are observed means a new noise source (vessel) is not introduced while pygmy blue whales are sighted. Restricting the introduction of new noise sources when pygmy blue whale presence is detected could lower likelihood of disturbance to pygmy blue whales so as to not be inconsistent with the Blue Whale Conservation Management Plan.	Benefits outweigh cost/ sacrifice.	Yes C 5.4

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)38***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
During the EP stage, review the acoustic modelling included in the Goodwyn Area Infill Development OPP, to confirm the assumptions continue to be valid and the outputs are appropriate to inform management actions, relative to the nature and scale of the potential impacts	F: Yes. CS: Minimal cost / sacrifice.	Ensure that continuous noise emissions associated with the Petroleum Activity described in this EP does not result in a larger environmental impact than described in the OPP	Benefits outweigh cost/ sacrifice.	Yes Additional modelling was undertaken and is presented in this EP
Use of additional detection controls (e.g., drones for aerial observations, Passive Acoustic Monitoring for use at night, thermal imaging for use at night) to Identify cetacean presence.	F: Yes CS: Time / cost associated with additional personnel and technology onboard vessels. Due to Operational Area distance offshore actual observation times are limited by fuel availability - larger fuel capacity associated with larger aircraft increases cost of the exercise	May increase likelihood of detection of whales, particularly during periods of poor visibility. Additional detection technologies can be degraded by metocean conditions (e.g., sea state). Additional detection methods would not result in a reduction in the potential consequence level. However the Operational Area and the predicted ensonified area does not extend into any cetacean BIA and therefore it is expected that the presence of ceteceans would be limited reducing the requirements for detection.	Disproportionate. The cost/ sacrifice outweighs the benefit gained. Adequate observations are able to be made from the MODU bridge due to the height and surveillance by trained crew and expected frequency of cetaceans in the Operational Area It is not expected that additional technologies would add significantly more value than this to warrant deployment.	No
The use of dedicated Marine Fauna Observers (MFOs) on project 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.	F: Yes. However, support vessel bridge crews already maintain a constant watch during operations. CS: Additional cost of MFOs.	Given that support vessel bridge crews already maintain a constant watch during operations and trained crew as MFOs will monitor for pygmy blue whale presence prior to resupply/support vessel moves alongside the MODU and PIV, additional MFOs would not further reduce the likelihood of an individual being within close proximity of the acoustic source during introduction of sounds	Disproportionate. The cost/sacrifice outweighs the benefit gained.	No

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)38***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
		related to DP or during operations.		
Professional judgement – Eliminate				
Remove support vessel on standby at the Petroleum Activity location.	F: No. Activity support vessel required as per MODU Safety Case, particularly for maintaining the 500 m safety exclusion zone around the MODU and relevant vessels. CS: Introduces unacceptable safety risk.	Not considered – control not feasible.	Not considered – control not feasible.	No
Eliminate generation of noise from the MODU, installation vessel, support vessels or positioning equipment.	F: No. The generation of noise from these sources cannot be eliminated due to operating requirements. Note that vessels operating 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

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)38***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
Use professional MFOs in lieu of trained crew to observe for pygmy blue whales.	F: Yes CS: The cost of implementing dedicated MFOs during vessel activities would be tens of thousands of dollars and expose additional personnel to the health and safety risks of working at sea. The cost is grossly disproportionate to the environmental benefit.	The environmental benefit of having dedicated professional MFOs is a potential increase in the likelihood of detecting pygmy blue whales at the species level, which then permits actions to maintain separation as per the adaptive management procedure. Trained crew will watch for marine fauna during the Petroleum Activity. Trained crew will implement adaptive management measures if a pygmy blue whale or large unidentified whale is observed. Therefore whilst there is an increased likelihood for professional MFO's to detect pygmy blue whales from other large whale species, the ability to identify marine fauna in comparison with trained crew is negligible.	Disproportionate. The cost/ sacrifice outweighs the benefit gained.	No
Professional judgement – Substitute				
Management of vessel noise by varying the timing of the Petroleum Activity to avoid migration periods.	F: Yes. Migration periods for cetaceans that may occur in the Operational Area (pygmy blue and humpback whales) are well known. CS: Significant cost and schedule impacts if activities avoid specific timeframes	Avoiding migration periods would reduce the likelihood of impacts to cetaceans. However, given that the predicted impacts from noise sources associated with the Petroleum Activity are considered to be localised with no lasting effect, the overall benefit is minimal.	Disproportionate. The cost/sacrifice outweighs the benefit gained.	No
Professional judgement – Engineered Solution				
No additional controls identified				
ALARP statement: On the basis of the environmental risk assessment outcomes and use of the relevant tools appropriate to the decision type, Woodside considers the adopted controls appropriate to manage the impacts and risks of continuous noise emissions. As no reasonable additional/alternative controls were identified that would further reduce the impacts without grossly disproportionate sacrifice, the impacts and risks are considered ALARP.				

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Demonstration of acceptability
Acceptability statement: The impact assessment has determined that the generation of noise from the MODU, project vessels and positioning equipment is unlikely to result in an impact greater than no lasting effect. Relevant recovery plans and conservation advice have been considered during the impact assessment. The Conservation Management Plan for the Blue Whale (Commonwealth of Australia 2015a) Interim Recovery Objective is that 'Anthropogenic threats are demonstrably minimised' with the following Action Area A.2.3: "Anthropogenic noise in biologically important areas will be managed such that any blue whale continues to utilise the area without injury, and is not displaced from a foraging area". While the Operational Area is close to the PBW migration BIA, modelling predicted that the ensonified area is not expected to extend into the BIA (Warner et al 2026). In addition, with the adoption of adaptive management controls (C 5.4), the activity will be managed to prevent unacceptable impacts of underwater anthropogenic noise on pygmy blue whales such that they will not be prevented from displaying biologically important behaviours and is therefore not inconsistent with the Interim Recovery Objective. In addition, the Petroleum Activity is within the acceptable level of impact determined through the Goodwyn Area Infill Development OPP as the impact consequence level is consistent with the level rated in the OPP and the EPOs and controls from the OPP that are relevant to acoustic emissionshave been adopted. The potential impacts are considered broadly acceptable if the adopted controls are implemented. Therefore, Woodside considers the adopted controls appropriate to manage the impacts of continuous noise emissions to a level that is broadly acceptable, and compliance with those controls demonstrates that the EPOs are met.

EPOs, EPS and MC			
EPO	***Controls***	***PS***	***MC***
EPO 3c No long-term adverse effects to the values of Australian Marine Parks from the Petroleum Activity EPO 5 Planned noise generating activities are managed in such a manner to prevent auditory injury[39] and TTS	C 5.1 EPBC Regulations 2000 – Part 8 Division 8.1 Interacting with cetaceans, including the following measures: • Project vessels will not deliberately approach greater than 6 knots within 300 m of a cetacean (caution zone) and not deliberately approach closer than 100 m from a whale. • Project vessels will not deliberately approach closer than 50 m for a dolphin and/or 100 m for a whale (with the exception of animals bow riding). • If the cetacean shows signs of being disturbed, project vessels will immediately withdraw from the caution zone at a constant speed of less than 6 knots.	PS 5.1 Compliance with EPBC Regulations 2000 – Part 8 Division 8.1 (Regulation 8.05 and 8.06) Interacting with cetaceans	MS 5.1.1 Records demonstrate no breaches with EPBC Regulations 2000 – Part 8 Division 8.1 Interacting with cetaceans
			MS 5.1.1 Induction materials include relevant marine fauna caution and no approach zone requirements
	C 5.2	PS 5.2	MC 5.2.1

[39] *Previously PTS in Southall et al. (2019)*

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EPOs, EPS and MC			
EPO	***Controls***	***PS***	***MC***
	Project vessels will not travel greater than 6 knots within 300m 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.	When within 300m of a turtle, vessels will not travel greater than 6 knots	Records demonstrate actions taken (including recording speed) when a turtle is sighted
	C 5.3 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 5.3 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 5.3.1 Records demonstrate actions taken (including recording speed) when whale shark is sighted
	C 5.4 Implement adaptive management procedure during the pygmy blue whale southbound migration period.	PS 5.4 Implement adaptive management procedures for pygmy blue whales, during the southbound migration, during daylight hours (Section 7.5.1.2)	MC 5.4.1 Records demonstrate crew acting as marine fauna observers receive suitable training in detecting marine fauna, including cetaceans, whale sharks and turtles.
			MC 5.4.2 Records demonstrate trained crew on watch 30 minutes prior to resupply vessel moves alongside the MODU and/or PIV.
			MC 5.4.3 Records demonstrate when pygmy blue whale, or large unidentified whale are present, resupply activities moves have not commenced.

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6.7.5 Routine Emissions: Atmospheric and GHG emissions

Context		
Relevant Activities Project Vessels - Section 3.11 Drilling Activities – Section 3.7 Subsea Installation Activities – Section 3.7.11 Contingent Activities – Section 3.10	***Existing*** Environment Socio-economic Environment – Section 4.9	***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
Exhaust emissions from internal combustion engines and incinerators on project vessels and helicopters			X				A	F	-	-	LCS GP PJ	Broadly Acceptable	EPO 6a
Flaring (well test non-routine) during well unloading for pressure test and clean up			X										
Contingent venting of gas during drilling (e.g. well kick)			X										

Description of source of impact

Atmospheric emissions assessed in this Environment Plan (EP) are classified as either atmospheric pollutants (non-greenhouse gas emissions) or greenhouse gas (GHG) emissions.

- Atmospheric pollutants are gases and particulates emitted from activities or equipment that may adversely affect human health and/or flora and fauna. Key pollutants associated with the Petroleum Activity include carbon monoxide (CO), oxides of nitrogen (NO_x), sulphur oxides (SO_x), particulate matter less than 10 microns (PM_{10}), non-methane volatile organic compounds (VOCs), and BTEX compounds (benzene, toluene, ethylbenzene and xylenes).
- GHG emissions are atmospheric gases that absorb long-wave radiation and contribute to the greenhouse effect. The primary GHGs relevant to the Petroleum Activity are carbon dioxide (CO_2), methane (CH_4) and nitrous oxide (N_2O). Other greenhouse gases, including perfluorocarbons (PFCs), hydrofluorocarbons (HFCs) and sulphur hexafluoride (SF_6), may be emitted in trace quantities and are not expected to be material contributors.

MODU, Vessel and Helicopter Operations

Atmospheric emissions will be generated during the Petroleum Activity from the operation of MODUs, project vessels and helicopters. Emission sources include internal combustion engines (including propulsion, generators and auxiliary equipment) and onboard incineration systems associated with routine operations.

Atmospheric pollutants emitted during these activities are expected to include NO_x, SO_x, particulate matter and VOCs. Emission profiles are influenced by fuel type and sulphur content, with marine gas oil (MGO) typically producing lower SO_x and particulate emissions than marine diesel oil (MDO) or heavy fuel oil (HFO).

Total GHG emissions associated with MODU, vessel and helicopter operations for the Petroleum Activity are estimated to be approximately 126,900t CO_2-e.

A hybrid MODU may be utilised for the drilling campaign, which would reduce fuel consumption associated with station keeping where the MODU is primarily moored. However, dynamic positioning (DP) may be required due to water depth

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Description of source of impact

or adverse weather conditions. Other project vessels (e.g. pipelay, installation and intervention vessels) will utilise DP during installation or intervention activities.

Based on fuel consumption data from the DPS-1 MODU used during previous Woodside drilling campaigns, and the anticipated activity duration including mobilisation, a DP MODU is estimated to consume approximately 44 t/day of fuel. Over an estimated 90 days per well, total fuel consumption for MODU activities is expected to be up to 20,000 tonnes. This DP-based estimate is conservative and intended to bound potential emissions for impact assessment purposes. Actual emissions would be lower if a hybrid or moored MODU is used.

Based on fuel consumption data from comparable DP construction and intervention vessels used during previous Woodside offshore campaigns, the Installation Vessel is expected to operate for approximately 154 days, with total fuel consumption of up to 11,550 tonnes. The IMR vessel is expected to operate for approximately 35 days, with total fuel consumption of up to 525 tonnes, while a dedicated intervention vessel may be utilised for contingent activities for approximately 21 days, with total fuel consumption of up to 630 tonnes.

Support vessels and helicopters will also be required; however, their emissions are expected to be substantially lower than those generated by the MODU and primary installation vessels. Estimated fuel consumption for support vessels is up to 2,250 t for drilling activities, 3,850 t for subsea installation activities, and approximately 210 t for a contingent well intervention activity. Helicopter operations may consume up to 0.6 m³ of aviation fuel per hour, with multiple flights conservatively accounted for in the GHG estimates.

Well Kick, Flaring and Venting

Total GHG emissions associated with potential well kick events and MODU flaring and venting are estimated to be approximately 31,600 t CO_2-e.

During drilling or contingent well intervention activities, a well kick may occur, defined as an unplanned influx of formation fluids into the wellbore. During well control operations, small volumes of gas may be vented via the degasser to maintain well integrity and prevent escalation to an emergency condition. For conservative assessment purposes, up to two well kick events have been included in the GHG inventory and represent a very small proportion of total emissions. Well unloading to the MODU is not routinely required; however, for the purpose of the GWF4 assessment, the unloading of both Wilcox wells has been included. During unloading, gas, condensate, base oil and methanol present in the wellbore would be directed to the flare and are expected to be efficiently combusted.

In the event of flare extinguishment (e.g. due to water ingress, loss of pilot flame, adverse weather or equipment malfunction), short-duration cold venting may occur. Following completion of well testing and flowback objectives, the well may be cleaned using brine solutions containing chemicals such as biocides and surfactants. A worst-case conservative approach has been applied, with maximum flowback volumes of approximately 150 MMSCF of gas, 10,500 bbl of condensate, and 250 bbl of base oil.

Table 6-13: GHG emissions and sources associated with the Petroleum Activity

Source	**GHG** Emissions (CO_2-e t)
MODU Activities[1]	
MODU Operations[2]	63,900
Support vessel Operations	7,400
Helicopter operations	600
Pipelay, Installation and Commissioning[3]	
Support Vessel Operations	12,600
IMR vessel	1,800
Primary installation vessel	37,600
Helicopters Operations	200
Intervention / Contingency Scenarios (Including Unload to MODU)[4]	
Intervention Vessel	2,100
Support vessel Operations	700
Vented (MODU unload)	700
Flow back (MODU unload)	30,900
Well kick - Drilling Ops (60bbl Cold vent)	1

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Description of source of impact
1. *MODU activities estimates cover activities described in Section 3.7.* 2. *MODU emissions are based off the use of a MODU operating on DP while actively drilling. This is considered a conservative volume of GHG emissions to inform impact assessment. GHG emissions from hybrid and moored MODUs would be less due to reduced fuel burn from station keeping.* 3. *Pipelay, installation and commissioning estimates cover all activities described in Section 3.8.* 4. *Intervention/contingency scenario estimates cover activities described in Section 3.10 and are based on a potential two events occurring. The actual number of intervention/contingency events are unknown and will depend on circumstances encountered during the Petroleum Activity.*

Impact assessment
Environmental value(s) potentially impacted
Air Quality Atmospheric emissions may result in a localised, temporary decline in local air quality, within the immediate vicinity of the emissions source. As described above, produced atmospheric and GHG emissions associated with the petroleum activity may include SO_2, NO_x, ozone depleting substances, CO_2, particulates and VOCs. Emissions from engines, generators and deck equipment may be toxic, odoriferous or aesthetically unpleasing, and will result in a localised, temporary reduction in air quality. Given the offshore location of the Operational Area, the rapid dispersion and the low volumes of atmospheric emissions which will be generated the potential impacts are expected to be localised with no lasting effect. ***Aesthetic Value*** Atmospheric emissions have the potential to introduce localised, temporary odour and visual amenity issues which can result in changes to the aesthetic value of an area. Given the distance from shore of the Operational Area (~ 35 km) and the short duration of the activities, the potential for a change in air quality from atmospheric emissions resulting in a change to aesthetic value for tourism/recreation or settlements is not considered to be credible and will have no lasting effect. Therefore, the impact of a change in aesthetic value from atmospheric emissions associated with the Petroleum Activity is of no lasting effect.
Summary of Potential Impacts to environmental values(s)
Given the adopted controls, it is considered that routine atmospheric and GHG emissions will not result in a potential impact greater than no lasting effect (e.g. Environment Impact – F) based on a localised effect to air quality of the regional airshed.

Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)[40]***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
Legislation, codes and standards				
Marine Order 97 (Marine pollution prevention – Air pollution).	F: Yes CS: Minimal cost. Standard practice	Legislative requirements to be followed may slightly reduce the likelihood of air pollution.	Control based on legislative requirements – must be adopted.	Yes C 6.1

[40] *Qualitative measure*

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)40***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
Offshore Petroleum and Greenhouse Gas Storage (Resource Management and Administration) Regulations 2011: Accepted Well Operations Management Plan (WOMP) and application to drill.	F: Yes CS: Minimal cost. Standard practice	The accepted WOMP will manage the risk of well kicks, reducing the likelihood of occurrence. No reduction in consequence will occur	Control based on legislative requirements – must be adopted.	Yes C 6.2
As-built checks that shall be completed during well operations to establish a minimum acceptable standard of well integrity is achieved.	F: Yes CS: Minimal cost. Standard practice	Reduces the likelihood of occurrence. No reduction in consequence will occur.	Benefits outweigh cost/sacrifice	Yes C 6.3
Subsea BOP installed and tested during drilling operations. The BOP shall include: • One annular preventer • Two pipe rams (excluding the test rams) • A minimum of two sets of shear rams, one of which must be capable of sealing • Deadman functionality • The capability of ROV intervention • Independent power systems	F: Yes CS: Standard practice. Required by Woodside standards.	BOP testing reduces the volume of gas vented in the event of a well kick.	Benefits outweigh cost/sacrifice	Yes C 6.4
Process conducted to calculate, update and monitor kick tolerance for use in well design and while drilling, including: • The BOP shall be closed upon detecting a positive well influx • The shut in procedure shall be according the rig contractor procedures or as the well conditions dictate	F: Yes CS: Standard practice. Required by Woodside standards.	Processes will reduce the volume of gas vented in the event of a well kick.	Benefits outweigh cost/sacrifice	Yes 6.5

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)40***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
• Kick tolerance calculations will be made for drilling all hole sections based on the weakest known point in the well. Kick detection techniques will be adjusted based on the level of kick tolerance through a management of change (MOC). • The manual also includes requirements for kick tolerance management in the event of down-hole losses.				
Well control bridging document (WCBD) for alignment of Woodside and the MODU Contractor in order to manage the equipment and procedures for preventing and handling a well kick.	F: Yes CS: Standard practice. Required by Woodside standards.	Implementing equipment and procedures in the well control bridging document will reduce the volume of gas vented in the event of a well kick.	Benefits outweigh cost/sacrifice	Yes C 6.6
Comply with legislative requirements for emissions reporting, including National Greenhouse and Energy Reporting (NGER) scheme	F: Yes CS: Standard practice. Required by Woodside standards.	Tracking and reporting of emissions gives visibility to performance and enables improvement opportunities to be identified. Reporting increases transparency and accountability which can also drive performance improvements.	Control based on legislative requirements – must be adopted	Yes C 6.7
Good practice				
Well unloading acceptance criteria that define the well objectives will be established	F: Yes. CS: Standard practice.	Eliminates unnecessary flared volumes and corresponding emissions (light and GHG).	Benefits outweigh cost/ sacrifice.	Yes C 6.9
Professional judgement – Eliminate				
Do not combust fuel	F: No. There are no MODUs or 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

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)40***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
Do not vent during well kick.	F: No. Venting is a critical safety activity required in the event of a kick to reduce pressure build up. CS: Not considered – control not feasible.	Not considered – control not feasible.	Not considered – control not feasible.	No
Professional judgement – Substitute				
Contracting strategy and evaluation for hire of vessels includes consideration of vessel emissions parameters and low carbon/alternate fuels	F: Yes CS: Minimal cost.	Reduce the GHG emissions associated with the Petroleum Activity	Benefits outweigh cost/ sacrifice.	Yes C 6.10
Professional judgement – Engineered Solution				
ALARP statement: On the basis of the environmental risk assessment outcomes and use of the relevant tools appropriate to the decision type, Woodside considers the adopted controls appropriate to manage the impacts of fuel combustion, incineration and venting. As no reasonable additional/alternative controls were identified that would further reduce the impacts without grossly disproportionate sacrifice, the impacts and risks are considered ALARP.				

Demonstration of acceptability
Acceptability statement: The impact assessment has determined that, given the adopted controls, routine atmospheric emissions from fuel combustion, incineration, and venting are unlikely to result in an impact significance greater than no lasting effect. The adopted controls are considered consistent with industry legislation, codes and standards, and professional judgement and meet the requirements of Australian Marine Orders. In addition the Petroleum Activity is within the acceptable level of impact determined through the Goodwyn Area Infill OPP as the impact consequence level is consistent with the level rated in the OPP and the EPOs and controls from the OPP that are relevant to atmospheric and GHG emissions have been adopted. The potential impacts are considered broadly acceptable if the adopted controls are implemented. Therefore, Woodside considers the adopted controls appropriate to manage the impacts of atmospheric emissions to a level that is broadly acceptable, and compliance with those controls demonstrates that the EPOs are met.

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EPOs, EPS and MC			
EPO	***Controls***	***PS***	***MC***
EPO 6a Emissions to atmosphere associated with fuel combustion, incineration, flaring and venting limited to those necessary to complete the Petroleum Activity.	C 6.1 Marine Order 97 (Marine Pollution Prevention – Air Pollution) which detail requirements for: • International Air Pollution Prevention (IAPP) Certificate, required by vessel class • Use of low sulphur fuel when available • Ship Energy Efficiency Management Plan (SEEMP), where required by vessel class • Onboard incinerator complies with Marine Order 97	PS 6.1 MODU and project vessels compliant with Marine Order 97 (Marine Pollution Prevention – Air Pollution) to restrict emissions to those necessary to perform the activity. Vessel marine assurance process conducted prior to contracting vessels, to ensure suitability and compliance with vessel combustion certification/marine order requirements.	MS 6.1.1 Marine Assurance inspection records demonstrate compliance with Marine Order 97.
	C 6.2 Offshore Petroleum and Greenhouse Gas Storage (Resource Management and Administration) Regulations 2011: accepted Well Operations Management Plan (WOMP), which describes the well design and barriers to be used to prevent a loss of well integrity, specifically: • All permeable zones penetrated by the well bore, containing hydrocarbons or over-pressured water, shall be isolated from the surface environment by a minimum of two barriers (primary and secondary) (a single fluid barrier may be implemented during the initial stages of well construction if appropriateness is confirmed by a shallow hazard study) • Discrete hydrocarbon zones shall be isolated from each other (to prevent cross flow) by a minimum of one barrier where deemed required	PS 6.2 Well drilled in compliance with the accepted WOMP, including implementation of barriers to prevent a loss of well integrity..	MC 6.2.1 Acceptance letter from NOPSEMA demonstrates the WOMP and application to drill were accepted by NOPSEMA prior to the drilling activity commencing. MC 6.2.2 Records demonstrate minimum of two verified barriers (a single fluid barrier may be implemented during the initial stages of well construction if appropriateness is confirmed by a shallow hazard study) were in place for all permeable zones penetrated by the wellbore. MC 6.2.3 Records demonstrate composition and weight of drilling fluids were applicable to down hole conditions.

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EPOs, EPS and MC			
EPO	***Controls***	***PS***	***MC***
	• All normally pressured permeable water-bearing formations shall be isolated from the surface by a minimum of one barrier. The barriers shall • Be effective over the lifetime of well construction • (Fluid barriers) remain monitored and provide sufficient pressure to counter pore pressure during well construction • (Cementing barriers, including conductor, casing and liners) conform to the relevant minimum standards set out in the Woodside Engineering Standard – Well Cementing Standard Verification • Effectiveness of primary and secondary barriers shall be verified (physical evidence of the correct placement and performance) during the drilling of the well		
	C 6.4 As-built checks shall be completed during well operations to establish a minimum acceptable standard of well integrity is achieved.	PS 6.4 A minimum acceptable well integrity standard is achieved and verified through as-built checks completed during well operations.	MC 6.4.1 Records show Well Acceptance criteria are developed for each well.
	C 6.5 Subsea BOP installed and tested during drilling operations. The BOP shall include: • One annular preventer • Two pipe rams (excluding the test rams) • A minimum of two sets of shear rams, one of which must be capable of sealing • Deadman functionality • The capability of ROV intervention	PS 6.5 Subsea BOP specification, installation and testing compliant with internal Woodside Standards and international requirements (API Standard 53 5th Edition) as agreed by Woodside and MODU contractor	MC 6.5.1 Records demonstrate that BOP and BOP control system specifications and testing were in accordance with minimum standards for the expected drilling conditions as agreed by Woodside and MODU contractor

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EPOs, EPS and MC			
EPO	***Controls***	***PS***	***MC***
	• Independent power systems		
	C 6.6 Process conducted to calculate, update and monitor kick tolerance for use in well design and while drilling, including: • The BOP shall be closed upon detecting a positive well influx. • The shut in procedure shall be according the rig contractor procedures or as the well conditions dictate. • Kick tolerance calculations will be made for drilling all hole sections based on the weakest known point in the well. Kick detection techniques will be adjusted based on the level of kick tolerance through a management of change (MOC). The manual also includes requirements for kick tolerance management in the event of down-hole losses.	PS 6.6 Kick tolerance is calculated, managed, monitored and updated while drilling.	MC 6.6.1 Records demonstrates well kick tolerance is calculated, managed, monitored and updated while drilling.
	C 6.7 Well control bridging document (WCBD) for alignment of Woodside and the MODU Contractor in order to manage the equipment and procedures for preventing and handling a well kick.	PS 6.7 Well is drilled in accordance with the contractor WCBD to reduce the likelihood of emissions to air from a well kick during drilling operations.	MC 6.7.1 Records demonstrate well drilled in accordance with WCBD.
	C 6.8 Comply with legislative requirements for emissions reporting, including National Greenhouse and Energy Reporting (NGER) scheme, where required.	PS 6.8 GHG emissions data from flaring provided to MODU contractor.	MC 6.8.1 GHG data provided to MODU contractor.
	C 6.10 Well unloading acceptance criteria that define the well objectives will be established	PS 6.10 Flaring restricted to a duration necessary to achieve the well objectives.	MC 6.10.1 Records demonstrate flaring was restricted to a duration necessary to achieve the well objectives.

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EPOs, EPS and MC			
EPO	***Controls***	***PS***	***MC***
	C 6.11 Contracting strategy and evaluation for hire of vessels includes consideration of vessel emissions parameters and low carbon/alternate fuels	PS 6.11 Contracting strategy for vessel hire to be implemented including evaluation of vessel emissions parameters and low carbon/alternate fuels	MC 6.11.1 Contracting strategy demonstrates evaluation of vessel emissions parameters and low carbon/alternate fuels

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6.7.6 Routine and Non-Routine Discharges: Hydrocarbons and Chemicals

Context		
Relevant Activities Subsea Installation Activities – Section 3.7.11 Contingent Activities – Section 3.10	***Existing*** Environment Socio-economic Environment – Section 4.9	***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
Discharge of subsea control fluids during installation activities	X	X		X	X		A	F	-	-	LCS GP PJ	Broadly Acceptable	EPO 2c, 7
Discharge of chemicals from subsea equipment. during installation activities	X	X		X	X								
Discharge of minor fugitive hydrocarbons from subsea equipment during installation activities	X	X		X	X								
Flowline hydrotest discharges	X	X		X	X								

Description of source of impact

Subsea installation and pre-commissioning

Planned (routine and non-routine) hydrocarbon and chemical discharges may occur during a range of subsea installation and pre-commissioning activities, including:

- connection of new and/or existing subsea infrastructure
- pressure and leak testing to check system integrity
- dewatering of the Wilcox flowline
- barrier testing and tie-in to existing GWF infrastructure.

Types of discharges may include preservation fluids, control fluids, MEG, hydrocarbon, or other chemicals. It should be noted that the discharges during the subsea installation and pre-commissioning phase are typically small volumes and are intermittent. The exception is pre-filled test fluids from flowlines, as depending on the length of flowline and location of discharge, these may be higher volumes.

Pre-filled test fluids may comprise biocide, corrosion inhibitor, oxygen scavenger, scale inhibitor, MEG, and fluorescein dye. Any hydrotest fluids will typically be discharged to the GWA platform, and these discharges will be managed in accordance with the NOPSEMA-accepted GWA Facility Operations EP; this does not form part of this impact assessment. However, due to distance to GWA platform hydrotest discharge from the Wilcox flowline may need to be discharged in situ.

Barrier Testing

Prior to tie-ins to existing GWF infrastructure testing of the isolation valves over a short period of time (<1 hour) will be undertaken. Releases associated with valve testing are expected to be very small (up to approximately 50 L condensate and 150 kg gas per test). This will provide an understanding of the potential manifold isolation valve pass rates during flowline tie-in. When the flowline tie-ins take place, hydrocarbons may be released at the manifold isolation valves.

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Description of source of impact
Dewatering Following leak testing the Wilcox flowline will be dewatered with the discharge occurring either the Wilcox or LPA end of the flowline, and has been estimated to be ~1610 m^3. This will be undertaken with a dewatering pig train propelled by nitrogen resulting in the discharge of MEG, treated water and nitrogen (See Section 3.8.4.3). **Dewatering Modelling** Woodside commissioned RPS to undertake a marine dispersion modelling study for a hydrotest discharge (RPS 2023b). The principal aim of the study was to predict the extent of the near-field and far-field mixing zones, based on the required dilution levels for biocide in the hydrotest discharge. The modelling conservatively used a discharge volume of 2000 m^3 and adopted the exposure criteria as the median concentration of fluid is not to exceed 0.06 mg/L over a 48-hour period (based on previously undertaken whole effluent toxicity (WET) testing of a hydrotest fluid (which contained the biocide Hydrosure 0-3670R) (CAPL 2015). Based on an expected dose concentration of hydrotest fluid (containing biocide), the required dilution factor to meet the above exposure criteria is 10,000.

Impact assessment
Environmental value(s) potentially impacted
Water Quality Subsea planned (routine and non-routine) discharges of hydrocarbons and chemicals will result in localised and temporary changes to water quality. Changes in water quality will depend on the discharge volume, rate and chemical composition. During installation activities, the subsea discharges are intermittent and small volumes, which are expected to rapidly mix and disperse in the open ocean. The small quantities of hydrocarbons (liquid and gas) that may be released will be buoyant and float upwards towards the surface. However, given the water depth, pressure, and the small volumes released, these hydrocarbons are not expected to reach the sea surface. Rather, the release will disperse and dissolve within the water column. A typical acid–water mix discharge may would be expected to quickly dilute and neutralise as it reacts with the calcareous material being removed from the subsea infrastructure. The aquatic toxicity of MEG is very low, it is listed as an 'E' category fluid under the Offshore Chemical Notification Scheme (OCNS), and is on the OSPAR list of substances that are considered to pose little or no risk to the environment once released (PLONOR). MEG is biodegradable and water soluble and dilutes rapidly in the marine environment to low concentrations. Given the relatively small volumes, intermittent discharges, and rapid mixing expected to occur within an open ocean environment, only localised and temporary changes in water quality are predicted. Hydrotest fluid discharge is likely to be the largest routine discharge. Modelling of hydrotest discharge indicate that dilution is expected rapidly upon release, with an average of between 896–1,214 dilutions occurring within ~282 m of the discharge location (RPS 2023b). The modelling also indicated that the distance to reach an instantaneous concentration of 0.06 ppm of the hydrotest fluid was estimated to be up to ~3 km from the discharge location (RPS 2023b); however this instantaneous exposure is not associated with any predicted ecotoxicological affects. In fact the modelling study showed that 48-hour median the exposure criteria was not predicted to be exceeded at any distance from the discharge location, during any season. Though the discharge location has not been selected both options are more than 500 m from either the unnamed shoal or Rankin bank. Therefore, the routine and non-routine discharge of hydrocarbons and chemicals within the Operational Area is expected to have no lasting effect on water quality. ***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. However, 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. ***Planktonic Communities*** A change in water quality as a result of routine and non-routine hydrocarbon and chemical discharges has the potential to change planktonic communities within the water column through toxicity effects. Any effects to plankton have to be assessed in the context of natural mortality rates, which are generally considered high and variable. Plankton have a patchy distribution linked to localised and seasonal productivity that produces sporadic bursts in populations (DEWHA 2008b). As described in the consequence evaluation above, the discharge of hydrocarbons and chemicals within the Operational Area is not expected to result in a lasting effect to water quality. Given the patchy and variable plankton

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Impact assessment
communities, these discharges are not expected to cause a change in planktonic communities at a measurable level and will not change the viability of the population or ecosystem. ***Key Ecological Features*** A change in water quality as a result of routine and non-routine hydrocarbon and chemical discharges has the potential to change benthic habitats and communities through toxicity effects. As described in the consequence evaluation above, the discharge of hydrocarbons and chemicals 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. ***Australian Marine Parks*** The Operational Area overlaps ~23 km^2 of the 3,413 km^2 Montebello Marine Park (i.e. ~0.67% of the marine park). The values of the Montebello Marine Park (as described in section 4.8.1) include ecosystems representative of the Northwest Shelf Province, including areas of ancient coastline. Benthic habitat surveys within the northern section of the marine park indicate that it has a relatively flat and sandy seabed with variable coverage of benthic epifauna (e.g. sponges, corals) (Advisian 2019). This is not dissimilar to the benthic habitats and communities expected to occur throughout most of the Operational Area, which are broadly represented throughout the NWMR). Noting that subsea infrastructure will not be installed within the Marine Park and that while the hydrotest plume may extend into the marine park (if released at the Wilcox manifold) there is no ecological effect. Therefore, the routine and non-routine discharge of hydrocarbons and chemicals within the Operational Area is expected to have no lasting effect on the values of the Montebello Marine Park.
Summary of Potential Impacts to environmental values(s)
Given the adopted controls, it is considered that routine and non-routine discharges of hydrocarbons and chemicals associated with the Petroleum Activity will not result in a potential impact greater than no lasting effect (e.g. Environment Impact – F)

Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)41***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
Legislation, codes and standards				
None identified				

[41] *Qualitative measure*

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)41***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
Good practice				
Implement Woodside's Chemical Selection and Assessment Environment Guideline to demonstrate chemicals selected are ALARP.	F: Yes. CS: Minimal cost. Standard practice.	Environmental assessment of chemicals in discharges 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 7.1
Chemicals used to treat hydrotest water will be Hazard Quotient Colour Band 'Gold' (or OCNS Grouping E) with no substitution or product warnings	F: Yes. CS: Minimal cost. Standard practice.	By limiting hydrotest chemicals to Hazard Quotient Colour Band 'Gold' (or OCNS Grouping E) consequence of impacts can be reduced to ALARP. Planned discharges are required for the safe execution of activities and therefore no reduction in likelihood can occur.	Benefits outweigh cost/sacrifice.	Yes C 7.2
ROV inspection during leak test.	F: Yes. CS: Minimal cost. Standard practice.	A procedure for leak testing work that includes inspection (including by ROV) during testing to identify leakage and trigger activity to stop will reduce likelihood of impacts.	Benefits outweigh cost/sacrifice.	Yes C7.3

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)41***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
Test manifold and PLET isolation valves prior to flowline tie-ins	F: Yes. CS: Minimal cost. Standard practice.	Testing of the isolation valves will provide a valve pass rate to be used to assess isolation requirements and determine the isolations required to confirm to the relevant internal Woodside standards.	Benefits outweigh cost/sacrifice.	Yes C7.4
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 • It must be possible to isolate the reservoir by remote operation of tree isolation valves • 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 tree isolation valves	F: Yes. CS: Minimal cost. Standard practice.	Pass rate (to be determined during detailed engineering) across valve with proven single block isolation. Conditions for single block isolation reduce the likelihood and consequence of an uncontrolled release	If valve testing confirms proven barrier, slight environmental impact associated with hydrocarbon release is disproportionate to requirement to shut in wells over a number of days to achieve double isolation. Benefit for additional conditions for single isolation outweigh cost.	Yes C 7.5

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)41***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
Professional judgement – Eliminate				
Do not conduct leak testing activities.	F: No. Leak testing activities are required to control the potential for corrosion of the flexible flowlines and to determine if any unacceptable restrictions and/or obstructions exist in the line. CS: Potential loss of production due to loss of integrity, possibly leading to a larger environmental incident.	This would eliminate any potential impacts from the leak testing activities but increases the likelihood of loss of integrity during operation and potentially greater environmental impacts.	Disproportionate. The cost/sacrifice outweighs the benefit gained.	No
Dewatering will not occur within 500 m of the identified shoals (Figure 4-3)	F: Yes. CS: Minimal cost. Standard practice.	Ensuring that activities of the Petroleum Activity are spatially removed from shoals to avoid impacts to potential sensitive benthic habitats (e.g. coral reef tops)	Benefits outweigh cost/sacrifice.	Yes Implemented through current manifold and PLET locations
Professional judgement – Substitute				
None identified				
Professional judgement – Engineered Solution				
None identified				
ALARP statement: On the basis of the environmental risk assessment outcomes and use of the relevant tools appropriate to the decision type, Woodside considers the adopted controls appropriate to manage the impacts of routine and non-routine hydrocarbon and chemical discharges additional/alternative controls were identified that would further reduce the impacts without grossly disproportionate sacrifice, the impacts and risks are considered ALARP.				

Demonstration of acceptability
Acceptability statement: The impact assessment has determined that, given the adopted controls, routine and non-routine hydrocarbon and chemical discharges are unlikely to result in an impact significance greater than no lasting effect. The adopted controls are considered consistent with industry legislation, codes and standards, and professional judgement and meet the requirements of Australian Marine Orders. In addition the Petroleum Activity is within the acceptable level of impact determined through the Goodwyn Area Infill OPP as the impact consequence level is consistent with the level rated in the OPP and the EPOs and controls from the OPP that are relevant to routine and non-routine hydrocarbon and chemical discharges have been adopted. The potential impacts are considered broadly acceptable if the adopted controls are implemented. Therefore, Woodside considers the adopted controls appropriate to manage the impacts of atmospheric emissions to a level that is broadly acceptable, and compliance with those controls demonstrates that the EPOs are met.

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EPOs, EPS and MC			
EPO	***Controls***	***PS***	***MC***
EPO 3c No long-term adverse effects to the values of Australian Marine Parks from the Petroleum Activity EPO 7 No adverse effects greater than temporary changes to water quality with no lasting effect to water quality from routine and non-routine hydrocarbon and chemical discharges during the Petroleum Activity	C 7.1 Implement Woodside's Chemical Selection and Assessment Environment Guideline to demonstrate chemicals selected are ALARP	PS 7.1 Chemicals intended or likely to be discharged into the marine environment will be assessed and approved through the Woodside chemical assessment process (Section 7.2.1) so the impacts associated with use are ALARP and acceptable.	MC 7.1.1 Records demonstrate the chemical selection, assessment and approval process for operational chemicals is followed.
	C 7.2 Chemicals used to treat hydrotest water will be Hazard Quotient Colour Band 'Gold' (or OCNS Grouping E) with no substitution or product warnings	PS 7.2 Chemicals used to treat hydrotest water (i.e. oxygen scavenger, biocide, dye) will be Hazard Quotient Colour Band 'Gold' (or OCNS Grouping E) with no substitution or product warnings	MC 7.2.1 Records demonstrate chemicals used to treat hydrotest water Hazard Quotient Colour Band 'Gold' (or OCNS Grouping E) with no substitution or product warnings
	C 7.3 ROV inspection during leak test.	PS 7.3 ROV inspection during leak test to identify leakage and trigger activity to stop.	MC 7.3.1 Records demonstrate ROV inspection during leak test and record any instances of activity required to stop due to identified leak(s).
	C 7.4 Test manifolds and PLET isolation valves prior to flowline tie-in	PS 7.4 Valve testing undertaken prior to flowline tie-in.	MC 7.4.1 Records demonstrate testing of isolation valves is completed.
	C 7.5 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 • It must be possible to isolate the reservoir by remote operation of tree isolation valves • The residual risks must be shown to be ALARP by a documented isolation risk assessment.	PS 7.5 Subsea Isolations implemented conform with the relevant internal Woodside standards and any single isolation will have a proven barrier (pass rate to be determined during detailed engineering).	MC 7.5.1 Records demonstrate isolations are implemented and compliant with the relevant internal Woodside standards. MC 7.5.2 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

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EPOs, EPS and MC			
EPO	***Controls***	***PS***	***MC***
	• Procedures and response plans for the activity must be developed and implemented and address all applicable hazards appropriately, including provision for closing tree isolation valves		

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6.7.7 Routine and Non-Routine Discharges: MODU and Project Vessels

Context		
Relevant Activities Project Vessels - Section 3.11	***Existing Environment*** Regional Context – Section 4.2 Protected Species – Section 4.6	***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
Routine discharge of sewage, grey water and putrescible wastes to marine environment from MODU, and project vessels		X			X		A	F	-	-	LCS	Broadly Acceptable	EPO 3c, 8
Routine discharge of deck and bilge water to marine environment from MODU, installation vessel and support vessels													
Routine discharge of brine or cooling water to the marine environment from MODU, installation vessel and support vessels	X	X		X	X								

Description of source of impact

Vessel and MODU Operations

Sewage, grey water and putrescible wastes

The MODU, installation vessel and support vessels routinely generate/discharge small volumes of treated sewage, putrescible wastes and grey water to the marine environment (impact assessment based on approximate discharge of 15 m^3 per vessel/MODU per day), using an average volume of 75 L/person/day and a maximum of 200 persons on board. However, it is noted that vessels such as the installation vessels, AHV and support vessels will have considerably fewer persons on board.

Deck and bilge water

The MODU/PIV and support vessels routinely generate/discharge:

- Routine/periodic discharge of relatively small volumes of bilge water. Bilge tanks receive fluids from many parts of the project vessels or MODU/PIV. Bilge water can contain water, oil, detergents, solvents, chemicals, particles, biocides and other liquids, solids or chemicals
- Variable water discharge from MODU/PIV/vessel decks directly overboard or via deck drainage systems. Sources could include rainfall events and/or deck activities such as cleaning/wash-down of equipment/decks.

Brine

Reverse osmosis (RO), distillation or desalination plants on board vessels and the MODU use seawater to produce potable and demineralised water; resulting in reject brine (i.e. hypersaline water) that is discharged to the marine environment. The potable water produced is stored in tanks on board.

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Description of source of impact
During the desalination process, relatively small volumes of reject brine is produced and discharged. Reject brine discharge is typically 20 to 50 percent higher in salinity than the intake seawater (depending on the desalination process used) and may contain low concentrations of scale inhibitors and biocides, which are used to avoid fouling of pipework (Woodside, 2014). Models developed by the US EPA (Frick et al., 2001) for temporary brine discharges from vessels assuming no ocean current (i.e. 0 m/s) found that brine discharges from the surface dilute 40–fold at 4 m from the source. This modelling can be used as an indicator for predicting horizontal attenuation and diffusion of reject brine; and suggests that the salinity concentration drops below environmental impact thresholds within 4 m of the discharge point. **Cooling Water** Seawater is used as a heat exchange medium for cooling machinery engines and other equipment. Seawater is drawn up from the ocean, where it is subsequently de-oxygenated and sterilised by electrolysis (by release of chlorine from the salt solution) and then circulated as coolant for various equipment through the heat exchangers (in the process transferring heat from the machinery), prior to discharge to the ocean. Upon discharge, it will be warmer than the ambient water temperature. Cooling water is often treated with additives including scale inhibitors and biocide to avoid fouling of pipework. In some instances, fresh water or central cooling systems may be fitted. In these systems, fresh water is used in a closed circuit to cool down the engine room machinery, and then further cooled by sea water in a seawater cooler. Seawater used for cooling purposes will be routinely discharged at a temperature expected to be less than 70°C and rates ~50 m³/d. Environmental risks relating to the unplanned disposal/discharges are addressed in Section 6.8.6.

Impact assessment
Environmental value(s) potentially impacted
Water Quality **Sewage, grey water and putrescible wastes** The principal environmental impact associated with ocean disposal of sewage and other organic wastes (i.e. putrescible waste) is eutrophication. Eutrophication occurs when the addition of nutrients, such as nitrates and phosphates, causes adverse changes to the ecosystem, such as oxygen depletion and phytoplankton blooms. Other contaminants of concern occurring in these discharges may include ammonia, E. coli, faecal coliform, volatile and semi-volatile organic compounds, phenol, hydrogen sulphide, metals, surfactants and phthalates. Woodside conducted monitoring of sewage discharges at its Torosa-4 Appraisal Drilling campaign which demonstrated that a 10 m³ sewage discharge reduced to about 1% of its original concentration within 50 m of the discharge location. In addition to this, monitoring at distances 50 m, 100 m and 200 m downstream of the platform and at five different water depths confirmed that discharges were rapidly diluted; no elevations in water quality monitoring parameters (e.g. total nitrogen, total phosphorous and selected metals) were recorded above background levels at any station (Woodside, 2011). Mixing and dispersion would be further facilitated in offshore waters, consistent with the location of the Operational Area, through regional wind and large scale current patterns resulting in the rapid mixing of surface and near surface waters where sewage discharges may occur. Studies investigating the effects of nutrient enrichment from offshore sewage discharges indicate that the influence of nutrients in open marine areas is much less significant than that experienced in enclosed areas (McIntyre and Johnston, 1975). Activities associated with the Petroleum Activity will occur over a period of three and a half years, however actual project activities will occur as separate campaigns over the entire Petroleum Activity (refer Section 3.6 for timing). Vessels will also be moving (i.e. not in a single location for an extended period of time) and these routine discharges are expected to be intermittent in nature for the duration of the Petroleum Activity. Therefore, impacts to water quality from discharge of sewage, grey water and putrescible wastes within the Operational Area are expected to be localised with no lasting effect **Deck and bilge water** Deck drainage and treated bilge may contain a range of chemicals, oil, grease and solid material. This particulate matter can cause an increase in the turbidity of the receiving waters close to the point of discharge. The addition of these substances into the marine environment will result in a change to ambient water quality; however, these discharges are expected to rapidly dilute in the water column (Shell, 2010). Discharges will disperse and dilute rapidly, with concentrations significantly dropping with distance from the discharge point. Bilge water and deck drainage discharges, which may include non-organic contaminants, will rapidly dilute. As such, no significant impacts from the planned routine discharges are anticipated, because of the small quantities involved, the expected localised mixing zone and high level of dilution into the open water marine environment of the Operational Area

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Impact assessment

Based on the detailed evaluation, the magnitude of potential impact of a change in water quality is no lasting effects.

Brine and cooling water

The key physicochemical stressors that are associated with reject brine and cooling water discharge include salinity, pH, temperature and chemical toxicity.

The potential impacts on water quality due to cooling water discharge include chlorine toxicity and increased water temperatures. Woodside undertook modelling of continuous wastewater discharges (including cooling water) for its Torosa South-1 drilling program in the Scott Reef complex (Woodside, 2014). This study predicted that discharge water temperature decreases quickly as it mixes with the receiving waters, with the discharge water temperature being <1 °C above ambient within 100 m (horizontally) of the discharge point, and 10 m vertically (Woodside, 2014). As such, any potential impacts to water quality are expected to be limited to 100 m of the source of the discharge where concentrations are highest.

Reject brine water is typically 20 to 50% higher in salinity to the surrounding water and, based on models developed by the US EPA (Frick et al., 2001), discharges of brine water will sink through the water column where it will be rapidly mixed with receiving waters and dispersed by ocean currents, with salinity rapidly returning to background concentrations in the near field.

Water quality of the surrounding environment may be altered through the addition of chemicals and an increase in 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 (Black et al., 1994). The biocides typically used in the industry are highly reactive and degrade rapidly (Black et al., 1994).

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.

Based on the detailed risk evaluation, the magnitude of the potential impact of a change in water quality from routine and non-routine brine and cooling water discharges is assessed as no lasting effect.

Seabirds and Migratory Shorebirds, Fish, Marine Reptiles and Marine Mammals

It is possible that marine fauna transiting the localised area may come into contact with these discharges (e.g. marine turtles, humpback whales, whale sharks; Section 4.6) as they traverse the Operational Area. However, given the localised extent of even from multiple vessel discharges and limited exposure within the Operational Area, significant impacts to marine fauna are not expected. In particular, whilst a flatback turtle internesting buffer BIA and an internesting Habitat Critical overlap the Operational Area, no impacts to flatback turtles are expected, given the offshore location and distance to nesting beaches (> 35 km).

Planktonic Communities

Research suggests that zooplankton composition and distribution are not affected in areas associated with sewage dumping grounds (McIntyre and Johnston, 1975). Plankton communities are expected to rapidly recover from any such short term, localised impact, as they are known to have naturally high levels of mortality and a rapid replacement rate.

Discharged brine sinks through the water column where it is rapidly mixed with receiving waters and dispersed by ocean currents. As such, any potential impacts are expected to be limited to the source of the discharge where concentrations are highest. Studies indicate that effects from increased salinity on planktonic communities in areas of high mixing and dispersion are generally limited to the point of discharge (Azis et al., 2003).

Planktonic productivity in the NWMR is low. No significant impacts from the planned routine discharges are expected, because of the minor quantities involved, the expected localised mixing zone and high level of dilution into the open water marine environment of the Operational Area

Based on the impact assessment, the magnitude of the potential impacts on plankton from routine and non-routine brine and cooling water discharges is assessed as no lasting effect.

Cumulative Impacts

Routine and non-routine utility discharges from a MODU/PIV and supporting vessels may occur simultaneously, but will dilute rapidly and have negligible cumulative impacts. These discharges may also occur simultaneously with other discharges from the MODU, such as drill cuttings and fluids. Given the rapid dilution of these discharges in the open water environment, the potential for cumulative impacts to water quality is expected to occur within approximately 100 m of the discharge location hence, cumulative impacts will have a no lasting effect

Summary of Potential Impacts to environmental values(s)

Given the adopted controls, it is considered that routine or non-routine discharges described will not result in a potential impact greater than localised contamination not significant to environmental receptors, with no lasting effect (i.e. Environment Impact – F).

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)42***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
Legislation, codes and standards				
Marine Order 95 – marine pollution prevention— garbage (as appropriate to vessel class) which requires putrescible waste and food scraps to pass through a macerator so it is capable of passing through a screen with no opening wider than 25 mm.	F: Yes. CS: Minimal cost. Standard practice.	No reduction in likelihood or consequence would result.	Controls based on legislative requirements – must be adopted.	Yes C 8.1
Marine Order 96 – marine pollution prevention— sewage (as appropriate to vessel class) which includes the following requirements • a valid International Sewage Pollution Prevention Certificate, as required by vessel class • a sewage treatment plant approved by AMSA or an issuing body • a sewage comminuting and disinfecting system • a sewage holding tank sized appropriately to contain all generated waste (black and grey water) • discharge of sewage which is not comminuted or disinfected will only occur at a distance of more than 12 nm from the nearest land • discharge of sewage which is comminuted or disinfected using a	F: Yes. CS: Minimal cost. Standard practice.	No reduction in likelihood or consequence would result.	Controls based on legislative requirements – must be adopted.	Yes C 8.2

[42] *Qualitative measure*

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)42***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
certified approved sewage treatment plant will only occur at a distance of more than 3 nm from the nearest land • discharge of sewage will occur at a moderate rate while project vessel is proceeding (> • 4 knots), to avoid discharges in environmentally sensitive areas				
Where there is potential for loss of primary containment of oil and chemicals on the project vessels, deck drainage must be collected via a deck drainage water management system.	F: Yes. CS: Minimal cost. Standard practice.	Reduces the likelihood of contaminated deck drainage water being discharged to the marine environment. No change in consequence would occur.	Benefits outweigh cost/sacrifice.	Yes C 8.3
Marine Order 91 – marine pollution prevention—oil (as relevant to vessel class) requirements, which includes mandatory measures for processing oily water prior to discharge • Machinery space bilge/oily water shall have IMO approved oil filtering equipment (oil/water separator) with an on-line monitoring device to measure Oil in Water (OIW) content to be less than 15 Parts per Million (ppm) prior to 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	F: Yes. CS: Minimal cost. Standard practice.	No reduction in likelihood or consequence would result.	Controls based on legislative requirements – must be adopted.	Yes C 8.4

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)42***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
• 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. • If machinery space bilge discharges cannot meet the oil content standard of <15 ppm without dilution or be treated by an IMO approved oil/water separator, they will be contained on-board and disposed onshore. • Valid International Oil Pollution Prevention Certificate.				
Good practice				
No additional controls identified				
Professional judgement – Eliminate				
No additional controls identified				
Professional judgement – Substitute				
Storage, transport and treatment/disposal onshore of sewage, greywater, putrescible and bilge wastes.	F: Not feasible. Would present additional safety and hygiene hazards resulting from the storage, loading and transport of the waste material. Distance of activity offshore also makes implementing this control not feasible. CS: Not considered – control not feasible.	Not considered – control not feasible.	Not considered – control not feasible.	No
Professional judgement – Engineered Solution				
None identified				

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)42***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
ALARP statement: On the basis of the environmental risk assessment outcomes and use of the relevant tools appropriate to the decision type, Woodside considers the adopted controls appropriate to manage the impacts and risks of planned routine and non-routine discharges from MODU/vessels. As no reasonable additional/alternative controls were identified that would further reduce the impacts without grossly disproportionate sacrifice, the impacts and risks 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 MODU and project vessels are unlikely to result in an impact significance level greater than no lasting effect. BIAs within the Operational Area include the flatback turtle internesting, whale shark foraging, and distribution, and wedge-tailed shearwater breeding and foraging areas. The adopted controls are considered consistent with industry legislation, codes and standards, and professional judgement and meet the requirements of Australian Marine Orders. In addition, the Petroleum Activity is within the acceptable level of impact determined through the Goodwyn Area Infill OPP as the impact consequence level is consistent with the level rated in the OPP and the EPOs and controls from the OPP that are relevant to routine and non-routine discharges from the MODU and project vessel have been adopted. The potential impacts are considered broadly acceptable if the adopted controls are implemented. Therefore, Woodside considers the adopted controls appropriate to manage the impacts of these discharges to a level that is broadly acceptable, and compliance with those controls demonstrates that the EPOs are met.

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EPOs, EPS and MC			
EPO	***Controls***	***PS***	***MC***
EPO 3c No long-term adverse effects to the values of Australian Marine Parks from the Petroleum Activity EPO 8 No adverse effects greater than temporary changes to water quality and biological communities while vessels / MODU are within the Operational Area, with no lasting effect from routine and non-routine MODU/vessel discharges	C 8.1 Marine Order 95 – Pollution prevention – Garbage (as appropriate to vessel class) which requires putrescible waste and food scraps are passed through a macerator so that it is capable of passing through a screen with no opening wider than 25 mm.	PS 8.1 MODU and project vessels compliant with Marine Order 95 – Pollution prevention – Garbage.	MC 8.1.1 Environmental and MARPOL inspection records demonstrate MODU and project vessels are compliant with Marine Order 95 – Pollution prevention (as appropriate to vessel class).
	C 8.2 Marine Order 96 – marine pollution prevention—sewage (as appropriate to vessel class) which includes the following requirements • a valid International Sewage Pollution Prevention Certificate, as required by vessel class • a sewage treatment plant approved by AMSA or an issuing body • a sewage comminuting and disinfecting system • a sewage holding tank sized appropriately to contain all generated waste (black and grey water) • discharge of sewage which is not comminuted or disinfected will only occur at a distance of more than 12 nm from the nearest land • discharge of sewage which is comminuted or disinfected using a certified approved sewage treatment plant will only occur at a distance of more than 3 nm from the nearest land • discharge of sewage will occur at a moderate rate while project vessel is proceeding (>4 knots), to avoid discharges in environmentally sensitive areas	PS 8.2 MODU and project vessels compliant with Marine Order 96 – Pollution prevention – Sewage (as appropriate to vessel class).	MC 8.2.1 Environmental and MARPOL inspection records demonstrate MODU and project vessels are compliant with Marine Order 96 – Pollution prevention – Sewage (as appropriate to vessel class).

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EPOs, EPS and MC			
EPO	***Controls***	***PS***	***MC***
	C 8.3 Where there is potential for loss of primary containment of oil and chemicals on the MODU, deck drainage must be collected via a closed drainage system. E.g. drill floor.	PS 8.3 Contaminated drainage contained, treated and/or separated prior to discharge.	MC 8.3.1 Environmental inspection records demonstrate MODU has a functioning bilge/oily water management system.
	C 8.4 Marine Order 91 – marine pollution prevention—oil (as relevant to vessel class) requirements, which includes mandatory measures for processing oily water prior to discharge • Machinery space bilge/oily water shall have IMO approved oil filtering equipment (oil/water separator) with an on-line monitoring device to measure Oil in Water (OIW) content to be less than 15 Parts per Million (ppm) prior to 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. • If machinery space bilge discharges cannot meet the oil content standard of	PS 8.4 Discharge of machinery space bilge/oily water will meet oil content standard of <15 ppm without dilution	MC 8.4.1 Environmental and MARPOL inspection records demonstrate discharge specification met for MODU and project vessels

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EPOs, EPS and MC			
EPO	***Controls***	***PS***	***MC***
	• <15 ppm without dilution or be treated by an IMO approved oil/water separator, they will be contained on-board and disposed onshore. • Valid International Oil Pollution Prevention Certificate.		

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6.7.8 Routine and Non-Routine Discharges: Drill Cuttings and Drilling Fluids

Context		
Relevant Activities Drilling Activities – Section 3.7.5 Contingent Activities – Section 3.10	***Existing*** Environment Regional Context – Section 4.2 Habitats and Biological Communities – Section 4.5 Protected Species – Section 4.6	***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
Routine discharge of drill cuttings and drilling muds (WBM) to the seabed and the marine environment	X	X		X			A	D	-	-	GP PJ	Broadly Acceptable	EPO 3c, 9a, 9b
Routine discharge of treated NWBM drill cuttings to the marine environment	X	X		X									
Non-routine discharge of wash water from mud pits and vessel tank wash fluids	X	X		X									
Routine discharge of well clean-out fluids	X	X		X									
Non-routine discharge of well annular fluids	X	X		X									
Non-routine discharge of WBM and cement cuttings to the marine environment during drilling out of a cement plug	X	X		X									
Non-routine discharge of grit and flocculant during removal of well infrastructure	X	X		X									

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Description of source of impact

Drilling Operations

The Petroleum Activity will involve the drilling of up to five wells as described in Section 3.7. Drilling activities generate drill cuttings, require cementing of the casing, gravel packing of the open hole and require the use of a range of fluids. Throughout the drilling program several different fluids are to be run through the closed circulation system including, but not limited to, drilling fluids (water-based muds and non water-based muds), sea water, and kill-weight brine.

- Routine drilling discharges will include:
  - drill cuttings
  - drilling fluids direct to seabed (WBMs only), retained on cuttings and bulk discharge of mud pits (WBMs only)
- Non-routine drilling discharges may include:
  - drill cuttings and fluids generated due to respud or side tracking
  - well abandonment and use of fluids (subsea control, completions and well annular fluids).

The well will be drilled as a series of sections, as detailed in Table 6-14. The top-hole section of the well will be drilled without a riser in place (i.e. riserless drilling) with drill cuttings and unrecoverable WBMs are discharged at the seabed for the top-hole sections. This results in a localised area of sediment deposition (known as a cuttings pile) around and in proximity to the well site influenced by prevailing seabed currents.

Upon drilling of the top hole section, conductor and surface casing will be cemented in place, a BOP installed and a riser put in place between the BOP and the MODU. The riser remains in place during drilling of the bottom hole sections and facilitates the circulation of drilling fluids and cuttings between the well bore and the MODU. This enables cuttings and drilling fluids to be circulated back to the MODU, where the cuttings are separated from the drilling fluids by the solids control equipment (SCE) and typically re-used in the closed loop system between the well bore and the MODU. The cuttings (with adhered residual fluids) are, in typical circumstances, discharged below the water line, with their fate and dispersion determined by cuttings particle size and the density of the unrecoverable fluids.

In contrast, fluids are recirculated into the fluid system where there are a number of mud pits (tanks) on the MODU that provide a capacity to mix, maintain and store fluids required for drilling activities. The mud pits form part of the drilling fluid circulating system and may be discharged at the end of specific well sections, where there is a requirement to change the drilling fluid system or the drilling fluid cannot be re-used (due to deterioration/ contamination). Bulk discharge of this type is only permitted for WBMs.

Base oil may be used for inflow testing prior to abandonment of the well, to verify barrier integrity. Base oil would be pumped down the drill string and reverse circulated back to the rig, with fluids collected for disposal onshore. If stored in a mud pit, the base oil and other fluids associated with the test may result in pit wash water contaminated with hydrocarbons. If this is the case, mud pit wash water would be discharged in accordance with requirements in this EP; with a hydrocarbon content <1% by volume. Well abandonment activities are conducted in accordance with Woodside's internal standards

Drill Cuttings and Fluids

As described above, the primary discharges used as the basis of the impact assessment for this Petroleum Activity are as follows:

- Drill cuttings: drilling generates drill cuttings due to the breakup of solid material from within the borehole. The resultant drill cuttings are basically rock particles of various shapes, with sizes typically ranging from very fine to very coarse.
- Drilling fluids: serve many purposes including maintaining borehole stability and hydrostatic pressure, reducing friction and cleaning/ cooling of the drill bit, in addition to acting as a medium to carry cuttings from the well bore and return them to the surface at seabed or on the MODU. There are two main types of drilling fluids as follows:
  - WBMs consists mainly of fresh water or seawater with the addition of chemical and mineral additives to aid in its function. Drilling additives typically used may include chlorides (e.g. sodium, potassium), bentonite (clay), cellulose polymers, guar gum, barite or calcium carbonate. These additives are either completely inert in the marine environment, naturally occurring benign materials, or readily biodegradable organic polymers with a very fast rate of biodegradation in the marine environment. Bentonite and guar gum are listed as 'E' category fluids under the OCNS and is included on the Oslo Paris (OSPAR) Commission PLONOR (chemicals that 'pose little or no risk to the environment') list (OSPAR Commission, 2021). WBMs can be discharged to sea as fluids retained on cuttings and as bulk discharge from mud pits.
  - NWBMs refers to drill fluids that are hydrocarbon rather than water based fluid. NWBM may contain a range of synthetic hydrocarbons, such as paraffins and olefins; however, such additives are designed to be low in toxicity and biodegradable, as well as not being readily bioavailable or likely to bioaccumulate, particularly in deeper water areas. No bulk discharge of NWBMs will occur offshore, only NWBMs retained on cuttings can be discharged from the MODU. If a NWBM system is required to drill a well section, the cuttings from the NWBM drilling fluid system will pass through the SCE (centrifuge and dryers) to reduce the average residual oil on cuttings (OOC). An OOC discharge limit of 6.9% wt/wt or less on wet cuttings will be averaged over well sections drilled with NWBM for the well. It is noted that microbial biodegradation can result in oxygen

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Description of source of impact

reduction within sediments, however Nedwed et al. (2006) found that depth is an important factor for residual concentrations of NWBF once they reach the seabed, suggesting that loss of base fluid during settling acted to significantly reduce chemical effects from discharges. It is also noted that NWBM cuttings tend to clump and settle to the seabed rapidly adding to the cuttings pile in proximity to the well site.

For the purposes of this impact assessment, the indicative dimensions, discharge locations and approximate drill cuttings and drilling fluid volumes provided in Table 6-14 represent the typical volumes for a single well section.

Table 6-14: Indicative drill cuttings and fluid volumes for a single well section

Well section width (inches)	Cuttings volume (~m³)	Drilling fluid type	Drilling fluid volume (~bbl)	Drilling fluid volume (~m³)	Discharge point
Planned activities					
42" conductor hole	78	Seawater with pre-hydrated bentonite (PHB) sweeps/XC polymer/WBM	4,251	675.8	Seabed
26" surface hole	237	Seawater with PHB sweeps/XC polymer/WBM	15,583	2,477.5	Seabed
17.5" intermediate hole	306	WBM	14,067	2,236.5	Surface
12.25" production hole	165	WBM /NWBM	12,727	2,023.3	Surface
8.5" open hole	19	WBM	6,747	1,072.7	Surface
Total	***805***	**—**	***53,375***	***8,485.9***	**—**
If NWBM is required					
12.25"	165	NWBM	Retained fluid on cuttings		Surface
Indicative Contingent Activities – one top-hole respud					
42" + 26" + 17.5" sections	621	Seawater with PHB sweeps/XC polymer for 42" and 26" hole sections. WBM for 17.5" section	33,901	5,389.8	As above for each section
Indicative Contingent Activities – sidetrack one section					
~12.25" section	165 (formation rock) 2 (swarf) 3 (cement)	WBM	12,727	2,023.3	Surface
~12.25" section	165 (formation rock) 2 (swarf) 3 (cement)	NWBM	Retained fluid on cuttings		Surface

If NWBM required these volumes replace WBM volumes for equivalent production hole

Subsea – Displacement, Completion and Well-bore Cleanout Fluids

Reservoir drilling and completion fluids are usually brines (i.e. a mixture of seawater or formation water) with additives that can include:

- chlorides (often sodium, potassium or calcium)

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Description of source of impact
• bromides • hydrate inhibitor (mono-ethylene glycol (MEG)) • biocide • oxygen scavenger • formates (potassium). • filtercake breakers (such as acids or chelants) They are designed to have the proper density and flow characteristics to be compatible with the reservoir formation. Completion fluids are used to run well completions, and during wellbore clean up and flowback during drilling. Wellbore and casing clean-up are required at various stages of the drilling operations to ensure the contents of the well are free of contaminants before the next stage of drilling. A chemical wellbore cleanout fluid train may be used to remove residual fluids from the wellbore. The wellbore cleanout fluid is usually brine (similar to completion fluid) that can include several chemicals, such as biocide and surfactant. During the clean-up process, fluids are circulated back to the MODU. Cleanout fluids and completion brine will be captured and stored on the MODU and discharged if oil concentration is less than 1% by volume or returned to shore if discharge requirements cannot be met. Discharge volume would be~400 m³. Base oil may also be displaced into the tubing after the upper completion is installed in order to underbalance the well to allow the well to flow for well unloading activities. ***Contingent Drilling Activities*** **Respud** It is unlikely that a well would be required to respud. If required, the most likely scenario is that the decision to respud is made during drilling of the top hole section of a well; therefore, the incremental increase in cuttings and fluids discharges is associated with the repeat drilling of the same top hole sections for the respudded well with the same associated discharges. A respud once drilling of the bottom hole sections has commenced is far less likely, given the time and effort already committed to the well. However, if this was to occur, the associated discharges would also be a repeat of the discharges as per Table 6-14 to re-drill the same sections of the respudded well. **Sidetrack** The option of a sidetrack instead of a respud may be determined, if operational issues are encountered. Should a sidetrack be required, it will result in an increase in the volume of cuttings generated and a potential increase in the use of NWBM. Additional drill cuttings, swarf and cement volumes are estimated in Table 6-14. **Permanent Plugging Program and Removal of Well Infrastructure** If required as a contingency activity, the base case for permanently plugging the wells includes the use of WBM and wet cement and will produce well annulus fluids (residual hydrocarbons and residual produced formation water). These fluids/cuttings will be generated during the well bore clean-out, drilling of existing cement barriers, installation of permanent abandonment barriers, circulation of the annulus and washing out of the mud pit. Potential additional activities that may be required as part of the Petroleum Activity includes milling, which will produce metal swarf, drilled cement and formation rock. All of the downhole plugging for permanent abandonment activities are conducted through the marine riser. This is a closed system, meaning there are no planned discharges directly to sea during these activities. Planned discharges of the above fluids are only planned to occur after they have been received on the MODU.

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Impact assessment
Environmental value(s) potentially impacted

Drill Cuttings Discharge and Dispersion Modelling

As the volumes of cuttings and fluids have been updated based on additional project definition (See Table 6-14) and the assumptions on the discharge location, now approximately 5 m below the water line, Woodside commissioned RPS to undertake a sediment dispersion modelling study that considered discharges of drill cuttings and drilling fluids to the marine environment during drilling activities (RPS 2026). Based on the modelled fate of discharged drill cuttings and drilling fluids, predictions of the levels of suspended sediments within the water column and bottom deposition (thickness and accumulated load) were quantified.

Given the proximity to sensitive receptors, modelling was undertaken for a nominal well location in the Wilcox field, outside the Montebello Marine Park.

- The modelling takes into account these discharge sources:
  - continuous discharge of drill cuttings and retained fluids as drilling proceeds
  - bulk discharge of drilling fluids at the end of each hole section
  - routine (approximately daily) discharge of a single mud pit

Stochastic modelling from the RPS (2026) drill cuttings and drilling fluids dispersion modelling showed:

- most of the sediment released by continuous discharges will settle out over an elliptical area with a long axis aligned with the tidal currents (typically west-north-west to east-south-east)
- the potential for thin (0.1 mm) deposits of sediment to settle out at distances ~1.2 km is very low (<5%) for all seasons (RPS 2026)
- TSS distribution calculations indicate that concentrations >10 mg/L may extend up to ~220-440 m from the source up to 5% of the time, (RPS 2026)
- TSS concentrations >1 mg/L were calculated to extend ~7.7–9.5 km from the source up to 5% of the time (RPS 2026)

Water Quality

Surface and subsea discharges of drill cuttings and drilling fluids will result in temporary changes to water quality. A reduction in water quality may occur via a change in suspended sediment within the water column, or from a change to the chemical content in the water column.

The discharge of cuttings and drilling fluids at the surface (associated with bottom-hole drilling), is expected to result in a larger spatial change to water quality because there is a greater possibility for wider dispersal (e.g. due to surface currents and waves) than discharging at the seabed (associated with top-hole drilling).

Hinwood et al. (1994) explain that when cuttings are discharged to the ocean from the surface, the larger particles (which represent ~90% of the mass of the solids) form a plume that settles quickly to the seabed close to the release point. A similar finding was observed by Jones et al. (2021) over 95% of the cuttings were greater than 1 mm (and >35% >2 mm) and the settling time to the seabed was minutes to tens of minutes. The remaining solids form a plume in the upper water column that drifts with prevailing currents away from the platform and is diluted rapidly in the receiving waters (Neff 2005; 2010). Neff (2005) state that in well-mixed oceanic waters, the drilling cuttings and fluid plume from a surface discharge is diluted by more than 100-fold within 10 m of the discharge.

Marine dispersion modelling for the Petroleum Activity indicated that the area of influence of TSS (1–3 mg/L) ranges between ~2.6–9.5 km for 95th percentile exposurey (RPS 2026). Modelling also indicated that the distance to ecological impact threshold (10 mg/L) is up to ~0.440 km for 95th percentile exposures (RPS 2026). Note that these results represent distances that would only be reached 5% of the time, and are based on instantaneous predictions for TSS.

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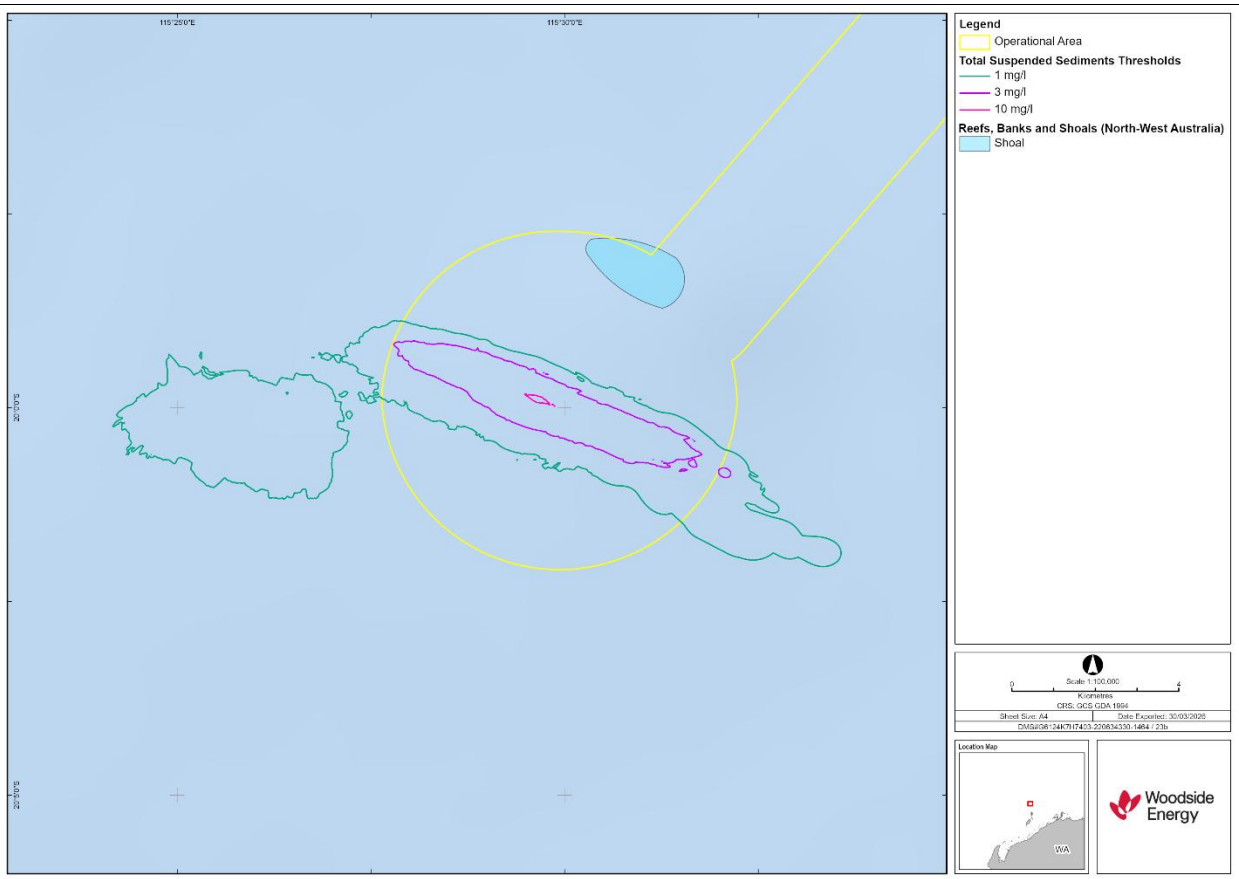


Figure 6-1: Predicted 95th percentile water column total suspended sediment concentrations under annualised enivornmetal conditions

Monitoring and modelling undertaken by Jones et al. (2021) of a drilling campaign at LPA, indicated that TSS concentrations up to 10 mg/L were possible ~1 km away from the discharge point, but these concentrations only remained for periods of minutes due to the intermittent nature of drilling discharges from the MODU. As context, Jones et al. (2021) also noted that transient peaks in TSS levels of tens or hundreds of mg/L for a few hours are common during cyclones and storms in tropical shallow water reef environments.

Drilling fluid discharges are mixtures of crushed rock (drill cuttings) and drilling fluid particles; these particles contain adsorbed organic components from the WBM or NWBM. When discharged, they form a plume in the water column. Dissolved components of the plume (particularly salts and water soluble drilling fluid additives) dilute rapidly by mixing in the water column (IOGP 2016).

Fluid components of WBM are predominantly ‘non-toxic’ or ‘almost non-toxic’ (Hinwood et al. 1994). Typical additives to WBMs are either completely inert in the marine environment, naturally occurring benign materials, or rapidly biodegradable organic polymers. Bentonite and guar gum are listed as ‘E’ category fluids under the OCNS and are included on the Oslo Paris (OSPAR) Commission PLONOR list (chemicals that ‘pose little or no risk to the environment’) (OSPAR Commission 2009). Given their typically inert nature, adverse impacts to water quality from additives to WBMs are not predicted to occur.

NWBM use a non-aqueous base fluid, with water and chemical additives. The environmental effects of NWBM are determined by the base fluid used; however the additives typically adsorb to particles in the cuttings (IOGP 2016). NWBM cuttings are hydrophobic and do not disperse or dissolve in the water column (IOGP 2016). As such, they are not expected to dissolve into the water column.

Due to the intermittent nature of drill cuttings and drilling fluid discharges, the short (~50 days per well) drilling campaign, and that peaks in TSS are expected to only remain for periods of minutes following a discharge, the routine and non-routine discharge of drill cuttings and drilling fluids within the Operational Area is expected to have no lasting effect on water quality.

Marine Sediments

Surface and subsea discharges of drill cuttings and drilling fluids could result in particles accumulating on the seabed, which may result in a localised and temporary change in sediment quality (e.g. physicochemical or composition), depending on the volume and type of contaminants.

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Impact assessment

Marine dispersion modelling predicted that local sedimentation would occur as a mound around the well site, and that the thickness of the deposits generated by the particles settling on the seabed decreases exponentially with distance from the drilling location (RPS 2026). Modelling indicated that the distance to ecological impact threshold (6.5 mm) is up to ~0.26 km for 95th percentile exposure (RPS 2026). The modelling also indicated that there is no potential for thin (0.1 mm) deposits of sediment to settle out at distances greater than 1.2 km (RPS 2026).

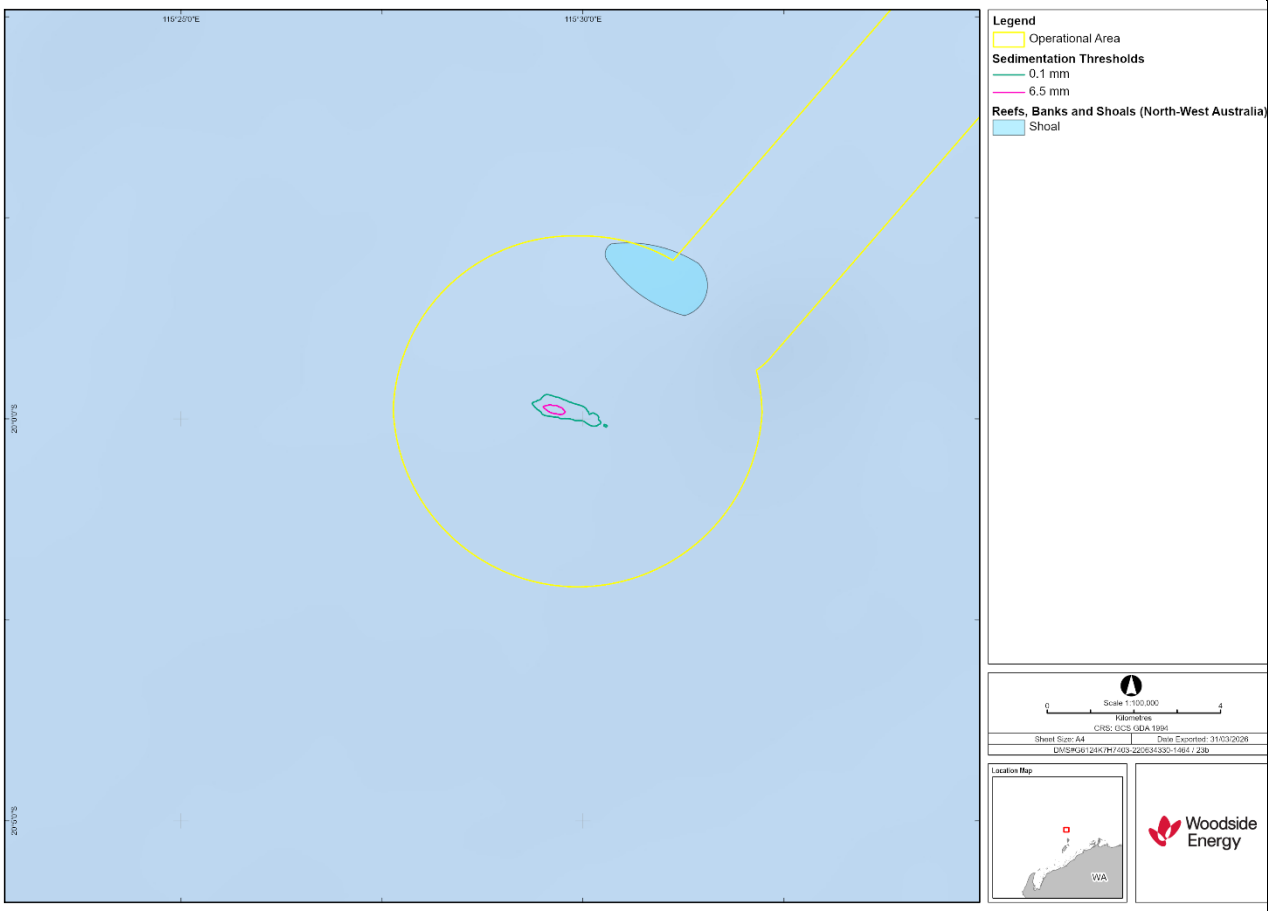


Figure 6-2: Predicted 95th percentile sediment thickness under annualised environmental conditions

Monitoring and modelling undertaken by Jones et al. (2021) of a drilling campaign at LPA, indicated that an area up to ~50 m from the drilling site showed a build-up of cuttings and muds. Beyond this distance, the build-up decreased and gradually thinned to a veneer of fine sediments.

All wells will be drilled with either seawater (with basic additives) or WBM for the top-hole sections (Section 3.7). As described above, additives to WBMs are typically either inert in the marine environment, naturally occurring benign materials, or rapidly biodegradable organic polymers.

Most of the metals detected in drilling muds are primarily trace impurities in barite, bentonite clay, or the sedimentary rocks (drill cuttings) in the formations penetrated by the drill bit (Neff 2008). Barite and bentonite have been referred to as practically inert from a toxicological perspective (Neff 1987; Smit et al. 2008). The metals of environmental concern (because of their potential toxicity and persistence) that may be present in some drilling mud barites include cadmium, chromium, copper, mercury, lead, and zinc, which are primarily insoluble mineralised sulfide salts in the barite (Neff 2008) and have limited environmental mobility. Laboratory testing on industrial barite samples indicates that mercury and other trace metals are not released in significant quantities into seawater or the pore water of marine sediment (Crecelius et al. 2007). Given the low concentrations of trace metals within the stock barite that would be within WBM, the overall volumes of heavy metals within the drilling fluid discharges are minimal.

IOGP (2016) summarised several field studies of cuttings and associated WBMs from top-hole drilling—they found that cuttings could be detected visually or as elevated barium concentrations in benthic sediments within 10–150 m of the discharge, with a greater spread down-current. This is consistent with measurements of barium in the sediment taken during a drilling campaign which showed elevated concentrations at 50 m from the drilling site, but decreased with increasing distance away (Jones et al. 2021). Jones et al. (2021) also detected some chromium around the wells, however this was well below Australian and New Zealand Guidelines for fresh & marine water quality (ANZG)

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Impact assessment

sediment quality guidelines. As such, a change in sediment quality from top-hole drilling discharges is expected to be localised to within hundreds of metres of the drilling site, and limited to inert minerals (e.g. barite) and trace amounts of mineralised metal sulfides.

Bottom-hole drilling may be undertaken using either WBM or NWBM depending on the technical requirements for the well (Section 3.7.5). NWBM remain as non-dispersible clumps of particles if the amount of NWBM on the cuttings is high (IOGP 2016). These clumps tend to settle rapidly and accumulate on the seafloor over a small area near the discharge location (Neff 2010; IOGP 2016). NWBM discharges in water depths of <400 m are usually deposited within ~100–200 m of the discharge (IOGP 2016).

WBM discharged at the surface from a drilling rig tend to disperse more widely and settle more slowly than NWBM; estimated distances for deposition range from ~100 m to >1 km (IOGP 2016). Jones et al. (2021) detected slightly elevated barium levels >2 km from the drilling site. This is consistent with other monitoring that referenced elevated sediment barium concentrations in sediment samples up to 1000 m and 3000 m from the platforms before decreasing to background levels (Jones et al. 2021).

Due to the localised area of effect for sedimentation, and trace amounts of constituents of concern in drilling fluids, the routine and non-routine discharge of drill cuttings and drilling fluids within the Operational Area is expected to have no lasting effect on sediment quality

Planktonic Communities

Physicochemical changes in water quality as a result of routine and non-routine drill cuttings and drilling fluid discharges has the potential to change planktonic communities within the water column.

Plankton have a patchy distribution linked to localised and seasonal productivity that produces sporadic bursts in populations (DEWHA 2008b). Any effects to plankton have to be assessed in the context of natural mortality rates, which are generally considered high and variable.

As described above, predicted changes to water quality are a localised and temporary increase in suspended sediments. Adverse changes to the chemical water quality parameters are not expected to occur due to the inert nature of additives to WBMs. Therefore, this evaluation is focussed on potential suspended sediment impacts to planktonic communities.

Impacts to zooplankton from turbidity are associated with variations in predator–prey dynamics, which favour planktonic feeders over visual feeders (Gophen 2015). Smit et al. (2008) also suggests that impacts to zooplankton occur due to physical effects to filter-feeding and respiration organs. Impacts to phytoplankton occur with decreases in available light, which reduces productivity (Dokulil 1994). Concentrations at which impacts to phytoplankton may occur are highly localised and unlikely to occur >25 m from the discharge point (IOGP 2016; Smith, Brandsma, and Nedwed 2004).

Jenkins and McKinnon (2006) reported that levels of suspended sediments greater than 500 mg/L are likely to produce a measurable impact upon larvae of most fish species, and that levels of 100 mg/L will affect the larvae of some species if exposed for >96 hours. Jenkins and McKinnon (2006) also indicated that levels of 100 mg/L may affect the larvae of several marine invertebrate species, and that fish eggs and larvae are more vulnerable to suspended sediments than older life stages. Note: Any impact to fish larvae is expected to be limited due to high natural mortality rates (McGurk 1986), intermittent exposure, and the dispersive characteristics of the open water near the wells.

Previous dilution estimates (Hinwood et al. 1994; Neff 2005) suggest suspended sediment concentrations caused by the discharge of drill cuttings will be well below the levels required to cause an effect on fish or invertebrate larvae (i.e. predicted levels are well below a 96-hour exposure at 100 mg/L, or instantaneous 500 mg/L exposure). Modelling indicated a maximum TSS concentration in the water column of 126.6 mg/L for 95th percentile exposure (RPS 2026). Note that these results represent concentrations that would only be reached 5% of the time, and are based on instantaneous predictions for TSS. Further, the modelling indicated that the distance to ecological impact threshold for TSS (10 mg/L) is up to ~0.4 km for 95th percentile exposure (RPS (2026).

As described in the consequence evaluation above, the discharge of drill cuttings and drilling fluids within the Operational Area is not expected to result in a lasting effect to water quality. Given the patchy and variable plankton communities, these discharges are unlikely to cause a change in planktonic communities at a measurable level and will not change the viability of the population or ecosystem.

Offshore Habitats and Biological Communities

Sedimentation, and physicochemical changes sediment or water quality resulting from routine and non-routine drill cuttings and drilling fluid discharges has the potential to change benthic habitats and communities.

The main environmental disturbance from discharging drill cuttings and drilling fluids is associated with smothering and burying sessile benthic and epibenthic fauna (Hinwood et al. 1994; Jones et al. 2021). Elevated TSS levels are also a well-known hazard for filter feeder communities (Jones et al. 2021).

Modelling indicated that the distance to ecological impact threshold for sediment (6.5 mm) is up to ~0.26 km for 95th percentile exposure (RPS 2026). The largest area predicted to be exposed above this ecological threshold was

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Impact assessment

~0.06 km^2 (RPS 2026). Further, the modelling indicated a maximum bottom thickness of 104.5 mm for 95th percentile exposure (RPS 2026).

This is supported by monitoring and modelling undertaken by Jones et al. (2021) of a drilling campaign at LPA, which indicated:

- a zone of high impact surrounding the drilling site up to 50–75 m
- an area of medium impact up to the ends of the 200 m transect lines.

The zone of high impact is due to a combination of riserless top-hole sections that discharged straight to the seabed, as well as surface discharges from the MODU (Jones et al. 2021). Effects to the sparse benthic filter feeder communities close to the wells were observed, but no effects were seen on the epibenthic or demersal fish assemblages across the nearby mesophotic reef, Rankin bank (Jones et al. 2021).

Although chemicals can usually be detected within the sediment surrounding the discharge site, impacts to benthic flora and fauna are generally subtle (Cranmer 1988; Neff et al. 1989; Hyland et al. 1994; Daan and Mulder 1996; Currie and Isaacs 2005; OSPAR Commission 2009; Bakke, Klungsøyr, and Sanni 2013). An increase in NWBM in sediments may deplete oxygen in surface layers; development of hypoxia in surface layers, accompanied by increased concentrations of ammonia and sulfide, often leads to a decrease in benthic community diversity (IOGP 2016). Terrens et al. (1998) found that NWBM was not detectable in sediments after 11 months. Although some components of WBM or NWBM are potentially bioaccumulative, organisms can oxidise and expel aromatics—i.e. aromatic hydrocarbons may be bioavailable but they are not expected to bioconcentrate (Melton et al. 2000). Mobile benthic fauna (e.g. crabs, shrimps, demersal fish) tend to avoid affected areas; therefore, no impacts to these fauna are expected (IOGP 2016).

Most of the metals detected in drilling muds are primarily trace impurities in barite, bentonite clay, or the sedimentary rocks (drill cuttings) in the formations penetrated by the drill bit (Neff 2008). Barite and bentonite have been referred to as practically inert from a toxicological perspective (Neff 1987; Smit et al. 2008). Trace metals within barite are primarily insoluble mineralised sulfide salts (Neff 2008). Laboratory testing on industrial barite samples indicates that mercury and other trace metals are not released in significant quantities into seawater or the pore water of marine sediment (Crecelius et al. 2007). As barite releases little of these metals to seawater or sediment pore-water, it is not likely that barite will cause environmental effects to organisms living on or near the seafloor. A study on the impacts of drilling in Bass Strait by Terrens et al. (1998) observed biological effects within 100 m of the drilling site shortly after drilling; recovery of seabed communities across the area were reported within 4 months. Neff (2010) found that recolonisation of NWBM cuttings piles in cold-water marine environments began within one to two years of ceasing discharges, after the hydrocarbon component of the cutting piles had biodegraded. Both Balcom et al. (2012) and IOGP (2016) indicate that impacts to benthic communities as a result of drill cuttings and drilling fluids discharges are minimal, resulting in highly localised impacts; benthic environments recover after drilling ceases. The studies reviewed in IOGP (2016) reported varying recovery times, but substantial recovery within one year post-drilling was common. Although recovery time may differ, species present in soft sediment are well adapted to changes in substrate, especially burrowing species (Kjeilen-Eilertsen et al. 2004), and they recover quickly.

The benthic habitat within the Operational Area is expected to be predominantly dominated by soft sediments with infauna (nearfield wells) and areas of sparse filter feeder communities (Wilcox wells); these habitats are broadly represented throughout the NWMR (Worley 2025) (Section 4.3). Benthic organisms (including benthic infauna and epifauna) below each cuttings pile may be smothered; however, this would be limited to a localised area. Ecological impacts to benthic biota as a result of smothering are predicted to occur when sediment deposition is equal to or greater than 6.5 mm in thickness (IOGP, 2016) which is expected to be ~250 m around the well.

The unnamed shoal is approximately 2 km north east of the Wilcox drilling centre and therefore ecological impacts are not expected. In addition, Rankin Bank and Wilcox Shoal are >8 km west and ~21 km west-south west of proposed drilling at the Yodel Updip, respectively. Wilcox Shoal is also ~12 km north-east of the proposed drilling at the Wilcox field. No sedimentation (at either the ecological threshold or as a low-level veneer) is predicted to occur at any of these shallow bathymetric features because of drill cuttings or drilling fluid discharges during the drilling Program.

Given the temporary and intermittent nature of the discharge, the predicted spatial extent of exposure, the predominantly soft sediment habitats within the Operational Area, and that habitats and communities are expected to recover, the routine and non-routine discharge of drill cuttings and drilling fluids is not expected to result in a consequence greater than minor short-term disturbance to localised areas but not affect ecosystem function.

Key Ecological Features

Sedimentation, and physicochemical changes sediment or water quality resulting from routine and non-routine drill cuttings and drilling fluid discharges has the potential to change benthic habitats and communities.

The largest area predicted to be exposed above this ecological threshold for sedimentation (6.5 mm) was ~0.06 km^2 (RPS 2026) for one well. Two of the nearfield wells are located on the KEF and therefore up to ~0.12 km^2 may be impacted however this represents a very small proportion (less than 0.001%) of the overall KEF.

As described in Section 4.7, the values of this KEF include providing areas of hard substrate that may result in higher diversity and enhanced species richness relative to surrounding areas of predominantly soft sediment. However, it is predicted that the areas around the nearfield wells is soft sediments and no hard substrate was identified. The

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Impact assessment
potential impacts to benthic habitats and communities from drill cuttings and drilling fluid discharges are described above. Physical habitat modification is listed as a pressure within the Marine Bioregional Plan for the NWMR, but has not been identified a pressure of concern for this KEF (DSEWPaC 2012b). Given the temporary and intermittent nature of the discharge, the predicted spatial extent of exposure, and the variable benthic habitat (sand interspersed with areas of rubble or pavement) within the KEF, the routine and non-routine discharge of drill cuttings and drilling fluids is not expected to result in a consequence greater than minor short-term disturbance to localised areas but not affect ecosystem function ***AMPs*** The potential for changes to the values of the Montebello Marine Park may occur from sedimentation or a change in suspended solids within the marine park resulting from the routine or non-routine discharge of drill cuttings or drilling fluids from drilling activities adjacent to the marine park associated with the Wilcox reservoir. No top holes for production wells will occur within the boundary of the marine park (Section 4.8.1). Modelling indicated that the distance to ecological impact threshold for sedimentation (6.5 mm) is up to ~0.26 km for 95th percentile exposure (RPS (2026). The modelling also indicated that there is no potential for thin (0.1 mm) deposits of sediment to settle out at distances ~1.2 km (RPS (2026). Therefore, depending on the exact location of the drilling activity, limited exposure above ecological sedimentation thresholds may occur within the marine park; and some deposition (<6.5 mm thick) may occur. Modelling indicated that the distance to ecological impact threshold for TSS (10 mg/L) is up to ~0.44 km for 95th percentile exposure (RPS 2026). Modelling also indicated that the area of influence of TSS (1–3 mg/L) ranges between ~2.6–9.5 km for 95th percentile exposure (RPS (2026)). As such, changes in suspended sediment loads are expected to occur within the marine park boundary, with concentrations depending on the exact location of the drilling activity. The values of the Montebello Marine Park (as described in Section 4.8.1) include ecosystems representative of the Northwest Shelf Province, including areas of ancient coastline. Benthic habitat surveys within the northern section of the marine park indicate that it is a relatively flat and sandy seabed with variable coverage of benthic epifauna (e.g. sponges, octocorals) (Section 4.5; (Advisian 2019; Worley 2025)), which is similar to the benthic habitats and communities expected to occur throughout most of the Operational Area, and which are broadly represented throughout the NWMR. However, as described above, predicted changes to water quality are a localised and temporary increase in suspended sediments. Adverse changes to the chemical water quality parameters are not expected to occur. Potential impacts to benthic habitats and communities are also highly localised (e.g. up to ~250 m) from a drilling location, and as such no or negligible change to benthic habitats and communities within the Montebello Marine Park is expected.
Summary of Potential Impacts to environmental values(s)
Given the adopted controls, it is considered that routine discharges of drill cuttings and drilling fluids described will not result in a potential impact greater than minor short-term disturbance to localised areas but not affect ecosystem function (i.e. Environment Impact – D).

Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)43***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
Legislation, codes and standards				
No additional controls identified.				
Good practice				
Drilling and completions fluids will have an environmental assessment completed prior to use.	F: Yes. CS: Minimal cost. Standard practice.	Environmental assessment of chemicals in discharges will reduce the consequence of impacts resulting from	Benefits outweigh cost/sacrifice.	Yes C 7 . 1

[43] *Qualitative measure*

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)43***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
		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.		
Implement the following requirements: • Where NWBM are required include justification in the Fluid Selection Memo • Maintain average OOC at <6.9% by weight on wet cuttings (for sections drilled with NWBM)	F: Yes. CS: Minimal cost. Standard practice.	The written justification takes onboard the technical need for NWBM use, receiving environment, cost and additional controls that may be required. By undertaking formal assessment, the potential impacts are well understood.	Benefits outweigh cost/sacrifice.	Yes C 9.1
Prohibit bulk overboard discharge of NWBM	F: Yes. CS: Minimal cost. Standard practice.	By prohibiting bulk overboard discharge of NWBM, reduces the environmental risk.	Benefits outweigh cost/sacrifice.	Yes C 9.2
NWBM base oils selected based on expected toxicity	F: Yes. CS: Minimal cost. Standard practice.	By selecting a base oil with lower toxicity the consequence of the release on the environment is reduced	Benefits outweigh cost/sacrifice.	Yes C 9.3
Bulk operational discharges conducted under MODU's permit to work system (to operate discharge valves/pumps)	F: Yes. CS: Minimal cost. Standard practice	The MODU's PTW may slightly reduce the volumes of bulk discharges occurring, but it is unlikely to be significant given that bulk discharges are often operationally required and cannot be eliminated.	Benefits outweigh cost/sacrifice.	Yes C 9.4
Displacement, brine, workover or intervention fluids contaminated with hydrocarbons will be treated prior to discharge or containment. If discharge specification not met the fluid will be returned to shore.	F: Yes. CS: Minimal cost. Standard practice.	Ensuring <1% oil content will provide a small reduction in consequence when fluids are discharged to the environment.	Benefits outweigh cost/sacrifice.	Yes C 9.5

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)43***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
SCE used to treat NWBM cuttings prior to discharge.	F: Yes. CS: Minimal – more frequent cuttings sampling and testing.	Achieving average oil on cuttings (sections using NWBM only) discharge limit of 6.9% or less oil on wet cuttings will have a small reduction in consequence.	Benefits outweigh cost/sacrifice.	Yes C 9.6
In event of SCE failure (including auger) while drilling with NWBM, the initial action will be to cease drilling and determine whether to repair SCE or drill ahead until next practicable opportunity to trip out of the hole. If cuttings are discharged during dryer or auger failure, measurement of OOC to occur more frequently from shakers	F: Yes. CS: Cost and schedule implications due to cessation of drilling	Ceasing of drilling in the event of equipment failure will allow for time to assess feasibility of drilling ahead while still meeting residual OOC discharge requirements	Benefits outweigh cost/sacrifice.	Yes C 9.7
Daily operations reports, or similar, record volumes of overboard drilling discharges.	F: Yes CS: Minor costs.	Provides opportunity to confirm that actual discharges are within the discharge volumes outline in the EP.	Benefit outweighs cost.	Yes C 9.8
Professional judgement – Eliminate				
No additional controls identified				
Professional judgement – Substitute				
No additional controls identified				
Professional judgement – Engineered Solution				
Mud pit wash residue will be measured for oil content prior to discharge.	F: Yes. CS: Minimal cost. Standard practice.	Ensuring <1% oil content will provide a small reduction in consequence when residue is discharged to the environment.	Benefits outweigh cost/sacrifice.	Yes C 9.9
WBM drill cuttings returned to the MODU will be processed using SCE equipment.	F: Yes. CS: Minimal cost. Standard practice.	Limiting the discharge of WBMs through reuse will reduce the consequence of the using WBM.	Benefits outweigh cost/sacrifice.	Yes C 9.10
Drill cuttings returned to the MODU will be discharged below the water line.	F: Yes. CS: Minimal cost. Standard practice.	Discharge of drill cuttings below the water line will reduce carriage and dispersion of cuttings thereby reducing the consequence of cuttings discharges	Benefits outweigh cost/sacrifice.	Yes C 9.11

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)43***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
		during the Petroleum Activity.		
No top hole locations within the Montebello Marine Park	F: Yes. CS: Minimal cost. Standard practice.	Mitigates the risk of sediment plumes generated during riserless drilling entering the AMP	Benefits outweigh cost/sacrifice.	Yes See adopted locations (Table 3-3)
Cuttings reinjection into formation. Cuttings are crushed, slurrified and pumped to a desired geological structure with a suitable seal, below the seabed through an annulus or tubing.	F: No. No concurrent drilling or direct sequential drilling planned which would require cuttings to be stored prior to re-injection.	Not considered – control not feasible.	Not considered – control not feasible.	No
Riserless Mud Recovery (RMR) system to return top-hole cuttings/mud from the riserless section of the well to the MODU prior to treatment onboard and discharge from the MODU (below the water line).	F: Yes CS: Additional costs associated with the installation of the RMR system	Has the potential to reduce the size of cuttings pile in the vicinity of the top hole however it may increase the area of ecological impact (>6.5mm) from sedimentation.	Disproportionate. Given the adopted controls and low current risk rating, the high cost/sacrifice outweighs the benefit gained over the duration of the Petroleum Activity.	No
Riserless Mud Recovery (RMR) system to return top hole cuttings from the riserless section of the well to the MODU prior to transport to an alternative discharge location or back to shore for disposal. OR Return riser-in-place cuttings for disposal at another marine location or onshore for processing and land disposal (skip and ship) for whole well to reduce risk of benthic disturbance. OR Return riser-in-place cuttings for all sections drilled with NWBM for disposal onshore (to reduce potential residual oil on cuttings to environment).	F: Yes. CS: Primary cost/sacrifice of this option is the additional handling required in transporting cuttings to alternative disposal location. Particularly the health and safety risks associated with high frequency of support vessel activity alongside the rig and the amount of crane lifting required if a cuttings skip/drilling waste container system were employed. Other cost/sacrifice elements which are considered include: • Further treatment of cuttings onshore is required to ensure a standard suitable for landfill. Class II disposed locally (e.g. Karratha).	Compared to adopted control, return riser in place cuttings would achieve a reduction in cuttings/mud discharged (although discharge would still occur during riserless drilling on the basis this control is not adopted) at each well location; however, given current impact assessment and controls adopted, this would not result in a significant reduction on consequence.	Disproportionate. Given the adopted controls and low current risk rating, the high cost/sacrifice outweighs the benefit gained over the duration of the Petroleum Activity. Impact assessment has determined a minor from overall cuttings/mud discharge to benthic communities which are broadly represented throughout the NWMR therefore benefit to be gained from cuttings/mud recovery is disproportionate to the risks introduced by cuttings relocation (including if an alternative system which doesn't use transport containers was implemented).	No

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)43***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
	• Class III landfill requires transport to Geraldton or Perth (NWBM) • Increased risk of unplanned vessel collision or loss of cuttings during transfer activities • Environmental impact (suspended sediment/ sedimentation) of discharging cuttings at new location and other regulatory approvals may also be required (e.g. sea dumping permit). • Potential halt to drilling activity if transfer operations are delayed due to weather or operational issues • Additional environmental impact incurred (air emissions) from vessel use and onshore trucking for transportation of cuttings. • Disposal via landfill and/or treatment does not eliminate an environmental impact. These options have their own impacts and therefore disadvantages if implemented			

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)43***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
Reduce total drill cuttings by implementing slim well design.	F: No. Slim well design is not considered feasible based on the following factors: The well design is optimised to minimise the size of hole drilled while still being able to reach the targets and meet development objectives safely. CS: Not considered – control not feasible.	Not considered – control not feasible.	Not considered – control not feasible.	No
Water quality and/or sediment monitoring of drill cuttings or drilling fluids to verify impact during activity.	F: Yes. CS: For in-water sampling utilising ROV - Time and logistics for tool change out from operational tools to specialised scientific sampling tools. Additional personnel on board to operate ROV and coordinate sampling program. Low ROV availability due to operations can limit time to perform environment monitoring. If additional ROV is required on the MODU, deck space and resources to run/store/service ROV. Resources for sample processing (space/ equipment/ personnel).	No environmental benefit would be gained by implementation of monitoring during the activity. Monitoring could be used to inform additional control measures in future drilling activities; however, there is a considerable body of existing scientific literature, including a study at LPA which is within the Operational Area (Jones et al 2021), on potential impacts of drill cuttings and impacts are generally well understood. Furthermore, it is not guaranteed that additional controls would be feasible, or if they would provide any environmental benefit.	Disproportionate Cost/sacrifice outweigh benefit to be gained in in reducing environmental impacts. Although adoption of this control could be used to verify EPOs associated with drilling mud and cutting discharge, current modelling is based on site specific information and alternative controls identified achieve an appropriate outcome.	No
Use SCE with secondary treatment for NWBM: Thermomechanical systems (to achieve <1% average oil on cuttings).	F: Yes – with associated infrastructure including vessels for offline storage and delivery to thermomechanical dryer.	A reduction in consequence would be achieved by reducing the average oil on cuttings discharged.	Disproportionate. Cost/sacrifice outweighs benefit to be gained in the context of existing environment and drilling campaign.	No

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)43***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
	CS: The primary cost/sacrifice of this option is the monetary outlay for acquisition and implementation which is estimated at $800,000 to mobilise, install and demobilise, along with a running cost of about $32,000/day. Other factors considered include: • It is estimated that it would take a minimum of seven months to mobilise, install and commission the system on to the MODU. • Complex and unfamiliar system to integrate with the rig systems. • Increased health and safety exposure due to: – crew of nine engineers and technicians required to run the plant. – multiple crane lifting operations, during installation, operations and demobilisation. – rotating machinery heat illness – deck congestion due to large footprint of the plant.			

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)43***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
Time restricted discharge of WBM and/or cuttings to align with tide/current or other oceanographic events.	F: Yes. CS: Disruption to drilling operations in having to stop drilling at time when discharge of WBM and/or cuttings might not be permitted. Additional mud storage volume required.	Given the offshore location, oceanographic changes are unlikely to significantly affect the dispersion of cuttings and therefore no environmental benefit would be gained.	Disproportionate. The cost/sacrifice outweighs the benefit gained – No hard coral or other photo- sensitive benthic communities in the vicinity of the well to rationalise phased/ timed discharge.	No
ALARP statement: On the basis of the environmental risk assessment outcomes and use of the relevant tools appropriate to the decision type, Woodside considers the adopted controls appropriate to manage the impacts and risks of drill cuttings and fluids discharges to the marine environment. As no reasonable additional/alternative controls were identified that would further reduce the impacts without grossly disproportionate sacrifice, the impacts and risks are considered ALARP.				

Demonstration of acceptability
Acceptability statement: The impact assessment has determined that, given the adopted controls, routine discharges of drilling cuttings and fluids to the marine environment are unlikely to result in a potential impact greater than slight, short-term impact (less than one year) on species, habitat (but not affecting ecosystems function), physical or biological attributes. Further opportunities to reduce the impacts and risks have been investigated above. The adopted controls are considered good oil-field practice/industry best practice. In addition, the Petroleum Activity is within the acceptable level of impact determined through the Goodwyn Area Infill OPP as the impact consequence level is consistent with the level rated in the OPP and the EPOs and controls from the OPP, including revised modelling, that are relevant to the routine discharges of drilling cuttings and fluids have been adopted. The potential impacts and risks are considered broadly acceptable if the adopted controls are implemented. Therefore, Woodside considers the adopted controls appropriate to manage the impacts and risks of these discharges to a level that is broadly acceptable, and compliance with those controls demonstrates that the EPOs are met.

EPOs, EPS and MC			
EPO	***Controls***	***PS***	***MC***
EPO 3c No long-term adverse effects to the values of Australian Marine Parks from the Petroleum Activity EPO-9a No adverse effects greater than a temporary change to water quality, during drilling activities, with no lasting effect from routine and non-routine drill cuttings and drilling fluid discharges.	C 7.1 See Section 6.7.6	PS 7.1 See Section 6.7.6.	MC 7.1 See Section 6.7.6
	C 9.1 Implement the following requirements:	PS 9.1 Drilling Fluid requirements are followed and NWBM only used where technically required.	MC 9.1.1 Records show NWBM Drilling Fluid requirements have been followed

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EPOs, EPS and MC			
EPO	***Controls***	***PS***	***MC***
EPO-9b No adverse effects greater than localised[44] habitat modification of benthic habitats and communities[45] from routine and non-routine drilling discharges during the Petroleum Activity	Where NWBM are required include technical justification. Maintain average OOC at <6.9% by weight on wet cuttings (for sections drilled with NWBM).		
	C 9.2 Prohibit bulk overboard discharge of NWBM	PS 9.2 No overboard disposal of bulk NWBM	MC 9.2.1 Incident reports of any unplanned discharges of NWBM
	C 9.3 NWBM base oils selected based on expected toxicity	PS 9.3 Group III base oils use in NWBM	MC 9.3.1 Fluid reports demonstrate that only Group III base oils used in NWBM.
	C 9.4 Bulk operational discharges conducted under MODU's permit to Work (PTW) system (to operate discharge valves/pumps).	PS 9.4 Increased level of assurance and verification on bulk operational discharges.	MC 9.4.1 Environmental inspection records demonstrate that bulk discharges are conducted under the MODU PTW system.
	C 9.5 Displacement, brine, workover or intervention fluids contaminated with hydrocarbons will be treated prior to discharge or contained. If discharge specification not met the fluid will be returned to shore.	PS 9.5 Achieve less than 1% by volume oil content before discharge.	MC 9.5.1 Discharge reports demonstrate contaminated fluids were less than 1% by volume oil content before discharge.
	C 9.6 SCE used to treat NWBM cuttings prior to discharge.	PS 9.6 Average OOC (sections using NWBM only) discharge limit of 6.9% or less oil on wet cuttings is achieved.	MC 9.6.1 Discharge reports confirm the average OOC for the entire well (sections using NWBM only) do not exceed limit.
	C 9.7 In event of SCE failure (including auger) while drilling with NWBM, the initial action will be to cease drilling and determine whether to repair SCE or drill ahead until next practicable opportunity to trip out of the hole.	PS 9.7 The decision whether to repair SCE or drill ahead has considered the estimated time for repairs and the amount of drilling until next planned trip out of hole, to ensure the OOC limit is not exceeded.	MC 9.7.1 Records demonstrate that in the event of auger or cuttings dryer failure (where no redundancy is available), active drilling is initially stopped as soon as safe to do so. Evidence of assessment to drill ahead with failed SCE can be produced.

[44] Defined as 2 km from the well location, based on the ecological impact from TSS and the lowest reportable deposition outcomes from the drill cutting modelling.

[45] Defined as the lowest reportable deposition outcomes from the drill cutting modelling.

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EPOs, EPS and MC			
EPO	***Controls***	***PS***	***MC***
	If cuttings are discharged during dryer or auger failure, measurement of OOC to occur more frequently from shakers		
	C 9.8 Daily operations reports, or similar, record volumes of overboard drilling discharges.	PS 9.8 Overboard drilling discharges are recorded	MC 9.8.1 Daily operations reports, or similar, show volumes of overboard drilling discharges.
	C 9.9 Mud pit wash residue will be measured for oil content prior to discharge.	PS 9.9 Achieve less than 1% by volume oil content before discharge	MC 9.9.1 Discharge report demonstrates after pit clean out (for pits potentially contaminated with base oil) demonstrate mud pit wash residue was less than 1% by volume oil content before discharge.
	C 9.10 WBM drill cuttings that are returned to the MODU will be processed using SCE equipment.	PS 9.10 WBM drill cuttings that are returned to the MODU processed using SCE equipment allowing reuse of mud prior to discharge.	MC 9.10.1 Daily drilling reports demonstrate that operational SCE is in use.
	C 9.11 Drill cuttings returned to the MODU will be discharged below the water line.	PS 9.11 Cuttings discharged below the water line.	MC 9.11.1 Inspection records confirm cuttings discharge chute/line below the water line.

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6.7.9 Routine and Non-Routine Discharges: Cement, Cementing Fluids, Subsea Well Fluids, Produced Water, Unused Bulk Product

Context		
Relevant Activities Drilling Activities – Section 3.7 Contingent Activities – Section 3.10	***Existing*** Environment Regional Context – Section 4.2 Habitats and Biological Communities – Section 4.5 Protected Species – Section 4.6	***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
Routine discharge of cement and cementing fluids, to the seabed and the marine environment.	X	X		X			A	E	-	-	GP PJ	Broadly Acceptable	EPO 9b, 10a, 10b,10c
Routine discharge of subsea well fluids (inc. BOP and well construction activity control fluids).	X	X		X									
Produced / reservoir water disposal.	X	X		X									
Non-routine discharge of unused bulk products at end of drilling campaign.	X	X		X									

Description of source of impact

Cementing Fluids, Cement and Grout

Cementing fluids, including cementing mix water, may require discharge to the marine environment under various scenarios.

Dry cement is pneumatically transferred between support vessels and the MODU. A small amount (typically 5% material loss) of dry cement may be vented and blown overboard during the pneumatic transfer process. At the commencement of the drilling campaign there may be a requirement to run a cement unit test to ensure the functionality of the cement unit and the cement bulk delivery system prior to performing an actual cement job. This test would result in a small volume (typically 10 m^3) of cement slurry being discharged at the sea surface. The slurry is usually a mix of cement and water however may contain stabilisers or chemical additives. There may also be infrequent, non-routine requirements to conduct cement unit tests throughout the drilling campaign. If required, this would result in an additional discharge of 10 m^3 per test.

When cementing the conductor and surface casings after top hole sections of a well have been drilled, cement must be circulated to the seabed to ensure structural integrity of the well. Excess cement is pumped to ensure structural integrity is achieved. If the hole is completely in-gauge and there are no downhole losses while pumping the cement, a maximum volume of 111 m^3 is estimated to be circulated to the seabed at each well location, which forms a thin concrete film on the seabed in close proximity to the well.

Wherever possible, the cement line flush volumes are included in the planned cement jobs. After each cement job, leftover cement slurry and/or cement spacer fluid in the cement pump unit and the surface lines is flushed and

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Description of source of impact
discharged to the sea to prevent clogging of the lines and equipment. This is estimated at about 50 m³ (based on up to five cement jobs x 10 m³ discharged per job per well). In the unlikely event a respud event is required it would result in additional cement jobs. Also, in the rare event that the cement products become contaminated, the entire volume (~140 m³) may need to be discharged to sea. Cement spacers can be used as part of the cementing process, within the well casing, to assist with cleaning of the casing sections prior to cement flow through. The spacers may consist of either seawater/fresh water with weighting agents and other additives (e.g. surfactants, solvents, defoamers, viscosifiers) to aid with the cleaning of casing and cement placement, and dye. The dye is used to provide a pre-indicator of cement overflow to the seabed surface, to ensure adequate cement height. Foam wiper balls may be used as part of the cementing process, ensuring that the: • cement is not contaminated by the displacement fluid through fluid separation. • a contaminated cement slurry could result in a compromised structural integrity of the casing strings that are installed in the top hole sections. • these casing strings are designed to support the load of the subsequent tubulars that are installed in the well and other equipment that is installed on top of the well (ie. Wellhead, Christmas tree, BOP stack) • landing string or work string is clear of any residual cement that may have not been flushed. • if the landing string or work string is not adequately cleaned of any residual cement, a cement sheath will form in the internal diameter of the tubulars which could plug up subsequent drilling assemblies or cause a restriction for the passage of equipment that may be run internally (eg. Drill pipe darts, e-line tools) Foam wiper balls may vary in size and material composition depending on the required application. Typical sizes range from around 8 cm to 30 cm when the wiper ball is new and unused. Where practicable, foam wiper balls that are constructed from natural rubber will be used however the use of high performance urethane foam wiper balls may be required depending on particulars such as temperature, pressure and chemical compatibility with the fluids in use. If used during top-hole sections where there is no riser in place, recovery of the foam wiper balls to the MODU will not be possible and residual components will be released to the environment. In this case, it is expected that the residual foam wiper ball components would be covered in the respective fluids (i.e. cementing fluids) and would therefore settle to the seabed in the vicinity of the well, assimilating with cuttings piles and cement. ***Subsea Fluids – Blow Out Preventors (BOP) and Well Construction Activity Control Fluids*** Subsea fluids are likely to be released during drilling, including the release of BOP control fluids. Subsea control fluids are water-based hydraulic control fluids used in control systems on the subsea trees and BOPs. The BOP is required, by legislation, to be regularly function tested when subsea. Subsea control fluids will be discharged during function testing of the BOP on installation and pressure testing. The BOP is function tested during assembly and maintenance and during operation on the seabed as described in Section 3.7.3. As part of this testing, small volumes (up to 90 L) of BOP control fluid (generally consisting of water mixed with a glycol based detergent or equivalent water-based anti-corrosive additive) are released to the marine environment. Each time a pressure and function test is undertaken approximately 3620 L of water-based fluid is released to the marine environment, of this approximately 4% is control fluid additive. BOP operation includes function and pressure testing approximately every 21 days, and a function test (approx. 2665 L) approximately every seven days, excluding the week a pressure test is conducted. ***Subsea Fluids – Displacement Fluids*** As required throughout activities with the riser connected, the well will be displaced from one drilling fluid system to another. A chemical clean-out pill or fluids train will be circulated between the different fluids. This will result in a discharge of operational fluids in accordance with the Woodside internal guidelines. ***Produced / Reservoir Water (Well Unloading)*** Completion/suspension fluids, as well as produced/reservoir formation water will be captured at surface during MODU unloading operations. The temporary production system water filtration package may be used to treat produced fluids prior to discharge. ***Non-routine discharge of unused dry bulk products at the end of the drilling campaign:*** Adequate stocks of dry bulk product are required to be stored on the MODU for the duration of the drilling activity for safe operations and well control purposes, as defined in the Woodside Well Control Bridging Document. Approximate quantities typically required are as follows: • cement: approximately 100 tonnes • barite: approximately 120 tonnes • bentonite: approximately 120 tonnes. At the end of the drilling activity and prior to demobilisation, Woodside is contractually obliged to remove the dry bulk product from the MODU. A number of options for removing excess product from the MODU exist, with the last option

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Description of source of impact
being to discharge to the marine environment. Woodside have developed a process to assess all safe and technically feasible options for the excess product before a decision is made to discharge overboard, this includes the considering the following options, as described below and illustrated in Figure 6-3 below: • Retaining products on the MODU to be used for subsequent Woodside drilling activities where the Petroleum Activity is not the last in the Woodside MODU sequence • Retaining products on the MODU to be used by the next titleholder who has the MODU on hire • Transferring to another Woodside-contracted MODU operating in the region • Transferring to another titleholder-contracted MODU operating in the region • Returning to shore for onshore storage and/or disposal if a facility is available that is both safe and technically feasible to transfer to • Discharged to the marine environment as a slurry if it is concluded that no other options outlined in Figure 6-3 (below) are feasible and that concentrations of mercury and cadmium in barite are <1 mg/kg and <3 mg/kg, respectively. Woodside's base plan is to retain dry bulk product on board the MODU at the end of the campaign, either for reuse by Woodside (if a subsequent Woodside drilling activity is contracted after the Petroleum Activity), or transfer the dry bulks to the next titleholder who has the MODU on hire. At the time this EP was written it was not yet confirmed whether Woodside would be contracting the MODU for subsequent petroleum activities or if there was another titleholder who planned to contract it. If there are no available options to leave the dry bulk products on the MODU, Woodside would look to transfer excess dry bulk product to another MODU operating in the region, either for Woodside use or for another titleholder. MODU schedules and regional activities are closely monitored to identify these transfer opportunities early, allowing sufficient time to coordinate transfer arrangements. At the time this EP was written it was not yet confirmed if there was another MODU to transfer dry bulk product to. The opportunity to transfer to another MODU would typically present toward the end of the drilling activity Woodside has a proven record of transferring dry bulk materials for reuse between operators and offshore facilities within these timeframes. The backload of dry bulks to shore at the end of the campaign has been explored with Woodside's fluids providers. However, current onshore infrastructure does not support the safe transfer of bulk product at high pressure. When the MODU receives bulk product from a shore base, it involves the pneumatic transfer of product from a lower pressure container/tank to the higher pressure MODU or supply vessel container/tank. However, transfer of bulk product from the MODU to shore would involve the transfer of that material, which is powder, from a high pressure to low pressure mobile tank. These high to low pressure transfers of dry powder carry safety risk as the pressure differential between the two systems can result in an uncontrolled, or rapid fluid flow causing pressure build up, beyond safe limits. Dry bulk products can be transported from shore when initially processed given the manufacturing locations have necessary infrastructure to package bulks in bags for transportation and sale, including bagging machines. These dry bulk products cannot be returned to shore in this same manner. Once the product is transported offshore, it is stored in tanks under high pressure conditions. To return product to shore in the same manner it is initially transported from manufacturing location, the product would need to be high-pressure transferred from the MODU or support vessel tanks to bags, which is not considered to be feasible. During the Petroleum Activity Woodside will continue exploring the feasibility of installing appropriate infrastructure including pressure release valves and other transfer equipment to enable safe transfer of dry bulk product to shore at the end of the drilling activities. If reuse of excess bulks for subsequent activities in the region is not possible and no feasible options for safe transfer of dry bulk product are identified by completion of the campaign, excess dry bulk will be discharged to the marine environment in the form of a slurry. This will only occur if it can be demonstrated that there are no other options identified in Figure 6-3. Use and discharge of all chemicals and products will be conducted in line with Woodside's internal guidelines (Section 7.2). Dry bulk materials generally pose little or no risk to the environment (PLONOR)[46], though barite may contain traces of heavy metals, such as mercury and cadmium. Woodside requires that concentrations of mercury and cadmium in barite be <1 mg/kg and <3 mg/kg, respectively. This conforms to the American Petroleum Institute (API) specification for drilling barite. Heavy metal analysis is conducted on individual batches of stock barite prior to mobilisation offshore. This sampling confirms that heavy metals of concern (cadmium and mercury) are within limits prescribed by API standards.

[46] *Barite (as barium sulphate) is on the OSPAR List of Substances Used and Discharged Offshore which are Considered to Pose Little or No Risk to the Environment (PLONOR). The List is available at: https://www.cefas.co.uk/media/p3sbu3bn/ospar-list-of-substances-used-and-discharged-offshore-which-are-considered-to-pose-little-or-no-risk-to-the-environment-plonor-update-2021.pdf*

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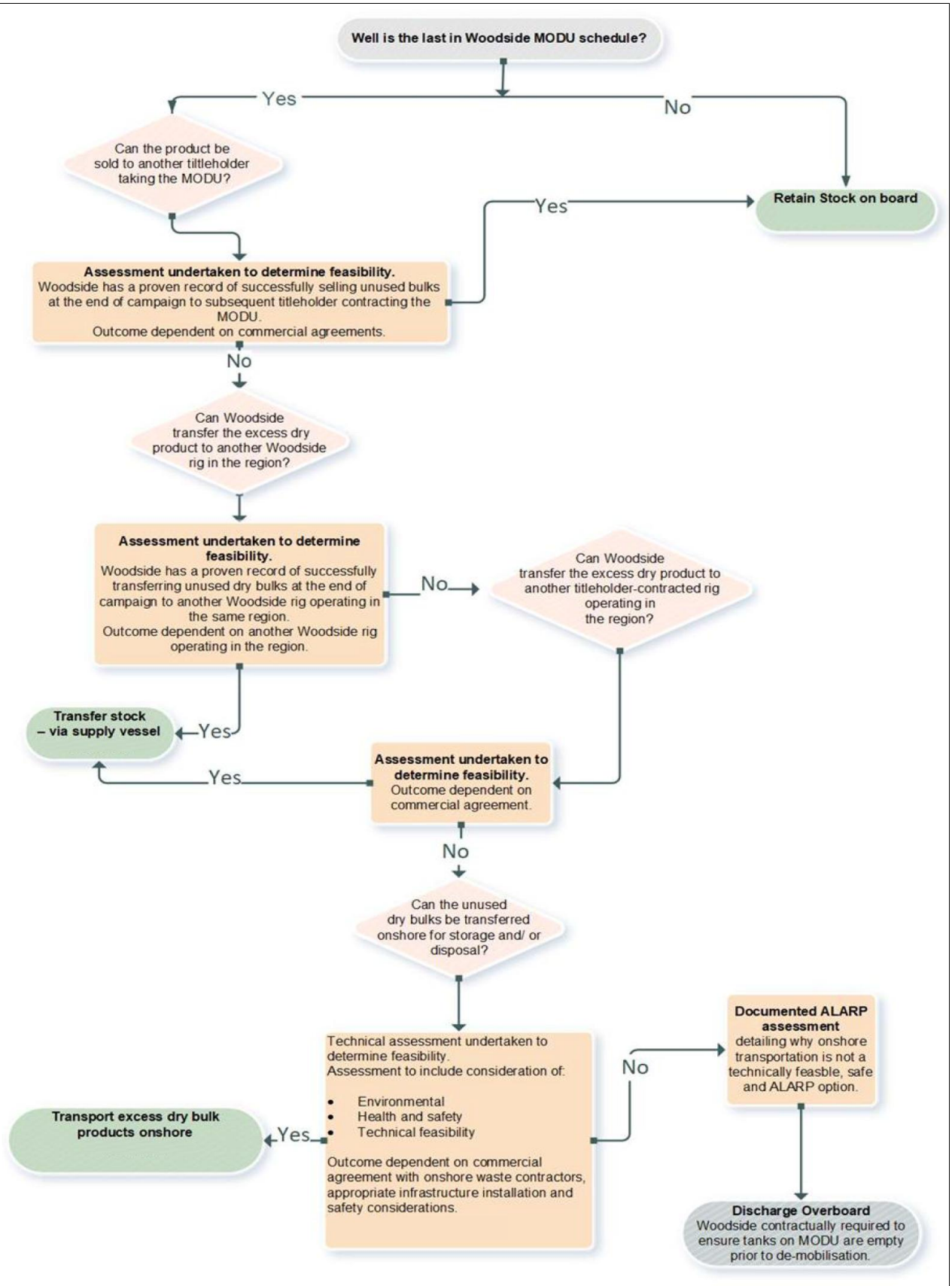


Figure 6-3: Management process for excess bulk product

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Description of source of impact

Contingency Activities

BOP Tethering

For BOP tethering, the system may comprise of an initial tensioning unit (ITU) component of the Liner Rope Tensioner (LRT) that sits on top of the Gravity Based Anchor (GBA) and operates using hydraulic fluid. The ITU may hold ~3L of fluid and typically, no top ups are required. ROV hydraulic system(s) may be used to for various purposes including tensioning the LRT and various other tooling functions utilising hot stabs. During ROV hot stabbing, a very small volume of hydraulic fluid between the two seals (10 - 15 mL) is released each time the hot stab is engaged. However, greater releases of hydraulic fluid (typically <500mL) do occur from time to time.

Well Intervention

Woodside may need to intervene or workover wells within the Operational Area. These activities generally occur within the wellbore and may include well testing and flowback activities, as well as any other drilling activities described in Sections 3.7 and 3.10, which may including discharge of subsea control fluid (control of subsea tree), completions fluids and well annular fluids. Discharges are not expected to be different from those previously described. Kill weight brine may also be used during well suspension or well abandonment, which is a brine (e.g. sodium chloride) of adequate density to control formation pressure.

Well unload to MODU - PW

If required, a temporary production system water filtration treatment package will be used to treat produced/reservoir water before discharge. Prior to discharging, the fluids are cycled through an oilbond filtration system and gauge tank. Water filtration is standard practice for well unloading operations and the produced water will be treated to meet 30 ppm OIW. Fluids that cannot be treated or flared will be sent onshore in tanks for disposal. Approximately 500 bbls (80 m^3) of produced water is yielded per well, which may be discharged via the treatment package.

Impact assessment

Environmental value(s) potentially impacted

Water Quality

Surface and/or subsea discharges of cement, cementing fluids, subsea fluids, PW, or bulk product may result in temporary changes to water quality. A reduction in water quality may occur via a change in suspended sediment within the water column, or from a change to the chemical content in the water column.

Cement-related discharges may occur at the seafloor or at the surface. Cement discharges increase the volume of suspended material in the water column, which can temporarily reduce water quality in a localised area. A surface discharge is expected to result in a larger spatial change to water quality because there is a greater possibility for wider dispersal (e.g. due to surface currents and waves) than discharging at the seabed.

Modelling of cement wash out discharges for another offshore project (BP Azerbaijan 2013) was used as it provides a comparison of the potential extent of exposure from cementing activities during drilling. Two hours after the start of discharge, plume TSS concentrations were determined to be 5–50 mg/L, and the horizontal and vertical extents of the plume were ~150 m and 10 m, respectively. Four hours after ceasing the discharge, modelling indicates that the plume had dispersed to concentrations <5 mg/L (BP Azerbaijan 2013). Based on this modelling, it is conservatively estimated that changes to water quality from cement discharges will be limited to within hundreds of metres of the discharge source.

Cement mixtures have the potential for toxicity due to the chemical additives that may be added. Discharge of cement mixtures is limited to the subsea release of cement (i.e. not discharge of dry cement or slurry). However, once the cement has hardened, chemical additives are locked into the cement (Terrens, Gwyther, and Keough 1998) and not are expected to pose any toxicological risk to the marine environment. Therefore adverse impacts to water quality from additives to cement mixtures are not predicted to occur.

Completion fluids are generally brine with additives that may be toxic (e.g. biocides, oxygen scavengers). PW may contain metals, hydrocarbons, glycols, phenols, organic acids, naturally occurring radioactive materials, and residual process chemicals. Changes to water quality are expected to be localised as these fluids will rapidly disperse within the Operational Area. As these are intermittent discharges, any change in water quality will also be temporary and short term, due to rapid dilution from ocean currents.

Control fluids are typically biodegradable and are expected to readily disperse after discharge to the marine environment. Modelling by BP (2013) indicates that a release of control fluids during BOP function testing is expected to reach a dilution of 3,000 times within a maximum displacement plume of 98 m. As the discharge of control fluids are intermittent small volumes, the subsequent changes to water quality are expected to highly localised and temporary.

Approximately 500 bbls (80 m^3) of treated produced / reservoir water may be discharged to the marine environment, meeting the 30 ppm OIW. Given the minor volumes of produced / reservoir water discharges, short discharge

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Impact assessment

durations and the low toxicity and high dispersion in the open, offshore environment, any impacts on the marine environment are expected to be slight and localised.

Therefore, routine and non-routine discharges of cement, cementing fluids, subsea fluids, PW, and bulk product within the Operational Area are expected to have no lasting effect on water quality.

Marine Sediments

Surface and/or subsea discharges of cement, cementing fluids, or bulk product could result in particles accumulating on the seabed, which may result in a localised and temporary change in sediment quality (e.g. physicochemical or composition), depending on the volume and type of contaminants.

Most cement discharges that will occur during the drilling activities will be at the seabed during cementing of the casing. Cement discharged at the seabed is not expected to disperse—it is designed to set in a marine environment and thus will set in situ, limiting its impact to the area directly around the well. BP (2013) modelled a 200 T subsurface cement discharge and determined that impacts would be limited to a radius of ~10–20 m (depending on the height of the discharge) from the well.

Once overspill from cementing activities hardens, the physical sediment properties of the area directly adjacent to the well (10–50 m) will be permanently altered (Terrens, Gwyther, and Keough 1998). As described above, once cement has hardened, any chemical additives (and potential source of toxicity) is locked into the cement (Terrens, Gwyther, and Keough 1998) and is not expected to pose any toxicological risk to the marine environment.

This estimated area for benthic habitat disturbance from cement discharges falls within the predicted exposure area for drill cuttings and drilling fluid discharges (Section 3.7.5). The highly localised (e.g. up to ~50 m) physical footprint at the well site is not expected to affect the overall sediment quality of the Operational Area, noting that sedimentation up to 6.5 mm is expected out to 260 m (Section 6.7.8).

Additional products such as barite and bentonite may be discharged in bulk during or at the end of the activity if they cannot be reused or taken back to shore. An overboard bulk discharge is expected to disperse over a wide area. Barite and bentonite have been referred to as practically inert from a toxicological perspective (Neff 1987; Smit et al. 2008). The metals of environmental concern (because of their potential toxicity and persistence) that may be present in some drilling mud barites include cadmium, chromium, copper, mercury, lead, and zinc, which are primarily insoluble mineralised sulfide salts in the barite (Neff 2008) and have limited environmental mobility. Laboratory testing on industrial barite samples indicates that mercury and other trace metals are not released in significant quantities into seawater or the pore water of marine sediment (Crecelius et al. 2007).Therefore, the routine and non-routine discharge of cement, cementing fluids, subsea fluids, PW, and bulk product within the Operational Area is expected to have no lasting effect on sediment quality.

Habitats and Biological Communities

Sedimentation, and physicochemical changes sediment or water quality resulting from routine and non-routine cement, cementing fluids, foam wiper balls, subsea fluids, PW, or bulk product has the potential to change benthic habitats and communities.

As described in the consequence evaluation above, the discharge of cement, cementing fluids, subsea fluids, PW, and bulk product within the Operational Area is not expected to result in a lasting effect to water or sediment is predicted to occur.

The area of sedimentation—and therefore potential smothering or burial of benthic habitats and communities—was predicted to be highly localised (up to ~50 m) around a well site. This estimated area for benthic habitat disturbance from cement discharges falls within the predicted exposure area for drill cuttings and drilling fluid discharges (Section 3.7.5).

An overboard bulk discharge of unused barite or bentonite is expected to disperse over a wide area. Barite and bentonite have been referred to as practically inert from a toxicological perspective (Neff 1987; Smit et al. 2008). Trace metals within barite are primarily insoluble mineralised sulfide salts (Neff 2008). Laboratory testing on industrial barite samples indicates that mercury and other trace metals are not released in significant quantities into seawater or the pore water of marine sediment (Crecelius et al. 2007). As barite releases little of these metals to seawater or sediment pore-water, it is not likely that barite will cause environmental effects to organisms living on or near the seafloor.

The benthic habitat within the Operational Area is expected to be predominantly dominated by sponges, soft corals with less coverage of bryozoans, hydroids, ascidians and soft sediment; this habitat is broadly represented throughout the NWMR (Worley 2025) (Section 4.5). The highly localised (i.e. up to ~50 m) physical footprint at the well site is not expected to affect the overall diversity or ecosystem function of the benthic communities of the Operational Area

Given the temporary and intermittent nature of the discharge, the predicted spatial extent of exposure, the routine and non-routine discharge of cement, cementing fluids, subsea fluids, PW, or bulk product is not expected to result in a consequence greater than slight short-term disturbance to localised areas but not affect ecosystem function.

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Impact assessment
Key Ecological Features
Sedimentation, and physicochemical changes sediment or water quality resulting from routine and non-routine cement, cementing fluids, subsea fluids, PW, or bulk product has the potential to change benthic habitats and communities.
As described in Section 4.7.1, the values of this KEF include providing areas of hard substrate that may result in higher diversity and enhanced species richness relative to surrounding areas of predominantly soft sediment. However, benthic habitat surveys within the KEF are characterised by soft sediment (Noting that only the nearfield wells are located on the KEF).
Physical habitat modification is listed as a pressure within the Marine Bioregional Plan for the NWMR, but has not been identified a pressure of concern for this KEF (DSEWPaC 2012b).
The potential impacts to benthic habitats and communities are described above.
Given the temporary and intermittent nature of the discharge, the predicted spatial extent of exposure, the routine and non-routine discharge of cement, cementing fluids, subsea fluids, PW, or bulk product is not expected to result in a consequence greater than slight short-term disturbance to localised areas but not affect ecosystem function.
AMPs
The potential for changes to the values of the Montebello Marine Park may occur from sedimentation or a change in suspended solids within the marine park resulting from the routine or non-routine discharge of cement, cementing fluids, subsea fluids, PW, or bulk product from drilling activities adjacent to the marine park associated with the Wilcox reservoir.
No top holes for production wells will occur within the boundary of the marine park (Section 3.7). Given the highly localised (i.e. up to ~50 m) physical footprint at the well site, exposure to the Montebello Marine Park from the routine or non-routine discharge of cement and wiper balls, cementing fluids, subsea fluids, PW, or bulk product is not predicted to occur. Therefore, potential changes to values of the Montebello Marine Park are not evaluated further.
Cumulative Impacts
Given the highly localised nature of these discharges and potential impacts, cumulative impacts to marine biota, water quality and sediments are expected to be slight and short-term.
Summary of Potential Impacts to environmental values(s)
The overall impact significance level for routine and non-routine discharges of cement, cementing fluids, subsea well fluids and unused bulk product is a slight, short-term impact (less than one year) on species, habitat (but not affecting ecosystems function), physical or biological attributes (e.g. Environment Impact – E).

Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)47***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
Legislation, codes and standards				
No additional controls identified.				

[47] *Qualitative measure*

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)47***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
Good practice				
Implement Woodside's Chemical Selection and Assessment Environment Guideline to demonstrate chemicals selected are ALARP.	F: Yes. CS: Minimal cost. Standard practice.	Environmental assessment of chemicals in discharges 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 7.1
During well unloading and completion activities, produced water will be processed through the well test water filtration treatment package prior to discharge to the environment. Water will be treated to less than 30 ppm oil in water content prior to discharge to the environment. If this cannot be met, fluids will be returned to shore.	F: Yes CS: Minimal cost, standard practice	Reduced toxicity to the marine environment when discharged.	Benefits outweigh cost/sacrifice.	Yes C 10.1
Professional judgement – Eliminate				
Do not use BOP/Xmas tree control fluids.	F: No. BOP and Xmas tree control fluids are critical to the operation of the BOP and Xmas trees. CS: Not considered, control not feasible.	Not considered, control not feasible.	Not considered, control not feasible.	No
Excess dry bulk products will be managed as per Figure 6-3.	F: Yes. However, the cement may not meet the required technical specifications, and hence not be usable. CS: Minor administrative costs associated with coordinating reuse opportunities. Cost savings associated with the re-use of dry bulk products.	Reusing bulk products or identifying an opportunity for it to be returned to shore may eliminate any environmental impacts associated with discharge to the marine environment, where these options are safe and technically feasible.	Benefits outweigh cost/sacrifice.	Yes C 10.2

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)47***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
	Moderate cost associated with onshore transportation and/ or disposal, if deemed feasible.	Furthermore, following the process outlined in Figure 6-3 confirms that discharge to the marine environment only occurs when there are no other safe or technically feasible options and therefore when ALARP.		
Limit stock barite to a maximum of 1 mg/kg dry weight of mercury, and a maximum 3 mg/kg dry weight of cadmium)	F: Yes. CS: Minimal cost. Standard practice.	Barite may contain heavy metals, such as cadmium and mercury, depending on their geological origin. Limiting the concentrations of cadmium and mercury is consistent with industry good practice. Limiting cadmium and mercury concentrations in barite reduces the environmental risk from discharges of barite to the environment, in the event barite is discharged to the marine environment in accordance with Figure 6-3.	Benefits outweigh cost/sacrifice.	Yes C 10.3
Professional judgement – Substitute				
No additional controls identified				
Professional judgement – Engineered Solution				
No top hole locations within the Montebello Marine Park	F: Yes. CS: Minimal cost. Standard practice.	Mitigates the discharges generated during drilling entering the AMP	Benefits outweigh cost/sacrifice.	Yes C 9.10
ALARP statement: On the basis of the environmental risk assessment outcomes and use of the relevant tools appropriate to the decision type, Woodside considers the adopted controls appropriate to manage the impacts and risks of cement, cementing fluids, subsea well fluids and unused bulk products. As no reasonable additional/alternative controls were identified that would further reduce the impacts without grossly disproportionate sacrifice, the impacts and risks are considered ALARP.				

Demonstration of acceptability
Acceptability statement: The impact assessment has determined that, given the adopted controls, cement, cementing fluids, subsea well fluids and unused bulk products discharges are likely to have no lasting effect. Further opportunities to reduce the impacts have been investigated above. The adopted controls are considered good practice. When considering the broader acceptability of the potential impacts consideration has been given to the legislative context, including international conventions such as the Minamata Convention on Mercury (Minamata Convention). While there are currently no specific legislative requirements relating to the Minamata Convention relevant to the management of mercury in this EP, Woodside has undertaken an assessment of the Petroleum Activity and the

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Demonstration of acceptability
Minimata Convention (including the measures in Article 9(5)) and considers that the Petroleum Activity is not inconsistent with the Minamata Convention. In addition the Petroleum Activity is within the acceptable level of impact determined through the Goodwyn Area Infill OPP as the impact consequence level is consistent with the level rated in the OPP and the EPOs and controls from the OPP that are relevant to routine and non-routine discharge of cement, cementing fluids, subsea well fluids and unused bulk products have been adopted. Therefore, Woodside considers the adopted controls appropriate to manage the impacts and risks of these discharges to a level that is broadly acceptable, and compliance with those controls demonstrates that the EPOs are met.

EPOs, EPS and MC			
EPO	***Controls***	***PS***	***MC***
EPO-9b No adverse effects greater than localised[48] habitat modification of benthic habitats and communities[49] from routine and non-routine drilling discharges during the Petroleum Activity EPO-10a No adverse effects greater than a temporary change to water quality, during drilling activities, from routine and non-routine cement and other drilling related discharges during the petroleum activity. EPO-10b No adverse effects greater than a localised[50] change to sediment quality from routine and non-routine cement and other drilling related discharges during the Petroleum Activity	C 7.1 See Section 6.7.6	PS 7.1 See Section 6.7.6	MC 7.1.1 See Section 6.7.6
	C 10.1 During well unloading and completion activities, produced water will be processed through the well test water filtration treatment package prior to discharge to the environment. Water will be treated to less than 30 ppm oil in water content prior to discharge to the environment. If this cannot be met, fluids will be returned to shore.	PS 10.1 Produced water discharged to the marine environment achieves discharge specification of<30 ppm	MC 10.1.1 Records demonstrate that discharge criteria were met before discharge or fluids were contained.
	C 10.2 Options for use of excess bulk cement, bentonite and barite will be managed as per Figure 6-3.	PS 10.2.1 Where the MODU is contracted for a subsequent Woodside drilling activity immediately following the Petroleum Activity, bulk cement, bentonite and barite is retained on-board for reuse.	MC 10.2.1 Records demonstrate that if the MODU is contracted for subsequent drilling activity immediately following the Petroleum Activity, dry bulk cement, bentonite and barite retained on board MODU for reuse at the conclusion of drilling campaign.
		PS 10.2.2 Where activity is last in Woodside MODU schedule, assess feasibility to transfer unused dry bulk cement, bentonite and barite to next titleholder who has the MODU on hire, or another Woodside- or other titleholder- contracted	MC10.2.2 Records demonstrate that where activity is the last in the Woodside MODU schedule, feasibility of transfer of unused dry bulk cement, bentonite and barite to next operator of the MODU, another Woodside or other titleholder rig in the region

[48] Defined as 2 km from the well location, based on the ecological impact from TSS and the lowest reportable deposition outcomes from the drill cutting modelling.

[49] Defined as the lowest reportable deposition outcomes from the drill cutting modelling.

[50] Localised has been defined as 2 km, based on a proxy from marine dispersion modelling for drilling discharges

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EPOs, EPS and MC			
EPO	***Controls***	***PS***	***MC***
		MODU operating in the region. If deemed feasible, bulks to be retained on board or transferred for reuse.	assessed and implemented if feasible.
		PS 10.2.3 Technical assessment of elimination of dry bulk discharge of barite on completion of drilling campaign undertaken, where options for reuse of bulk products on MODU or other MODUs in the region (PS 10.5.1, PS 10.5.2) are not feasible. Assessment to consider: • Environmental risk • Health and safety risk • Feasibility and timeframes for onshore disposal.	MC 10.2.3 Records demonstrate study undertaken where other options for reuse are not applicable
		PS 10.2.4 No discharge of bulk barite at completion of the drilling campaign, where assessment deems onshore transportation considered technically feasible and ALARP.	MC 10.2.4 Records demonstrate bulk barite transported onshore where transportation options are feasible and ALARP.
	C 10.3 Limit stock barite to a maximum of 1 mg/kg dry weight of mercury, and a maximum 3 mg/kg dry weight of cadmium)	PS 10.3 Sampling/ analysis of stock barite to ensure that heavy metals of concern (cadmium and mercury) are within limits prescribed by API standards: • Mercury (Hg): max 1 mg/kg (<1ppm) dry weight in stock barite. • Cadmium (Cd): max 3 mg/kg (<3 ppm) dry weight in stock barite.	MC 10.3.1 Records demonstrate that concentrations of heavy metals within stock barite used during the activity did not exceed: • Mercury (Hg): max • 1 mg/kg (<1ppm) dry weight in stock barite. • Cadmium (Cd): max 3 mg/kg (<3ppm) dry weight in stock barite.
	C 10.4 Unused MEG/ brine will be returned to port/ staging point for disposal where possible.	PS 10.4 Return all unused MEG/Brine for onshore disposal where possible.	MC 10.4 Records demonstrate all unused MEG/brine returned to shore for disposal where possible.
	C 9.10 See Section 6.7.8	PS 9.10 See Section 6.7.8	MC 9.10 See Section 6.7.8

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6.8 Unplanned activities (accidents, incidents, emergency situations)

6.8.1 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, 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.

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 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 oil-in-water 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.

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/or 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 the application of spreading filters that 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 undertaken by RPS undergo initial sensitivity modelling to determine appropriate time to add to the simulation after the cessation of the spill. The amount of time following the spill is based on the time required 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.

6.8.1.1 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: a long term (70-day) uncontrolled surface/subsurface release of 707,729 m^3 of PYA-01 condensate from the Wilcox well, representing loss of containment after a loss of well control
- Scenario 2: a long term (76-day) uncontrolled surface/subsurface release of 993,860 m^3 of Yodel-3 condensate from the Yodel Updip well, representing loss of containment after a loss of well control

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- Scenario 3: A short-term (instantaneous) surface release of 1000 m^3 of marine diesel near the furthest nearfield well, representing loss of fuel tank integrity after a vessel collision
- Scenario 4: A short-term (instantaneous) surface release of 1000 m^3 of marine diesel near the Wilcox wells, representing loss of fuel tank integrity after a vessel collision

These scenarios are considered appropriate to inform the risk assessment because:

- The volumes have been estimated based on a loss of well integrity resulting in a full well blowout. The estimates carry the worst-case assumption that blow out occurs once the well has been drilled to total depth and an unconstrained blow out occurs.
- The duration is based on Woodside's operational experience on the NWS and previous response time modelling for relief well drilling. Time frames have been informed based on vessel mobilisation, well intercept and kill estimations, and times to drill to total depth for a relief well. Redundancy has been included in this estimation for multiple attempts to kill the well.

Woodside identified analogous modelling that could be used to inform for scenarios 1, 3 and 4. These modelling studies were considered appropriate and conservative to inform the risk assessment. The modelled scenarios are summarised in Table 6-15.

Table 6-15: Summary of modelling credible hydrocarbon release scenarios

Scenario	Hydrocarbon type	Duration (days)	Maximum credible volume (m^3)	Locations
Scenario 1[1] Wilcox well loss of containment	PYA-01 Condensate	77	745,012	19˚59'53.8" S 115˚29'38.44"E (nominal Wilcox well location)
Scenario 2 Yodel Updip well loss of containment	Yodel-3 Condensate	76	993,860	19˚45'4.365" S 115˚43'38.44.79"E (Yodel Updip development well location)
Scenario 3 Vessel collision resulting in a fuel tank rupture at the nearfield wells	Marine Diesel	Instanteous	1000	
Scenario 4 Vessel collision resulting in a fuel tank rupture at the Wilcox wells	Marine Diesel	Instanteous	2000	20°03'1.4"S, 115°31'35.0"E (within Montebello Marine Park)

[1] modelling for a loss of well integrity in the Wilcox Prospect was originally undertaken in 2023 based on a preliminary estimated relief well duration of 77 days resulting in a release of circa 745,012 m^3. Contemporary studies estimate that a relief well could be executed within 70 days (including mobilisation of a MODU from South East Asia) releasing circa 707,729 m^3. Given the decreased duration and volume, the existing modelling is deemed conservative analogue.

6.8.1.2 Environment that May Be Affected 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

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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 5.

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/m^2), 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 of these hydrocarbon thresholds are presented in Table 6-16 and described in the subsections below.

Table 6-16: Summary of environmental impact 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)***
Condensate	10	1,000	10	100	1	10
Diesel	10	1,000	10	100	1	10

6.8.1.2.1 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/m^2 (dull metallic colours) based on the relationship between film thickness and appearance (Bonn Agreement 2015) (Table 6-17). 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/m^2 (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/m^2 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/m^2) 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, and
- fisheries.

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Table 6-17: 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 5000
Silver sheen	0.04 to 0.30	0.04 to 0.30	40 to 300

6.8.1.2.2 Dissolved hydrocarbon thresholds concentrations

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).

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.

6.8.1.2.3 Entrained hydrocarbon thresholds 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

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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.

6.8.1.2.4 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.

As described above in Section 0 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.

6.8.1.3 Operational and scientific monitoring

A planning area for operational and 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.

6.8.1.4 Hydrocarbon Characteristics

Table 6-18 summarises the characteristics of the hydrocarbons used as the basis for the modelling studies and subsequently used to inform the assessment of credible hydrocarbon spills. Additional detail on the characteristics of these hydrocarbons is also provided in the sections below.

Table 6-18: Characteristics of the hydrocarbon types used for modelling and ecotoxicological studies

Hydrocarbon Type	Density (g/m3) at 25 °C	Viscosity (cP) at 25 °C	Component	Volatile (%)	Semi-volatile (%)	Low volatility (%)	Residual (%)	Aromatics (%)
			Boiling Point (°C)	<180	180–265	265–380	>380	Of whole oil <380
PYA-01 Condensate	0.801	1.39	% of total	48	19	30	3	21.1
			% of aromatics	10.1	4.0	6.3	0.7	
Yodel 3 Condensate	0.761	0.540	% of total	63.1	25.3	9.1	2.5	8.7
			% of aromatics	1.8	3.45	3.45		
	0.829	4.000	% of total	6.0	34.6	54.4	5.0	3.0

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Hydrocarbon Type	Density (g/m3) at 25 °C	Viscosity (cP) at 25 °C	Component	Volatile (%)	Semi-volatile (%)	Low volatility (%)	Residual (%)	Aromatics (%)
			Boiling Point (°C)	<180	180–265	265–380	>380	Of whole oil <380
Marine Diesel			% of aromatics	1.8	1.0	0.2		

6.8.1.4.1 PYA-01 Condensate

PYA-01 condensate is a mixture of volatile and persistent hydrocarbons with high proportions of volatile and semi-volatile components (Table 6-18). In favourable evaporation conditions, ~48% by mass should evaporate within the first 12 hours; up to a further ~19% should evaporate within the first 24 hours; and a further ~30% should evaporate over several days. Around 3% of the hydrocarbon is shown to be persistent (Table 6-18).

The whole condensate has a 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 (RPS 2023c).

Soluble, aromatic hydrocarbons contribute ~21.1% by mass of the whole oil (RPS 2023c). Around 10.1% by mass is highly soluble and highly volatile. A further 4% by mass has semi-to-low volatility. These compounds dissolve more slowly but tend to persist in soluble form for longer. Discharge onto the water surface will favour the evaporation process over dissolution under calm sea conditions, but increased entrainment of oil and dissolution of soluble compounds can be expected under breaking wave conditions (RPS 2023c).

The mass balance forecast for the constant-wind case (Figure 6-4) for PYA-01 condensate shows that approximately 66% of the oil is predicted to evaporate within 12 hours. Under these calm conditions most of the remaining oil on the water surface will weather at a slower rate due to being comprised of the longer-chain compounds with higher boiling points. Evaporation of the residual compounds will slow significantly, and they will then be subject to more gradual decay through biological and photochemical processes.

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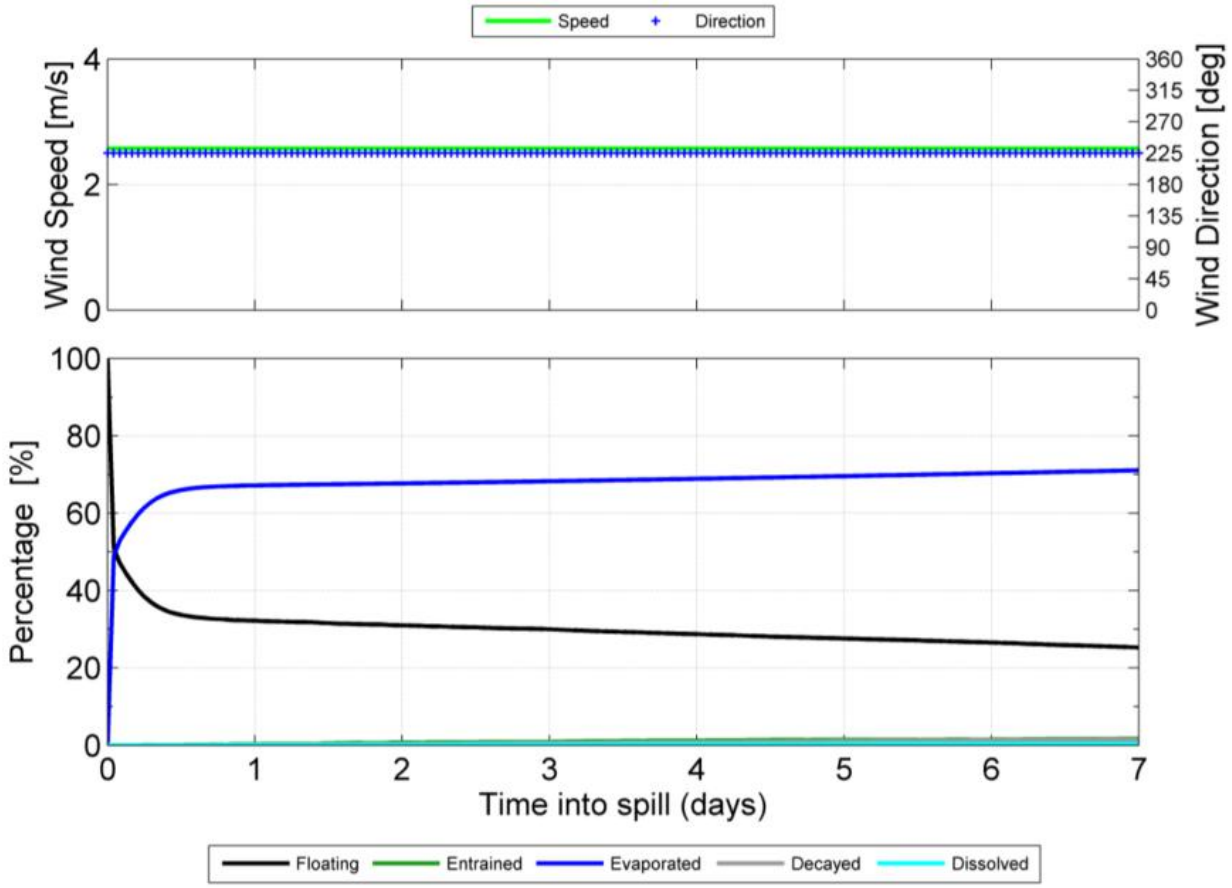


Figure 6-4: Proportional mass balance plot representing the weathering of PYA-01 condensate spilled onto the water surface as a one-off release (50 m^3) and subject to a constant 5 kn (2.6 m/s) wind at 27 °C water temperature and 25 °C air temperature

Under the variable-wind case (Figure 6-5), where the winds are of greater strength, entrainment of the condensate into the water column is indicated to be significant. Approximately 12 hours after the spill, around 33.7% of the oil mass is forecast to have entrained and a further 58.2% is forecast to have evaporated, leaving only a small proportion of the oil floating on the water surface (<1%). The residual compounds will tend to remain entrained beneath the surface under conditions that generate wind waves (approximately >6 m/s).

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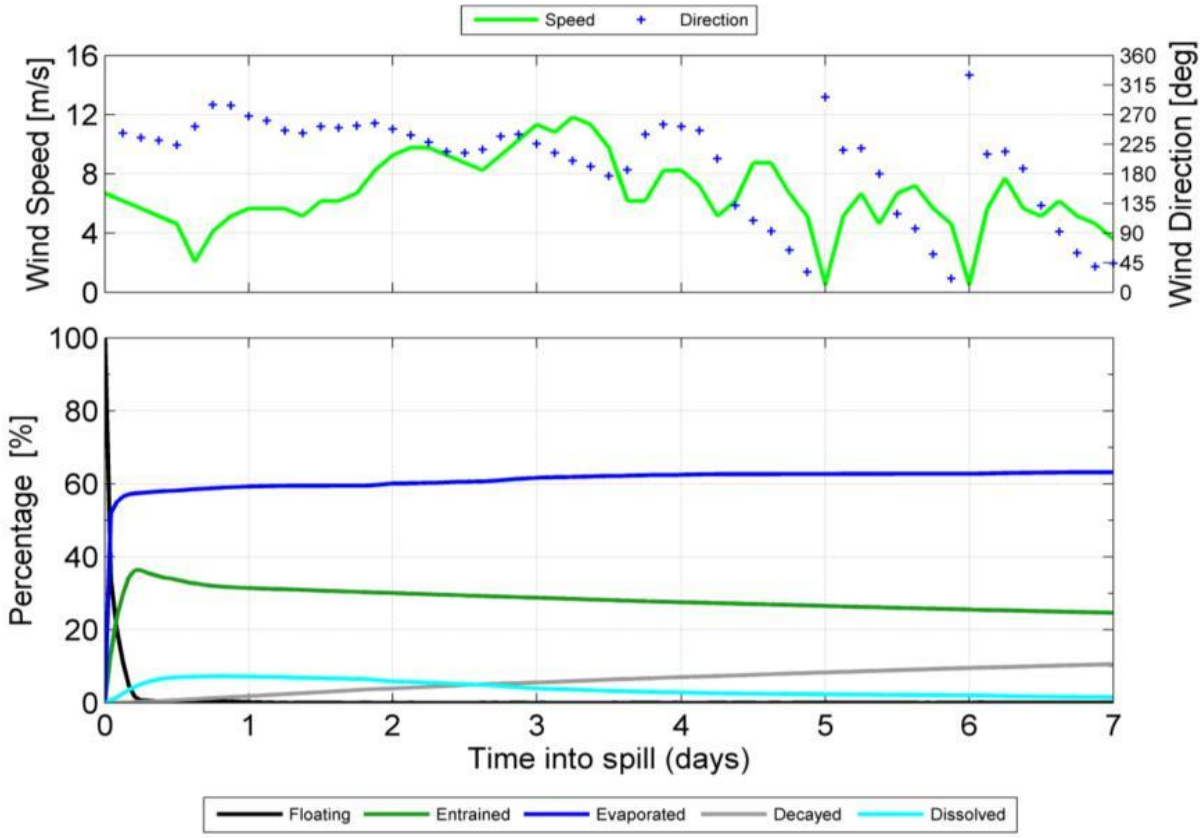


Figure 6-5: Proportional mass balance plot representing the weathering of PYA-01 condensate spilled onto the water surface as a one-off release (50 m^3) and subject to variable wind at 27 °C water temperature and 25 °C air temperature

6.8.1.4.2 Yodel 3 Condensate

Yodel 3 condensate is a mixture of volatile and persistent hydrocarbons with high proportions of volatile and semi-volatile components (Table 6-18). In favourable evaporation conditions, ~63.1% by mass should evaporate within the first 12 hours; up to a further ~25.3% should evaporate within the first 24 hours; and a further ~9.1% should evaporate over several days. Around 2.5% of the hydrocarbon is shown to be persistent (Table 6-18).

The whole condensate has a low asphaltene content (<0.1%), indicating a low propensity for the mixture to take up water to form water-in-oil emulsion over the weathering cycle (RPS 2025).

Soluble, aromatic hydrocarbons contribute ~8.7% by mass of the whole oil (RPS 2025). Around 1.8% by mass is highly soluble and highly volatile. A further 6.9% by mass has semi-to-low volatility. These compounds dissolve more slowly but tend to persist in soluble form for longer. Discharge onto the water surface will favour the evaporation process over dissolution under calm sea conditions, but increased entrainment of oil and dissolution of soluble compounds can be expected under breaking wave conditions (RPS 2025).

The mass balance forecast for the constant-wind case (Figure 6-6) indicate that Yodel-3 Condensate will have a tendency to evaporate fairly rapidly, with 88% of the spilled volume predicted to evaporate and around 10% remaining on the water surface after the first 24 hours under light winds. Negligible levels of entrainment and dissolution are expected under these light wind conditions.

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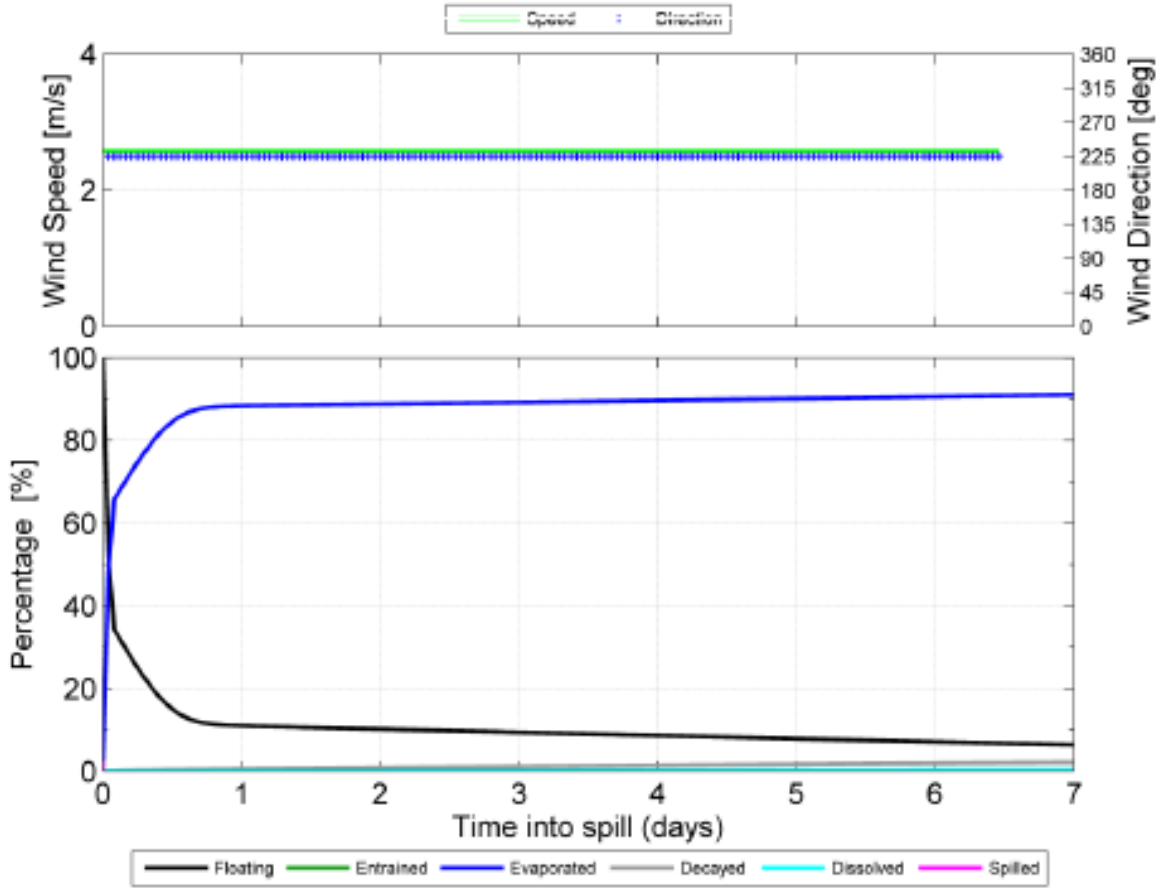


Figure 6-6: Proportional mass balance plot representing the weathering of Yodel 3 condensate spilled onto the water surface as a one-off release (50 m^3) and subject to a constant 5 kn (2.6 m/s) wind at 27 °C water temperature and 25 °C air temperature

The mass balance forecast for the constant-wind case (Figure 6-7) indicate that Yodel-3 Condensate indicate increased entrainment and dissolution rate, with a corresponding decrease in the floating oil proportion to negligible levels. The variable-wind case also indicates that, once entrained, the oil tends to remain in the water column and may not resurface even during calm wind periods.

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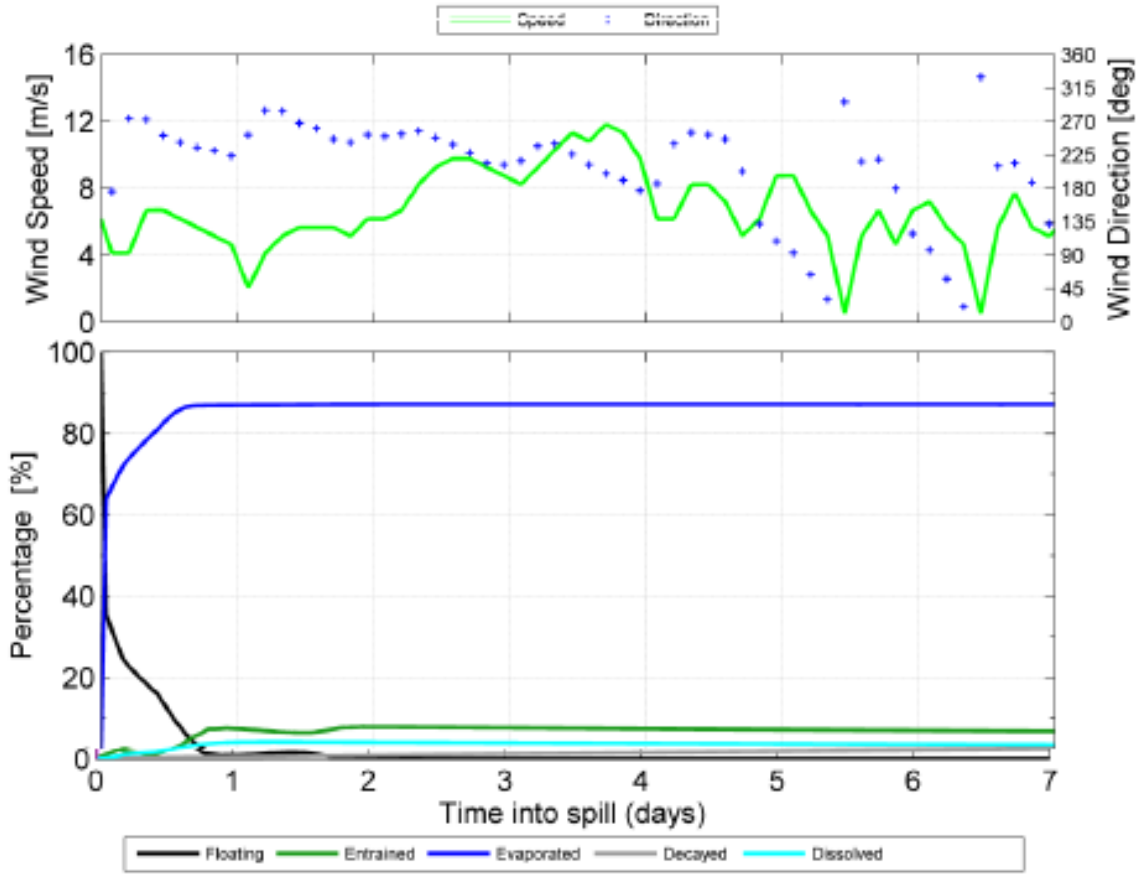


Figure 6-7: Proportional mass balance plot representing the weathering of Yodel 3 condensate spilled onto the water surface as a one-off release (50 m^3) and subject to variable wind at 27 °C water temperature and 25 °C air temperature

6.8.1.4.3 Marine diesel

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 (boiling point < 180°C); a further 35% should evaporate within the first 24 hours (180°C < boiling point < 265°C); and a further 54% should evaporate over several days (265°C < boiling point < 380°C). About 5% of the oil is shown to be persistent. The aromatic content of the oil is about 3%.

The mass balance forecast for the constant-wind case for marine diesel shows that about 41% of the oil is predicted to evaporate within 24 hours. Under these calm conditions the majority of the remaining oil on the water surface weathers at a slower rate due to comprising the longer-chain compounds with higher boiling points. Evaporation of the residual compounds slows significantly and is then subject to more gradual decay through biological and photochemical processes.

Under the more realistic variable-wind case (Figure 6-8), where the winds are of greater strength, entrainment of marine diesel into the water column is indicated to be significant. About 24 hours after the spill, around 72% of the oil mass is forecast to have entrained and a further 24% is forecast to have evaporated, leaving only a small proportion of the oil floating on the water surface (<1%). The residual compounds tend to remain entrained beneath the surface under conditions that generate wind waves (about >6 m/s).

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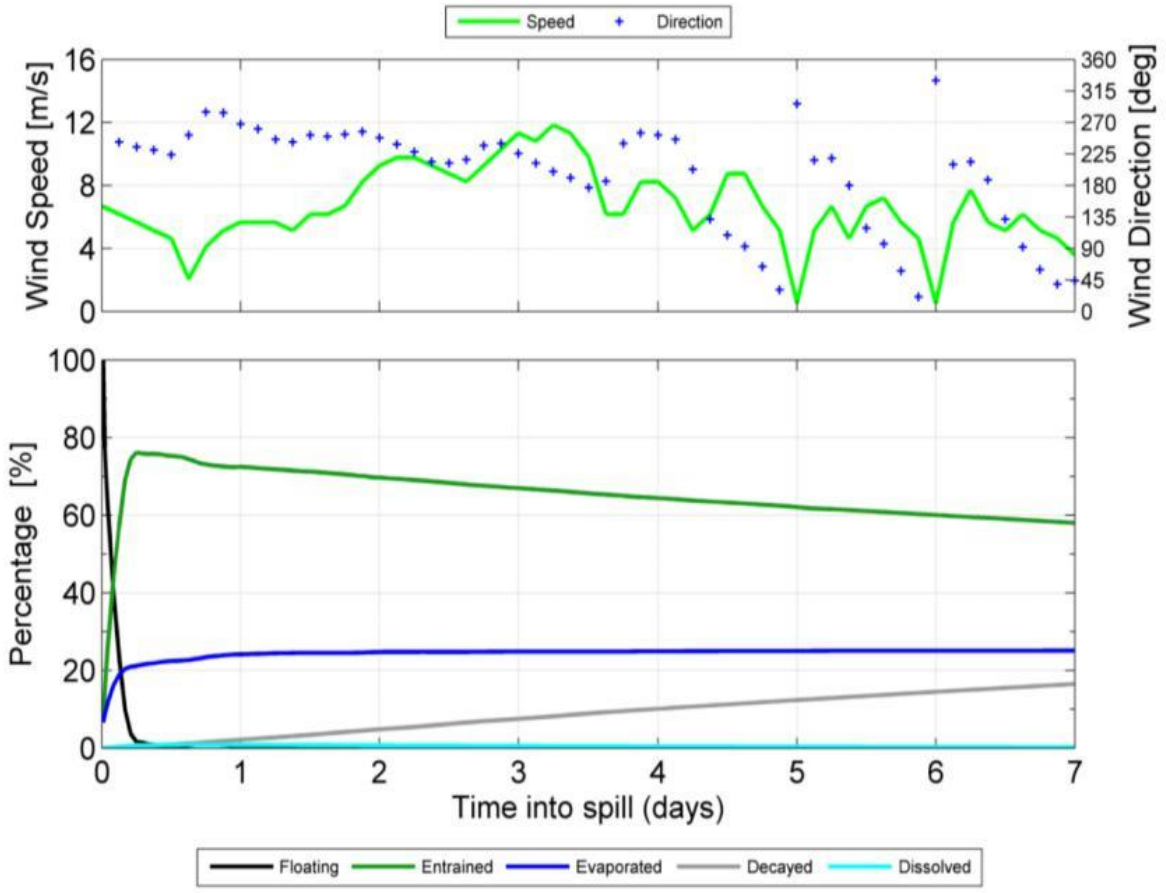


Figure 6-8: Proportional mass balance plot representing the weathering of Marine diesel spilled onto the water surface as a one-off release (50 m^3) and subject to variable wind at 27 °C water temperature and 25 °C air temperature

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6.8.2 Unplanned Hydrocarbon Release: Loss of Well Integrity

Context		
Relevant Activities Drilling Activities – Section 3.7 Subsea Installation Activities - Section 3.7.11 Contingent Activities – Section 3.10	***Existing*** Environment Physical Environment – Section 4.3 Habitats and Biological Communities – Section 4.5 Protected Species – Section 4.6 Socio-economic Environment – Section 4.9	***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
Loss of hydrocarbons to marine environment due to loss of well containment	X	X	X	X	X	X	B	B	1	M	LCS GP PJ RB A CV SV	Acceptable if ALARP	EPO 11

Description of Source of Impact

Woodside has identified a loss of well containment as the scenario with the worst-case credible environmental outcome as a result of loss of well integrity. A loss of well containment is an uncontrolled release of reservoir hydrocarbon or other well fluids to the environment. A blowout is an incident where formation fluid flows out of the well or between formation layers after all the predefined technical well barriers (e.g. the BOP) or activation of the same has failed.

Industry Experience

Review of industry statistics indicates the probability of a loss of well containment occurring during the drilling phase of a well is 3.02×10^{-4}(SINTEF 2020) which gives a likelihood of 'unlikely' on the Woodside risk matrix.

An order of magnitude reduction has been applied to reduce the likelihood of significant environmental impacts to Level 1'highly Unlikely' for the following reasons;

- The SINTEF data set considered well integrity events from 1980-2018. There have been significant improvements in industry standards following the Macondo event in 2010, including more stringent API STD 53 BOP requirements in force. 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 containment events that have resulted in significant releases or significant environmental impacts.
- For the international blowout incidents analysed, these are expected to have resulted in varied release outcomes with varied flow and environmental consequence outcomes – not all are aligned with a worst case unconstrained full-bore blowout (which is the basis for this assessment)
- When considering likelihood from an 'experience' perspective, and considering the significant environmental consequence likelihood as the outcome of a blowout event; historical blowouts resulting in major impacts to the environment have not occurred "many times in industry". Hence, alignment with Highly Unlikely likelihood classification is deemed appropriate.

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Description of Source of Impact
Credible Scenarios – Loss of Well Containment
The Petroleum Activity consists of drilling five production wells. A loss of well integrity could result in a loss of containment at any of these wells of which Woodside has identified two worst-case credible spill scenarios for consideration. These include: • Scenario 1 – an uncontrolled surface release for five days (during which time the MODU would provide a conduit to the surface for the uncontrolled flow) followed by a 65 uncontrolled seabed release from the Wilcox well • Scenario 2 - an uncontrolled surface release for five days (during which time the MODU would provide a conduit to the surface for the uncontrolled flow) followed by a 71 uncontrolled seabed release from the Yodel Updip well A number of Woodside procedures were followed to identify credible spill scenarios, calculate release rates and determine relief well drill timing. The duration of the model run is based on relief well drill times, which is comprised as mobilisation of a MODU to site, mooring and drilling to required depth and then intersect and kill of the well to cease the release of hydrocarbons. While the total volume release is estimated based on the release rates and time to drill a relief well, taking into account well characteristics.
Quantitative Hydrocarbon Spill Modelling
Modelling for a loss of well integrity in the Wilcox Prospect was originally undertaken in 2023 based on a preliminary estimated relief well duration of 77 days resulting in a release of circa 745,012 m^3. Contemporary studies estimate that a relief well could be executed within 70 days (including mobilisation of a MODU from South East Asia) releasing circa 707,729 m^3. Given the decreased duration and volume, the existing modelling is deemed conservative and therefore additional modelling was not required. Spill modelling was undertaken by RPS, on behalf of Woodside, to determine to determine the fate of hydrocarbon released from the Yodel Updip loss of well containment scenario, based on the condensate characteristics (Table Table 6-18). The modelled release rate provided assumes the worst case scenario for the largest oil volume release (Table 6-15). Modelling considered metocean conditions throughout the year; this was done to inform the determination of consequence of loss of well control during intervention at any time of the year.
Hydrocarbon characteristics
See Section 6.8.1.4

Impact Assessment
Potential Impacts Overview
EMBA
Quantitative hydrocarbon spill modelling results for surface, dissolved and entrained hydrocarbon fates for Scenarios 1 and 2 are described below. Individual receptors contacted, worst case of the two scenarios, are listed in Table 6 28. The individual hydrocarbon fates are described herein.
Surface Hydrocarbons
Scenario 1: Surface hydrocarbons above 1 g/m^2 are predicted to drift over Rankin Bank and reach Tryal Rocks, both at 47% probability. Floating oil concentrations above 10 g/m^2 are predicted to contact several receptors including Montebello Marine Park, which has a 100% probability of contact for all assessed thresholds. This is due to the hypothetical spill site being within the boundaries of the Montebello Marine Park. The worst-case for maximum local accumulation of oil on any surrounding shoreline was calculated at 3,133 g/m^2 on Hermite Island. Scenario 2: Surface hydrocarbons above 1 g/m^2 are predicted to drift over Rankin Bank but is not expected to reach Tryal Rocks. Floating oil concentrations above 10 g/m^2 are predicted to contact several receptors. The worst-case for maximum local accumulation of oil on any surrounding shoreline was calculated at 32 g/m^2 at Southern Pilbara Islands.
Entrained Hydrocarbons
Scenario 1: Entrained hydrocarbons at concentrations equal to or greater than the 1,000 ppb threshold are predicted to be found up to 1,206 km from the release site. Scenario 2: The greatest probability of contact for entrained oil above 1,000 ppb is calculated at 100% for Rankin Bank while Tryal Rocks (55%), Montebello Marine Park (98%), Ningaloo Marine Park (57%), Muiron Islands MMA (53%), Ningaloo Coast WH (57%), and Gascoyne Marine Park (65%), having more than 90% probability of contact. The worst-case entrained condensate concentration at any receptor is 6,602 ppb at Rankin Bank.
Dissolved Hydrocarbons
Scenario 1: The probability of contact by dissolved aromatic hydrocarbon concentrations above 10 ppb is predicted to be 100% at Montebello Marine Park and Tryal Rocks. The probability of contact above 10 ppb is more than 90% for

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Impact Assessment
Gascoyne Marine Park, Ningaloo Marine Park, Barrow Islan and the, Southern Pilbara Islands. The maximum dissolved aromatic hydrocarbon concentration forecast at any receptor is 24,018 ppb at Montebello Marine Park. Scenario 2: The probability of contact by dissolved aromatic hydrocarbon concentrations above 10 ppb is predicted to be 100% at Montebello Marine Park and Rankin Bank. The probability of contact above 10 ppb is more than 50% for Tyral Rocks (60%), Murion Islands MMA (64%), Ningaloo Marine Park (68%), Gascoyne Marine Park (69%), and the Southern Pilbara Islands (55%). The maximum dissolved aromatic hydrocarbon concentration forecast at any receptor is 30 550 ppb at Montebello Marine Park.

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Table 6-19: Key receptor locations and sensitivities potentially contacted above impact thresholds by the loss of well containment scenario with summary hydrocarbon spill contact (table cell values correspond to highest probability of contact [%] from the two scenarios)

Environmental setting	Location / name	Environmental, Social, Cultural, Heritage and Economic Aspects presented as per the Environmental Risk Definitions (Woodside's Risk Management Procedure [WM0000PG10055394])																													Probability of hydrocarbon contact and fate (%) Note: the probability is based on stochastic modelling of 100 hypothetical worst-case spills under a variety of weather and metocean conditions					
		Physical		Biological																					Socioeconomic and Cultural					Socio-cultural EMBA		Ecological EMBA			
		Water Quality	*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 and/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 interesting areas and significant nesting beaches)	Sea snakes	Whale sharks	Sharks and rays	Seabirds and/or migratory shorebirds	Pelagic fish populations	Resident /Demersal Fish	Fisheries – commercial	Fisheries – traditional	Tourism and Recreation	Protected Areas / Heritage – European and Indigenous / Underwater Cultural Heritage	Offshore Oil and Gas Infrastructure (topside and subsea)	Surface hydrocarbon (1-10 g/m2)	Accumulated hydrocarbons (10–100 g/m2)	Surface hydrocarbon (≥10 g/m2)	Entrained hydrocarbon (≥1000 ppb)	Dissolved aromatic hydrocarbon (≥10 ppb)	Accumulated hydrocarbons (>100 g/m2)
Offshore	Argo-Rowley Terrace AMP	✓						✓							✓	✓			✓				✓	✓	✓		✓			✓			-			7	
	Carnarvon Canyon AMP	✓						✓							✓	✓			✓				✓	✓	✓		✓			✓						7	
	Dampier AMP	✓	✓					✓							✓	✓			✓				✓	✓	✓		✓			✓						3	
	Montebello AMP	✓	✓	✓			✓	✓							✓	✓			✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓		100		100	100	100	
	Ningaloo AMP	✓	✓	✓			✓	✓							✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓		10			63	97	
	Shark Bay AMP	✓	✓					✓		✓					✓		✓		✓		✓		✓	✓	✓		✓	✓								22	
	Gascoyne AMP	✓	✓												✓	✓			✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	5			55	95	
	Abrolhos Islands AMP	✓	✓	✓	✓		✓	✓	✓	✓													✓	✓	✓	✓	✓		✓							4	
	Rankin Bank	✓	✓	✓			✓	✓		✓						✓				✓		✓		✓	✓	✓		✓			✓	100		97	100	84	
Islands	Montebello Islands (including MP and Hermite Islands)	✓	✓	✓	✓	✓	✓	✓				✓		✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓		5	38	3	43	77	3
	Barrow Island (including MMA, MP, Boodie and Middle Islands and NRs)	✓	✓	✓	✓		✓	✓				✓		✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓		14		24	99	

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Environmental setting	Location / name	Environmental, Social, Cultural, Heritage and Economic Aspects presented as per the Environmental Risk Definitions (Woodside's Risk Management Procedure [WM0000PG10055394])																								Probability of hydrocarbon contact and fate (%) Note: the probability is based on stochastic modelling of 100 hypothetical worst-case spills under a variety of weather and metocean conditions					
		Physical		Biological																			Socioeconomic and Cultural					Socio-cultural EMBA		Ecological EMBA			
		Water Quality	*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 and/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 interesting areas and significant nesting beaches)	Sea snakes	Whale sharks	Sharks and rays	Seabirds and/or migratory shorebirds	Pelagic fish populations	Resident /Demersal Fish	Fisheries – commercial	Fisheries – traditional	Tourism and Recreation	Protected Areas / Heritage – European and Indigenous / Underwater Cultural Heritage	Offshore Oil and Gas Infrastructure (topside and subsea)	Surface hydrocarbon (1-10 g/m2)	Accumulated hydrocarbons (10–100 g/m2)	Surface hydrocarbon (≥10 g/m2)	Entrained hydrocarbon (≥1000 ppb)	Dissolved aromatic hydrocarbon (≥10 ppb)	Accumulated hydrocarbons (>100 g/m2)
	Pilbara Islands – Southern Islands (Airlie, Bessieres, Mary Anne Group, Middle, Passage, Peak, Serrurier, Table and Thevenard Islands)	✓	✓		✓		✓		✓			✓		✓	✓	✓		✓	✓		✓	✓	✓	✓	✓			✓	✓		1	35		61	95	14
	Lowendal Islands	✓	✓	✓	✓	✓	✓	✓				✓		✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓			✓	✓			12		10	28	
	Muiron Islands (includes MMA and Sunday Island)	✓	✓	✓	✓		✓	✓		✓		✓		✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓			✓	✓		8	50		61	84	8
Reefs, Banks and Shoals	Montebello Shoals	✓	✓	✓			✓	✓			✓				✓	✓			✓	✓	✓	✓		✓	✓								43	78	
	Barrow Island Reefs and Shoals (including Poivre Reef and Tryal Rocks)	✓	✓	✓			✓	✓			✓				✓	✓			✓	✓	✓	✓		✓	✓						47		9	99	100	
	North West Reef	✓	✓	✓			✓	✓			✓				✓	✓			✓	✓	✓	✓		✓	✓									9	56	
	Pilbara Reefs (including Brewis Reef, Little Shoals, Outtrim Patches, Penguin Bank, Ripple and Rosily Shoals, Sultan Reef, Taunton Reef and Trap Reef)	✓	✓	✓			✓	✓			✓				✓	✓			✓	✓	✓	✓		✓	✓									60	93	
	Ningaloo Reef	✓	✓	✓			✓	✓			✓				✓	✓			✓	✓	✓	✓		✓	✓						1			34	78	
	Carnarvon				✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓		✓			✓	✓		✓			✓				1			6	

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Environmental setting	Location / name	Environmental, Social, Cultural, Heritage and Economic Aspects presented as per the Environmental Risk Definitions (Woodside's Risk Management Procedure [WM0000PG10055394])																									Probability of hydrocarbon contact and fate (%) Note: the probability is based on stochastic modelling of 100 hypothetical worst-case spills under a variety of weather and metocean conditions					
		Physical		Biological																				Socioeconomic and Cultural					Socio-cultural EMBA		Ecological EMBA			
		Water Quality	*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 and/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 interesting areas and significant nesting beaches)	Sea snakes	Whale sharks	Sharks and rays	Seabirds and/or migratory shorebirds	Pelagic fish populations	Resident /Demersal Fish	Fisheries – commercial	Fisheries – traditional	Tourism and Recreation	Protected Areas / Heritage – European and Indigenous / Underwater Cultural Heritage	Offshore Oil and Gas Infrastructure (topside and subsea)	Surface hydrocarbon (1-10 g/m2)	Accumulated hydrocarbons (10–100 g/m2)	Surface hydrocarbon (≥10 g/m2)	Entrained hydrocarbon (≥1000 ppb)	Dissolved aromatic hydrocarbon (≥10 ppb)	Accumulated hydrocarbons (>100 g/m2)
Coastlines	Dampier Archipelago																														1	
	Exmouth		✓	✓		✓	✓	✓			✓	✓		✓	✓	✓	✓		✓	✓	✓	✓	✓		✓	✓		✓	✓		1	22		31	74	3
	Middle Pilbara – Islands and Shoreline	✓			✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓				✓	✓	✓	✓	✓		✓	✓		✓	✓	✓				5	
	Ningaloo (WHA, MP, Cape Range NP)	✓	✓	✓	✓	✓	✓	✓		✓		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓		✓	✓					63	97	
	Shark bay (WHA)	✓	✓	✓	✓	✓	✓	✓		✓		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓		✓	✓						1	

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Summary of Potential Impacts to environmental values
Summary of Potential Impacts to protected species
Receptor group
Offshore 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 loss of well containment, surface, entrained, and dissolved hydrocarbons exceeding environmental impact threshold concentrations may drift across habitat for cetacean species. Migratory routes and BIAs of cetaceans considered to be MNES may be affected, including humpback whales and pygmy blue whales (northbound and southbound migrations). 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 [DHNRDT] 2016). This may result in the 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 (e.g. lung disease, poor body condition), and mortality (DHNRDT 2016). 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 whales and humpback whales), which feed by filtering large volumes of water. Geraci (1988) has identified behavioural disturbance through avoidance of spilled hydrocarbons in several species of cetacean, suggesting that cetaceans have the ability to 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 (Aichinger Dias et al., 2017). In a review of the impacts of large scale hydrocarbon spills on cetaceans, it was found that exposure to oil from the Deepwater Horizon resulted in increased mortality to cetaceans in the Gulf of Mexico (DHNRDT., 2016), and long-term population level impacts to killer whales were linked to the Exxon Valdez tanker spill (Matkin et al., 2008). Pygmy blue whales and humpback whales are known to migrate seasonally through the wider EMBA. A major spill in May to November would coincide with humpback whale migration through the waters off the Pilbara and North West Cape (Section 4.6.3). A major spill in April–August or October would coincide with pygmy blue whale migration (Section 4.6.3). Both 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 for both species 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 to be less likely to result in toxic effects. As such, the risk of ingestion of hydrocarbons is low. Pygmy blue whale and humpback 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 the loss of well integrity is unlikely to affect an entire population. Therefore, a worst-case hydrocarbon spill scenario has the potential to result in major long-term impacts to offshore cetacean species, with consequence severity dependent on the actual timing, duration and extent of a spill in relation to species' migratory movements and distributions. ***Nearshore Cetaceans and Dugongs*** Coastal populations of small cetaceans and dugongs are known to reside or frequent nearshore waters, including the Ningaloo Coast, Muiron Islands, Montebello/Barrow/ Lowendal Islands Group and Pilbara Southern Island Group which may be potentially impacted by entrained hydrocarbons exceeding threshold concentrations in the event of a loss of well containment. The Exmouth Gulf is a known humpback whale aggregation area on the annual southern migration (September to December), as well as overlapping foraging, breeding, nursing and calving BIAs for dugongs (~215 km south of the Operational Area).; therefore, migratory humpbacks moving into the Gulf, or more residential dugongs, may be exposed to entrained hydrocarbons above thresholds levels. However, entrained hydrocarbons concentrations above the threshold are not expected within Exmouth Gulf itself. No hydrocarbon contact at or above threshold concentrations for the ecological EMBA is expected for Camden Sound, an important calving area for humpback whales. The potential impacts of exposure are discussed above. However, nearshore populations of cetaceans and dugongs are known to exhibit site fidelity and are often resident populations. Therefore, avoidance behaviour may have greater impacts to population functioning. Nearshore dolphin species (e.g. spotted bottlenose dolphins) may exhibit higher site fidelity than oceanic species, although Geraci (1988) observed relatively little impacts beyond behavioural disturbance. Additional potential environment impacts may also include the potential for dugongs to ingest hydrocarbons when feeding on oiled seagrass stands, or indirect impacts to dugongs due to loss of this food source due to dieback in worst-affected areas.

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Summary of Potential Impacts to environmental values

Cetacean populations that are resident within the EMBA may be susceptible to impacts from spilled hydrocarbons if they interact with an area affected by a spill. 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 possible transient interactions with the EMBA.

Therefore, a worst-case hydrocarbon spill scenario has the potential to result in major long-term impacts to inshore cetacean species and dugongs, with consequence severity dependent on the actual timing, duration and extent of a spill in relation to species' migratory movements and distributions.

Marine Turtles

Offshore

Adult sea turtles exhibit no avoidance behaviour when they encounter hydrocarbon spills (NOAA 2010). Therefore, contact with surface slicks or entrained hydrocarbon can result in hydrocarbons adhering to body surfaces (Gagnon and Rawson 2010) causing irritation of 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 are the most toxic component of the hydrocarbon spill (Milton and Lutz 2003). This can lead to lung damage and congestion, interstitial emphysema, inhalant pneumonia, and neurological impairment (NOAA 2010). Contact with entrained hydrocarbons can result in hydrocarbons adhering to body surfaces, causing irritation of mucous membranes in the nose, throat and eyes and leading to inflammation and infection (Gagnon and Rawson 2010).

A flatback turtle internesting BIA and Habitat Critical overlaps the Operational Area (Figure 4-9). However, the Operational Area is unlikely to represent an important habitat for marine turtles as there is an absence of potential nesting or foraging habitat (i.e. no emergent islands, reef habitat or shallow shoals) and the water is deep (70 - 160 m). There are significant nesting and foraging sites along the mainland coast and islands of the region, including Dampier Archipelago and the Montebello Islands, and a number of BIAs and Habitat Criticals' overlap the EMBA (Section 4.6.2, Figure 4-9, Table 4-10)

In particular, the internesting BIAs and Habitat Critical areas for green, loggerhead and hawksbill turtles extend for ~20 km from known nesting locations, and for ~60 km for flatback turtles. Oil from an ongoing loss of containment could be present during nesting season depending on the timing of a spill.

There is the potential for marine turtles to be present at submerged shoals within the EMBA, such as Rankin Bank and Glomar Shoals, however these receptors are not expected to be contacted by entrained hydrocarbons above the threshold concentration. Submerged reefs and shoals of Barrow Island and southern Pilbara islands have the potential to be contacted by entrained hydrocarbons above the threshold concentrations. Marine turtles may be present at such reefs and shoals given the benthic communities associated with the areas.

In summary, a worst-case hydrocarbon spill scenario has the potential to result in major long-term impacts to offshore foraging marine turtles, with consequence severity dependent on the actual timing, duration and extent of a spill in relation to species' migratory movements and distributions.

Mainland and Islands

Several marine turtle species use nearshore waters and shorelines for foraging and breeding (including internesting), with significant nesting beaches along the mainland coast and islands in potentially impacted locations such as the Montebello/Barrow/Lowendal Islands Group, Pilbara Islands and Ningaloo Reef. A number of BIAs have been identified for marine turtles, including nesting, internesting and foraging areas as discussed above. There are distinct breeding seasons, as detailed in Section 4.6.2. The nearshore waters of these turtle habitat areas may be exposed to entrained hydrocarbons exceeding the threshold concentration. In addition, The potential for accumulation of oil on shoreline, occurring above thresholds concentrations (100 g/m^2), was predicted at the Montebello Islands and State Marine Park, Hermite Island and Barrow Island (Table 6-19). Shoreline oil from an ongoing loss of containment could be present at these receptors during nesting/hatching season depending on the timing of a spill.

The potential impacts of exposure are as discussed above. In the nearshore environment, turtles can ingest hydrocarbons when feeding (e.g. on oiled seagrass stands/macroalgae) or can be indirectly affected by loss of food source (e.g. seagrass due to dieback from hydrocarbon exposure) (Gagnon and Rawson 2010). In addition, hydrocarbon exposure can impact turtles during the breeding season at nesting beaches. Contact with gravid adult females or hatchlings may occur on nesting beaches (accumulated hydrocarbons) or in nearshore waters (entrained hydrocarbons) where hydrocarbons are predicted to make shoreline contact. If accumulated hydrocarbons

(Montebello/Hermite/Barrow Island and Montebello State Marine Park) or entrained hydrocarbons reach the shoreline or internesting coastal waters (refer to Table 6-19 for receptor locations), there is the potential for impacts to turtles using the affected area. Animals that lay eggs have been shown to pass metabolised oil related compounds into their offspring which has the potential to be toxic to the developing embryos. Similarly, adult female turtles can pass

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Summary of Potential Impacts to environmental values

metabolised oil and related products to their eggs, thereby potentially exposing developing embryos and impairing the development and survival of embryos (DWH Natural Resource Damage Assessment Trustees, 2016).

During the breeding season, turtle aggregations near nesting beaches within the EMBA are most vulnerable due to greater turtle densities and potential impacts may occur at the population level. Potential impacts on marine turtles may be major and long-term in the unlikely event of a loss of well control. However, based on the assessment above and given the volatile and non-persistent nature of the hydrocarbons and low levels of shoreline accumulation, the extent of impacts is not expected to result in a threat to the overall viability of marine turtle populations in the wider region.

A worst-case hydrocarbon spill scenario has the potential to result in major long-term impacts to foraging and nesting marine turtles, with consequence severity dependent on the actual timing, duration and extent of a spill.

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. This may include potential damage to the dermis and irritation to the mucus membranes of the eyes, nose and throat (ITOP, 2011a). They may also be impacts 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 are found in continental shelf waters around offshore islands and potentially submerged shoals (water depths <100 m. Sea snakes may be present in the wider EMBA at the submerged shoals, Rankin Bank and Glomar Shoals, as well as the submerged reefs and shoals of Barrow Island and southern Pilbara islands. Sea snakes may also be present in nearshore waters of the mainland and islands which, along with submerged reefs and shoals, have the potential to be contacted by entrained hydrocarbons above the threshold concentrations. Their abundance is not expected to be high given the water depth and offshore environment. However, sea snake species in Australia generally show strong habitat preferences (Heatwole and Cogger, 1993); species that have preferred habitats associated with submerged shoals may be disproportionally affected by a hydrocarbon spill affecting such habitat.

Therefore, a worst-case hydrocarbon spill scenario has the potential to result in major long-term impacts to sea snakes, with consequence severity dependent on the duration and extent of a spill in relation to the distribution of sea snakes. Potential impacts to inshore and offshore reef associated sea snakes are discussed below.

Fish, Sharks and Rays

Offshore

Hydrocarbon contact may affect whale sharks through ingestion of entrained or dissolved hydrocarbons, particularly if feeding. Whale sharks may transit offshore open waters when migrating to and from Ningaloo Reef, where they aggregate for feeding from March to July (see Mainland and Islands (nearshore waters) below).

Whale sharks are known to feed in the Operational Area and EMBA, and both areas overlap the whale shark foraging BIA identified in Section 4.6.1.1, within which whale sharks are seasonally present between April and October (Section 4.6.1). 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 consumption of 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 inhibiting gas exchange.

There is the potential for resident shark, ray and fish populations associated with offshore reefs and shoals to be impacted directly from hydrocarbon contact, or indirectly through contaminated prey, or loss of habitat. Spill model results indicate Rankin Bank and Glomar Shoals are not predicted to be contacted by entrained hydrocarbons above threshold concentrations). Submerged reefs and shoals of Barrow Island and southern Pilbara islands have the potential to be contacted by entrained hydrocarbons above the threshold concentrations. Shark and ray species that have associations with submerged shoals may be more susceptible to a reduction in habitat quality resulting from a hydrocarbon spill.

Therefore, a worst-case hydrocarbon spill scenario has the potential to result in major long-term impacts to offshore shark, sawfish and ray species, with consequence severity dependent on the actual timing, duration and extent of a spill in relation to species' migratory movements and distributions.

Nearshore

Whale sharks and manta rays are known to frequent the Ningaloo Reef system and the Muiron Islands (forming feeding aggregations in late summer/autumn). Whale sharks and manta rays generally transit along the nearshore coastline and are vulnerable to surface, entrained and dissolved aromatic hydrocarbon spill impacts, with both taxa having similar modes of feeding.

Whale sharks are versatile feeders, filtering large amounts of water over their gills, catching planktonic and nektonic organisms (Jarman and Wilson 2004). Whale sharks at Ningaloo Reef have been observed using two different feeding strategies, including 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 with the mouth partially open (Taylor, 2007). Individuals that are present in worst affected spill areas would have the potential to ingest toxic amounts of entrained or dissolved

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Summary of Potential Impacts to environmental values

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, and potentially disrupt migration and aggregations to these areas in subsequent seasons. Whale sharks may also be affected indirectly by surface, entrained or dissolved aromatic hydrocarbons through the contamination of 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/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 as a result of bioaccumulation.

There is the potential for other resident shark and ray (e.g. manta ray species identified in Section 4.6.1) populations to be impacted directly from hydrocarbon contact or indirectly through contaminated prey or loss of habitat.

Spill modelling indicates the receptor locations predicted to be contacted by entrained hydrocarbons above the threshold concentration where impacts to the benthic communities of nearshore and subtidal communities could occur, potentially resulting in habitat loss. Therefore, the consequences to resident shark and ray populations (if present) from loss of habitat, may result in a disruption to a significant portion of the population; however, it is not expected to impact the overall viability of the population. Therefore, a worst-case hydrocarbon spill scenario has the potential to result in major long-term impacts to inshore associated shark, sawfish and ray species, with consequence severity dependent on the actual timing, duration and extent of a spill in relation to species' migratory movements and distributions.

Seabirds and Migratory Shorebirds

Offshore waters of the Operational Area are potential foraging grounds for seabirds associated with the coastal roosting and nesting habitat (e.g. Ningaloo, Muiron Islands and the Barrow/Montebello/Lowendal Island Group). There are confirmed foraging grounds off Ningaloo and the Barrow/Montebello/ Lowendal Island Group. Foraging and breeding BIAs for a number of seabirds and migratory shorebirds overlap with the EMBA (Section 4.6.4). In particular, the EMBA overlaps a number of significant habitats for seabirds and migratory shorebirds such as the Dampier Archipelago and Pilbara Islands.

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 may result in mortality (Hassan and Javed 2011).

Seabirds generally do not exhibit avoidance behaviour to floating hydrocarbons. Physical contact of seabirds with surface slicks is by several exposure pathways—primarily immersion, ingestion, and inhalation. Such contact with hydrocarbons may result in (AMSA 2013, 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
- pneumonia, and
- irritation of eyes, skin, nasal cavities and mouths.

Longer-term exposures may potentially impact seabird populations through loss of reproductive success, malformation of eggs or chicks (AMSA 2013), or mortality of individuals from oiling of feathers or the ingestion of hydrocarbons.

A hydrocarbon spill may result in surface slicks disrupting a significant portion of the foraging habitat for seabirds, including foraging BIAs, which are generally associated with breeding habitats. Seabird distributions are typically concentrated around islands, so hydrocarbons near nesting/roosting areas may result in increased numbers of seabirds being impacted, with many species of seabirds, such as the wedge-tailed shearwater and the various species of tern, foraging relatively close to breeding islands/colonies.

Therefore, a worst-case hydrocarbon spill scenario has the potential to result in major long-term impacts to offshore seabirds and migratory shorebirds, with consequence severity dependent on the actual timing, duration and extent of a spill in relation to species' migratory movements and distributions.

Nearshore

In the event of a major spill, there is the potential for seabirds, and resident, non-breeding overwintering shorebirds that use the nearshore waters for foraging and resting, to be exposed to entrained, dissolved, and accumulated hydrocarbons. This could result in lethal or sublethal effects. Although breeding oceanic seabird species can travel long distances to forage in offshore waters, most breeding seabirds tend to forage in waters near their breeding colony. This results in relatively higher seabird densities in these areas during the breeding season, making these areas particularly sensitive in the event of a spill.

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Summary of Potential Impacts to environmental values
Pathways of biological exposure that can result in impact may occur through ingesting contaminated fish (nearshore waters) or invertebrates (intertidal foraging grounds such as beaches, mudflats and reefs). Ingestion can also lead to internal injury to sensitive membranes and organs (IPIECA, 2004). Whether the toxicity of ingested hydrocarbons is lethal or sub-lethal will depend on the weathering stage and its inherent toxicity (note: the shortest entrained hydrocarbon time to contact with a shoreline is seven days (North Ningaloo Coast)). Exposure to hydrocarbons may have longer term effects, with impacts to population numbers due to decline in reproductive performance and malformed eggs and chicks, affecting survivorship and loss of adult birds. Migratory shorebirds may be exposed to stranded hydrocarbon when foraging or resting in intertidal habitats, however, direct oiling is typically restricted to a relatively small portion of birds, and such oiling is typically restricted to the birds' feet. Modelling predicts that shoreline accumulation above impact thresholds are not expected at receptor groups; the potential for impacts to migratory shorebirds by accumulated hydrocarbons on shorelines is considered to be very low. Important areas for foraging seabirds and migratory shorebirds are identified in Section 4.6.4. Refer to Table 6-19 for locations within the predicted extent of the EMBA that are identified as habitat for seabirds/migratory shorebirds. Suitable habitat or seabirds and shorebirds are broadly distributed along the mainland and nearshore island coasts within the EMBA. Of note are important nesting and resting areas, including (refer to Section 4.6.4 for additional information, including BIAs within the wider EMBA): • Muiron Islands • Ningaloo Coast • Montebello/Barrow/Lowendal Islands Group (including known nesting habitats on Boodie, Double and Middle Islands) • Pilbara Islands South Island Group Therefore, a hydrocarbon spill may result in impacts on key feeding habitat and disruption to a significant portion of the habitat. Potential impacts on seabirds and shorebirds are expected to be major and long-term in the highly unlikely event of a loss of well control. However, based on the assessment above and given the volatile and non-persistent nature of the hydrocarbons and low levels of shoreline accumulation predicted, the extent of impacts is not expected to result in a threat to the overall viability of seabird or shorebird populations in the wider region.
Summary of potential impacts to other species
Receptor Group
Pelagic Fish Populations
Fish mortalities are rarely observed to occur as a result of hydrocarbon spills (ITOPF 2011b). This has generally been attributed to the possibility that pelagic fish are able to 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 are capable of eliminating 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 that adult fish are able to 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 that juvenile and adult fish are capable of avoiding 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 (PAH) 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 the organ 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 and 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 and Heck 2011). Subtler, chronic effects on the life history of fish as a result 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 allows expression of viral diseases (Hjermann et al. 2007). PAHs have also been linked to increased mortality and

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Summary of Potential Impacts to environmental values

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 and/or eggs, and the extent to which any of the adverse impacts may occur, depends greatly on prevailing oceanographic and ecological conditions at the time of the spill and its contact with fish eggs or larvae.

A number of additional KEFs that may host relatively diverse or abundant fish assemblages compared to relatively featureless continental shelf habitats occur within the wider EMBA (Table 4-17 and Figure 4-12). KEFs within 5200 km of the Operational Area include the:

- Continental Slope Demersal Fish Communities (~150 25 km west), an area of high biodiversity of demersal fish assemblages, including high levels of endemism.

Mortality and sublethal effects may impact populations located close to a well blowout and within the EMBA for entrained/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 (PAHs), potentially impacting fish populations that feed on these.

Therefore, a worst-case hydrocarbon spill scenario has the potential to result in major long-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.

Summary of Potential Impacts to Marine Primary Producers

Receptor Group

Submerged Shoals

The waters overlying the submerged Rankin Bank and / or Wilcox Shoal have the potential to be exposed to dissolved and entrained hydrocarbons above threshold concentrations (Table 6-19).

The permanently submerged habitats of these banks and shoals represents sensitive open water benthic community receptors, extending from deep depths to relatively shallow water. Given the water depth, it is likely the potential for biological impact is significantly reduced when compared to the upper water column layers. However, potential biological impacts could include sub-lethal stress and in some instances total or partial mortality of sensitive benthic organisms such as corals and the early life stages of resident fish and invertebrate species.

The submerged shoals are areas associated with sporadic upwelling and associated primary productivity events. Impacts to plankton communities from exposure to entrained hydrocarbons above threshold concentrations may result in short-term changes in plankton community composition but recovery would occur. Hydrocarbon contact during the spawning seasons for resident shoal community benthos and fish (meroplankton), particularly exposure to in-water toxicity effects to biota, may result in the loss of a discrete cohort population but would not affect the longer term viability of resident populations. Therefore, any impacts to resident shoal community benthos and fish (meroplankton) are likely to be localised at the shoals and temporary.

Hydrocarbon exposure to offshore filter-feeding communities may occur depending on the depth of the entrained/dissolved hydrocarbons. Exposure to dissolved (aromatic) hydrocarbons (≥10 ppb) has potential to result in lethal or sub-lethal toxic effects. Sub-lethal impacts, including mucus production and polyp retraction, have been recorded for gorgonians exposed to hydrocarbon (White et al., 2012). Shoals that are exposed to entrained and/or dissolved hydrocarbons are expected to result in localised long-term effects, depending on the exposure concentrations and degree of weathering.

Coral Reef

The quantitative spill risk assessment indicates there would be potential for coral reef habitat to be exposed to entrained hydrocarbons at locations including the Montebello/Barrow Island reefs and shoals, and Ningaloo Reef.

Exposure to entrained hydrocarbons (≥1000 ppb) has the potential to result in lethal or sublethal toxic effects to corals and other sensitive sessile benthos within the upper water column (top 20 m), including upper reef slopes (subtidal corals), reef flat (intertidal corals) and lagoonal (back reef) coral communities. Mortality in a number of coral species is possible, and this could result in the reduction of coral cover and change in the composition of coral communities.

Sublethal effects to corals may include polyp retraction, changes in feeding, bleaching (loss of zooxanthellae), increased mucous production resulting in reduced growth rates, and impaired reproduction (Negri and Heyward 2000). This could result in impacts to the shallow water fringing coral communities/reefs of the offshore islands (e.g. Barrow/Montebello/Lowendal Islands, Muiron Islands) and the mainland coast (i.e. Ningaloo Coast). With reference to Ningaloo Reef, wave-induced water circulation flushes the lagoon and may promote removal of entrained hydrocarbons from this particular reef habitat. Under typical conditions, breaking waves on the reef crest induce a rise in water level in the lagoon, creating a pressure gradient that drives water in a strong outward flow through channels. These channels are across as much as 15% of the length of Ningaloo Reef (Taylor and Pearce 1999).

If a spill occurs at the time of coral spawning at potentially affected coral locations, or in the general peak period of biological productivity, there is the potential for a significant reduction in successful fertilisation and coral larval survival, due to the sensitivity of coral early life stages to hydrocarbons (Negri and Heyward 2000). Such impacts are

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Summary of Potential Impacts to environmental values
likely to result in the failure of recruitment and settlement of new population cohorts. In addition, some non-coral species may be affected via direct contact with entrained hydrocarbons, resulting in sublethal impacts and in some cases mortality—particularly 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, have small home ranges, and 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 (which may include fringing reefs of the offshore islands and/or the Ningaloo Reef system) will depend on actual hydrocarbon concentration, duration of exposure and water depth of the affected communities. Over the worst-affected sections of reef habitat, coral community live cover, structure and composition may reduce, manifested by loss of corals and associated sessile biota. Recovery of these impacted reef areas typically relies on coral larvae from neighbouring coral communities that have either not been affected or only partially impacted. For example, there is evidence that Ningaloo Reef corals and fish are partly self-seeding, with the supply of larvae from locations within Ningaloo Reef of critical importance to the healthy maintenance of the coral communities (Underwood 2009). Recovery at other coral reef areas may not be aided by a large supply of larvae from other reefs, with levels of recruits after a disturbance event only returning to previous levels after the numbers of reproductive corals had also recovered (Gilmour et al. 2013). Therefore, a worst-case hydrocarbon spill scenario has the potential to result in large scale impacts to coral populations within the EMBA, with long-term effects (recovery >10 years) likely. The consequence severity is predicted to be greatest at reefs closest to the potential release location (e.g. Montebello Islands). ***Seagrass Beds/Macroalgae and Mangroves*** Spill modelling has predicted that entrained hydrocarbons above threshold concentrations have the potential to contact a number of nearshore locations that support biologically diverse, shallow subtidal and intertidal communities. The variety of habitat and community types, from the upper subtidal to the intertidal zones support a high diversity of marine life and are used as important foraging and nursery grounds by a range of invertebrate and vertebrate species. Depending on the trajectory of the entrained plume, macroalgal/seagrass communities including Barrow Island, Lowendal Islands, Muiron Islands, Pilbara Islands, Montebello Islands and Ningaloo Coast may have the potential to be exposed (see Table 6-19 for a full list of receptors within the EMBA). Exposure to entrained hydrocarbons may result in mortality, depending on actual entrained exposure concentrations received and duration of exposure. Physical contact with entrained hydrocarbon droplets could cause sublethal stress, causing reduced growth rates and reduced tolerance to other stress factors (Zieman et al. 1984). Toxicity effects can also occur due to absorption of soluble fractions of hydrocarbons into tissues (Runcie et al. 2010). However, the potential for toxicity effects of entrained hydrocarbons may be reduced by weathering processes that should lower the content of soluble aromatic components before contact occurs. Mangrove habitat at Ningaloo Coast, Pilbara islands, and Montebello Islands may be contacted by entrained hydrocarbons within the EMBA (see Table 6-19). Entrained hydrocarbons may adhere to the sediment particles and in low-energy environments such as in mangroves, deposited sediment bound hydrocarbons are unlikely to be removed naturally by wave action and may be deposited in layers by successive tides (NOAA 2014). Hydrocarbons may persist in the sediment, potentially causing chronic sublethal toxicity impacts beyond immediate physical and acute effects, which may delay recovery in an affected area. Recovery of mangroves from any impacts could be long-term (>10 years). Therefore, a worst-case hydrocarbon spill scenario has the potential to result in major long-term impacts to seagrass beds, macroalgae and mangrove communities within the EMBA, with consequence severity predicted to be greatest at receptors closest to the potential release location (e.g. Montebello Islands).
Summary of Potential Impacts to Other Habitats and Communities
Receptor Group
Benthic Fauna Communities
In the event of a major release at the seabed, the stochastic spill model predicted hydrocarbon droplets would be entrained, rapidly transporting them to the sea surface. As a result, the low sensitivity benthic communities associated with the unconsolidated, soft sediment habitat and any epifauna (filter feeders) associated with KEFs within the wider EMBA are not expected to have widespread exposure to released hydrocarbons (Ancient Coastline, Continental Slope Demersal Fish Communities KEF, Canyons KEF, Exmouth Plateau KEF and Commonwealth Waters adjacent to Ningaloo Reef KEF (Section 4.7)). Therefore, a worst-case hydrocarbon spill scenario has the potential to result in minor, short-term impacts to seabed and associated epifauna and infauna within the EMBA, with impacts predicted to be greatest for habitats closest to the potential release location.

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Open Water – Productivity/Upwelling

Primary production by plankton (triggered by sporadic upwelling events in the offshore waters) is an important component of the primary marine food web. Planktonic communities are generally mixed, including phytoplankton (cyanobacteria and other microalgae), secondary consuming zooplankton (e.g. copepods), and the eggs and larvae of fish and invertebrates (meroplankton). Exposure to hydrocarbons in the water column can result in changes in species composition, with declines or increases in one or more species or taxonomic groups (Batten et al. 1998).

Phytoplankton may also experience decreased rates of photosynthesis (Tomajka 1985). For zooplankton, direct effects of contamination may include suffocation, changes in behaviour, or environmental changes that make them more susceptible to predation. Impacts on plankton communities are likely to occur in areas where surface, entrained or dissolved aromatic hydrocarbon threshold concentrations are exceeded, but communities are expected to recover relatively quickly (within weeks or months). This is due to high population turnover, with copious production within short generation times that also buffers the potential for long-term (i.e. years) population declines (ITOPF 2011a).

Nearshore waters and adjacent offshore waters surrounding the offshore islands (e.g. Montebello/Barrow/Lowendal Islands Group, Muiron Islands, Pilbara Islands), and west of the Ningaloo Reef system are known locations of seasonal upwelling events and productivity. The seasonal productivity events are critical to krill production, which supports megafauna aggregations such as whale sharks and manta rays in the region. This has the potential to result in lethal and sublethal impacts to a certain portion of plankton in affected areas, depending on concentration and duration of exposure and the inherent toxicity of the hydrocarbon. However, recovery would occur (see relevant section above).

Therefore, a worst-case hydrocarbon spill scenario has the potential to result in minor, short-term impacts to plankton populations within the EMBA.

Filter Feeders

Entrained hydrocarbons above the 1000 ppb ecological thresholds will be limited to the top 20 m of the water column beyond the immediate source. Entrained hydrocarbons are therefore not expected to impact filter feeder habitats in deep offshore waters including filter feed communities associated with the Continental Slope Demersal Fish Communities KEF, Canyons KEF, Exmouth Plateau KEF and Commonwealth Waters adjacent to Ningaloo Reef KEF.

Hydrocarbon exposure to shallow nearshore filter feeding communities (< 20 m) (e.g. Montebello Islands, Barrow Island) may occur. Exposure to entrained aromatic hydrocarbons has the potential to result in lethal or sublethal toxic effects. Sublethal impacts, including mucus production and polyp retraction, have been recorded for gorgonians exposed to hydrocarbon (White et al. 2012). Any impacts may result in localised long-term effects to community structure and habitat.

Nearshore filter feeders that are present in shallower water (< 20 m) may potentially be impacted by entrained hydrocarbon through lethal/sublethal effects, although given the distance from source hydrocarbons are expected to be less toxic due to the weathering process. Such impacts may result in localised, long term effects to community structure and habitat.

Therefore, a worst-case hydrocarbon spill scenario has the potential to result in localised, long-term impacts to filter feeders within the EMBA.

Open Water – Physical Displacement of Fauna from Gas Plume

The effect of the physical extent of the gas plume in the environment is expected to have a limited and localised effect on identified receptors such as the physical barrier created by the gas plume, which may displace transient and/or mobile biota such as pelagic fish, megafauna species (migratory whales) and plankton. It is acknowledged that the physical extent of the plume may displace some open water species transiting the offshore waters of this area of the NWS. The extent of the plume is relatively small in comparison to the surrounding offshore environment but the overall impact to the in-water biota and the marine environment in general is expected to be slight to minor short-term impact to communities in the EMBA.

Spawning/Nursery Areas

Fish (and other commercially targeted taxa) in their early life stages (eggs, larvae and juveniles) are at their most vulnerable to lethal and sublethal impacts from exposure to hydrocarbons, particularly if a spill coincides with spawning seasons or reaches nursery areas close to the shore (e.g. seagrass and mangroves) (ITOPF 2011a). Fish spawning (including for commercially targeted species such as snapper and mackerel) occurs in nearshore waters at certain times of the year, and nearshore waters are also inhabited by higher numbers of juvenile fishes than offshore waters.

Modelling indicated that, in the event of a major spill, there is potential for entrained hydrocarbons to occur in the surface water layers above threshold concentrations in nearshore waters, including Montebello/Barrow/Lowendal Islands Group, Pilbara Southern Islands Groups, Ningaloo Coast, Exmouth Gulf West, and the Muiron Islands. This has the potential to result in lethal and sublethal impacts to a portion of fish larvae in areas contaminated above impact thresholds, depending on concentration and duration of exposure and the inherent toxicity of the hydrocarbon. Although there is the potential for spawning/nursery habitat to be impacted (e.g. mangroves and seagrass beds, discussed above), losses of fish larvae in worst-affected areas are unlikely to be of major consequence to fish stocks compared with significantly larger losses through natural predation, and the likelihood that most nearshore areas would be exposed is low (i.e. not all areas in the region would be affected). This is supported by a study in the Gulf of

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Summary of Potential Impacts to environmental values
Mexico, which used juvenile abundance data from shallow-water seagrass meadows as indices of the acute, population-level responses of young fishes to the Deepwater Horizon spill. Results indicated that there was no change to the juvenile cohorts following the Deepwater Horizon spill. Additionally, there were no significant post-spill shifts in community composition and structure, nor were there changes in biodiversity measures (Fodrie and Heck 2011). Therefore, a worst-case hydrocarbon spill scenario has the potential to result in major long-term impacts to spawning fish and/or nursery areas within the EMBA, with consequence severity dependent on the actual timing, duration and extent of a spill in relation to key spawning periods and locations. ***Non-biogenic Reefs*** The reef communities fringing the Pilbara region (e.g. Pilbara islands) may be exposed to entrained hydrocarbons (at or above the threshold concentration), and consequently exhibit lethal or sublethal impacts resulting in partial or total mortality of keystone sessile benthos, particularly hard corals; thus, potential community structural changes to these shallow, nearshore benthic communities may occur. If these reefs are exposed to entrained hydrocarbons, impacts are expected to result in localised long-term effects. Therefore, a worst-case hydrocarbon spill scenario has the potential to result in minor, short-term impacts to non-biogenic reefs within the EMBA. ***Sandy Shores/Estuaries/Tributaries/Creeks (including Mudflats)/Rocky Shores*** Shoreline exposure for the upper and lower areas differ. The upper shore has the potential to be exposed to surface slicks, while the lower shore is potentially exposed to entrained hydrocarbon. Potential impacts may occur due to hydrocarbon contact with intertidal areas, including sandy shores, mudflats and rocky shores, listed in Table 6-19. Hydrocarbon at sandy shores is incorporated into fine sediments through mixing in the surface layers from wave energy, penetration down worm burrows and root pores. Hydrocarbon in the intertidal zone can adhere to sand particles; however, high tide may remove some or most of the hydrocarbon back of the sediments. Typically, hydrocarbon is only incorporated into the surface layers to a maximum of 10 cm (Etkin, 2003). As described earlier, accumulated hydrocarbons ≥100 g/m² could impact the survival and reproductive capacity of benthic epifaunal invertebrates living in intertidal habitat (French-McCay, 2009). Note that no shoreline accumulation above impact thresholds was identified by the stochastic modelling and long term impacts to shorelines is not expected. ***Key Ecological Features*** KEFs potentially impacted by the hydrocarbon spill from a loss of well containment event 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 loss of well containment event are predicted to result in minor impacts to values of the KEFs affected (for the values of each KEF, Refer Section 4.7). Impacts to benthic habitats are not predicted given the maximum depth of entrained hydrocarbons above 1000 ppb is predicted to be 20 m beyond the immediate source. Potential impacts to associated pelagic communities may occur as described above and below. The KEFs within the EMBA have relatively broad-scale distributions and are unlikely to be significantly impacted. Therefore, a worst-case hydrocarbon spill scenario has the potential to result in minor, short-term impacts to the ecological values of KEFs within the EMBA, with impacts predicted to be greatest for habitats closest to the potential release location.

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Summary of Potential Impacts to environmental values
Summary of Potential Impacts to Marine Primary Producers
Receptor Group
Submerged Shoals
The waters overlying the submerged Rankin Bank have the potential to be exposed to dissolved and entrained hydrocarbons above threshold concentrations (Table 6-19).
The permanently submerged habitats of Rankin Bank represents sensitive open water benthic community receptors, extending from deep depths to relatively shallow water. Given the water depth, it is likely the potential for biological impact is significantly reduced when compared to the upper water column layers. However, potential biological impacts could include sub-lethal stress and in some instances total or partial mortality of sensitive benthic organisms such as corals and the early life stages of resident fish and invertebrate species.
The submerged shoals are areas associated with sporadic upwelling and associated primary productivity events. Impacts to plankton communities from exposure to entrained hydrocarbons above threshold concentrations may result in short-term changes in plankton community composition but recovery would occur. Hydrocarbon contact during the spawning seasons for resident shoal community benthos and fish (meroplankton), particularly exposure to in-water toxicity effects to biota, may result in the loss of a discrete cohort population but would not affect the longer term viability of resident populations. Therefore, any impacts to resident shoal community benthos and fish (meroplankton) are likely to be localised at the shoals and temporary.
Hydrocarbon exposure to offshore filter-feeding communities may occur depending on the depth of the entrained/dissolved hydrocarbons. Exposure to dissolved (aromatic) hydrocarbons (≥10 ppb) has potential to result in lethal or sub-lethal toxic effects. Sub-lethal impacts, including mucus production and polyp retraction, have been recorded for gorgonians exposed to hydrocarbon (White et al., 2012). Shoals that are exposed to entrained and/or dissolved hydrocarbons are expected to result in localised long-term effects, depending on the exposure concentrations and degree of weathering.
Coral Reef
The quantitative spill risk assessment indicates there would be potential for coral reef habitat to be exposed to entrained hydrocarbons at locations including the Montebello/Barrow Island reefs and shoals, and Ningaloo Reef.
Exposure to entrained hydrocarbons (≥1000 ppb) has the potential to result in lethal or sublethal toxic effects to corals and other sensitive sessile benthos within the upper water column (top 20 m), including upper reef slopes (subtidal corals), reef flat (intertidal corals) and lagoonal (back reef) coral communities. Mortality in a number of coral species is possible, and this could result in the reduction of coral cover and change in the composition of coral communities.
Sublethal effects to corals may include polyp retraction, changes in feeding, bleaching (loss of zooxanthellae), increased mucous production resulting in reduced growth rates, and impaired reproduction (Negri and Heyward 2000). This could result in impacts to the shallow water fringing coral communities/reefs of the offshore islands (e.g. Barrow/Montebello/Lowendal Islands, Muiron Islands) and the mainland coast (i.e. Ningaloo Coast). With reference to Ningaloo Reef, wave-induced water circulation flushes the lagoon and may promote removal of entrained hydrocarbons from this particular reef habitat. Under typical conditions, breaking waves on the reef crest induce a rise in water level in the lagoon, creating a pressure gradient that drives water in a strong outward flow through channels. These channels are across as much as 15% of the length of Ningaloo Reef (Taylor and Pearce 1999).
If a spill occurs at the time of coral spawning at potentially affected coral locations, or in the general peak period of biological productivity, there is the potential for a significant reduction in successful fertilisation and coral larval survival, due to the sensitivity of coral early life stages to hydrocarbons (Negri and Heyward 2000). Such impacts are likely to result in the failure of recruitment and settlement of new population cohorts. In addition, some non-coral species may be affected via direct contact with entrained hydrocarbons, resulting in sublethal impacts and in some cases mortality—particularly 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, have small home ranges, and 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 (which may include fringing reefs of the offshore islands and/or the Ningaloo Reef system) will depend on actual hydrocarbon concentration, duration of exposure and water depth of the affected communities.
Over the worst-affected sections of reef habitat, coral community live cover, structure and composition may reduce, manifested by loss of corals and associated sessile biota. Recovery of these impacted reef areas typically relies on coral larvae from neighbouring coral communities that have either not been affected or only partially impacted. For example, there is evidence that Ningaloo Reef corals and fish are partly self-seeding, with the supply of larvae from locations within Ningaloo Reef of critical importance to the healthy maintenance of the coral communities (Underwood 2009). Recovery at other coral reef areas may not be aided by a large supply of larvae from other reefs, with levels of recruits after a disturbance event only returning to previous levels after the numbers of reproductive corals had also recovered (Gilmour et al. 2013).

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Summary of Potential Impacts to environmental values
Therefore, a worst-case hydrocarbon spill scenario has the potential to result in large scale impacts to coral populations within the EMBA, with long-term effects (recovery >10 years) likely. The consequence severity is predicted to be greatest at reefs closest to the potential release location (e.g. Montebello Islands). ***Seagrass Beds/Macroalgae and Mangroves*** Spill modelling has predicted that entrained hydrocarbons above threshold concentrations have the potential to contact a number of nearshore locations that support biologically diverse, shallow subtidal and intertidal communities. The variety of habitat and community types, from the upper subtidal to the intertidal zones support a high diversity of marine life and are used as important foraging and nursery grounds by a range of invertebrate and vertebrate species. Depending on the trajectory of the entrained plume, macroalgal/seagrass communities including Barrow Island, Lowendal Islands, Muiron Islands, Pilbara Islands, Montebello Islands and Ningaloo Coast may have the potential to be exposed (see Table 6-19 for a full list of receptors within the EMBA). Exposure to entrained hydrocarbons may result in mortality, depending on actual entrained exposure concentrations received and duration of exposure. Physical contact with entrained hydrocarbon droplets could cause sublethal stress, causing reduced growth rates and reduced tolerance to other stress factors (Zieman et al. 1984). Toxicity effects can also occur due to absorption of soluble fractions of hydrocarbons into tissues (Runcie et al. 2010). However, the potential for toxicity effects of entrained hydrocarbons may be reduced by weathering processes that should lower the content of soluble aromatic components before contact occurs. Mangrove habitat at Ningaloo Coast, Pilbara islands, and Montebello Islands may be contacted by entrained hydrocarbons within the EMBA (see Table 6-19). Entrained hydrocarbons may adhere to the sediment particles and in low-energy environments such as in mangroves, deposited sediment bound hydrocarbons are unlikely to be removed naturally by wave action and may be deposited in layers by successive tides (NOAA 2014). Hydrocarbons may persist in the sediment, potentially causing chronic sublethal toxicity impacts beyond immediate physical and acute effects, which may delay recovery in an affected area. Recovery of mangroves from any impacts could be long-term (>10 years). Therefore, a worst-case hydrocarbon spill scenario has the potential to result in major long-term impacts to seagrass beds, macroalgae and mangrove communities within the EMBA, with consequence severity predicted to be greatest at receptors closest to the potential release location (e.g. Montebello Islands).
Summary of Potential Impacts to Water Quality
Receptor Group
Open Water – Water Quality The highly-mixed, open water location will result in rapid evaporation and dispersion. Water quality would be reduced and is predicted to be at or above biological effect concentrations for the surrounding marine waters over the Montebello Marine Park. The submerged Tryal Rocks (30-40 m depth) within the Montebello Marine Park has the potential to be exposed to entrained hydrocarbons at or greater than 1000 ppb. The waters surrounding this submerged habitat would show a reduction in quality due to hydrocarbon contamination above background and/or national/international quality standards. Therefore, a worst-case hydrocarbon spill scenario has the potential to result in minor, short-term impacts to water quality within the EMBA, with impacts predicted to be greatest for areas closest to the release location.

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Summary of Potential Impacts to environmental values

Summary of Potential Impacts to Marine Sediment Quality

Receptor Group

Marine Sediment Quality

Studies of hydrocarbon concentrations in deep-sea sediments in the vicinity of a catastrophic well blowout indicated hydrocarbon from the blowouts can be incorporated into sediments (Romero et al. 2015). Proposed 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 that 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 surrounding the release site would be largely confined to a localised footprint.

Marine sediment quality would be reduced as a consequence 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). There is the potential for floating and entrained hydrocarbons to sink following extensive weathering and adsorption of sediment particles, which may result in the deposition of hydrocarbons to the seabed in areas distant from the release location. Such hydrocarbons are expected to be less toxic due to the weathering process.

Entrained and dissolved hydrocarbons (at or above the defined threshold) are predicted to potentially contact shallow, nearshore waters of identified islands and mainland coastlines. Hydrocarbons may occur (at or above the ecological impact thresholds) at the Montebello Islands, islands along the Pilbara coast and near Exmouth Gulf and the Ningaloo Coast (refer to Table 6-19).

Such hydrocarbon contact may lead to reduced marine sediment quality through adherence to sediment. However, given the nature of the hydrocarbon and degree of weathering that is expected prior to contact with nearshore seabed habitats, contamination of sediments is expected to be limited and short term.

Therefore, a worst-case hydrocarbon spill scenario has the potential to result in slight, short-term impacts to offshore sediment quality within a localised area of the Operational Area. For nearshore environments, a worst-case hydrocarbon spill scenario has the potential to result in minor, short-term impacts to sediment quality within the EMBA, with impacts predicted to be greatest for areas closest to the potential release location.

Summary of Potential Impacts to Air Quality

A hydrocarbon release during a loss of well containment has the potential to result in 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 is 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 reaction with photochemically produced hydroxyl radicals.

Given the remote likelihood of occurrence of a loss of well containment, the temporary nature of any VOC emissions (from either gas surfacing or weathering of liquid hydrocarbons from a loss of well containment), 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 ~169 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 that the open-water environment protected within a number of Commonwealth AMPs, State Marine Parks, World Heritage Areas and other protected places (refer to Table 6-19) may be affected by released hydrocarbons in the event of a loss of well containment. In the unlikely event of a major spill, entrained hydrocarbons and/or dissolved hydrocarbons may contact the identified key receptor locations of islands and mainland coastlines, resulting in the actual or perceived contamination of the protected areas, identified in Table 6-19.

The Montebello AMP has the greatest potential to be contacted by surface hydrocarbons, dissolved aromatic hydrocarbons and entrained hydrocarbons at or above the defined ecological effect concentrations. Hydrocarbons at or exceeding impact thresholds also have the potential to contact other protected areas, including the Argo-Rowley Terrace AMP, Gascoyne AMP, Ningaloo AMP and WHA and Shark Bay AMP. In most cases, the hydrocarbons that are predicted to reach these protected areas will be in an advanced state of weathering and at concentrations typically associated with lethal and sub-lethal impacts to only the most sensitive marine organisms. The potential (albeit low probability) of visible surface hydrocarbons exceeding 1 g/m^2 reaching these protected areas may result in a perception of more significant impacts than actually occur.

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Summary of Potential Impacts to environmental values
Objectives in the management plans for protected areas within the EMBA, including AMPs require consideration of a number of physical, ecological, socio-economic and heritage values identified in these areas (Section 4.8). Impact on the values of these protected areas are discussed in the relevant sections above for ecological and physical values and below for socio-economic and heritage values. Additionally, such hydrocarbon contact may alter perception of the protected marine environment, given these represent areas largely unaffected by anthropogenic influences and contain biological diverse environments.
Summary of Potential Impacts to Socioeconomic Values
Receptor Group
Traditional Custodians Through consultation and review of available literature (Section 4.9.1), Woodside understands that marine fauna that may be affected by unplanned discharges of hydrocarbon/chemicals, such as marine mammals, whale sharks and marine turtles, are culturally important to Traditional Custodians. 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 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. For example, activities that impact marine turtle populations and their marine environment may have an indirect impact on some Indigenous communities if they deplete hunting areas and threaten local food security (Delisle et al. 2018:251). Whale species may be subject of First Nations' increase ceremonies/rituals which are performed to enhance or maintain populations. As these Thalu ceremonies are performed to maintain and increase populations of marine species, it is considered that management applies at the species/population level and not to individuals. For example, it is anticipated 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. 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). Inter-generational transmission of cultural knowledge (including songlines) relating to marine reptiles may be impacted where changes 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). As described above, 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 these species are expected to be maintained ***Fisheries – Commercial*** **Offshore** A hydrocarbon release during a loss of well containment event has the potential to result in direct impacts to target species of three Commonwealth and 24 State fisheries active within the defined EMBA (refer Section 4.9.2). Lethal and sublethal effects may impact localised populations of targeted species within the EMBA for entrained/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. A major loss of hydrocarbons from the Petroleum Activity may also lead to an exclusion of fishing from the spill-affected area for an extended period. Fish exposure to hydrocarbon 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 its efficacy depends on 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 seafood contamination 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 major spill would result in the establishment of an exclusion zone around the spill-affected area. There would be a temporary prohibition on fishing activities for a period of time, and subsequent potential for minor economic impacts to affected commercial fishing operators. Therefore, a worst-case hydrocarbon spill scenario has the potential to result in major, long-term impacts to commercial fisheries within the EMBA, particularly for pelagic fisheries and fisheries with most of their effort focused within the EMBA. Potential impacts to inshore fisheries are discussed in the Mainland and Islands (nearshore) impacts discussion below, and the impact assessment relating to spawning is discussed above.

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Summary of Potential Impacts to environmental values

Nearshore

In the highly unlikely event of a loss of well integrity, there is the possibility that target species in some areas used by a number of State fisheries, prawn fisheries, pearl oyster fisheries and aquarium, and land hermit crab fisheries in nearshore waters of the mainland coast and islands that are within the EMBA could be affected. Targeted fish, prawn, mollusc and lobster species could experience sub-lethal stress, or in some instances mortality, depending on the concentration and duration of hydrocarbon exposure and its inherent toxicity.

The hydrocarbons predicted to reach these nearshore water locations will be in an advanced state of weathering and at concentrations typically associated with lethal and sub-lethal impacts to only the most sensitive marine organisms. Therefore, direct impacts may be limited to sub-lethal impacts only. However, there is also the potential for tainting of target species and for negative public perception.

Prawn Managed Fisheries

In a major spill, the modelling indicated the entrained EMBA may extend to nearshore waters closest to the mainland Pilbara and Gascoyne coasts, including the actively fished areas of the designated Onslow Prawn Managed Fishery, Exmouth Gulf Prawn Managed Fishery, Nickol Bay Prawn Managed Fishery and the Shark Bay Prawn and Scallop Managed Fishery, and managed prawn nursery areas. Those fisheries that occur within the EMBA occur in shallow, nearshore waters where limited hydrocarbon exposures are predicted to occur.

Prawn habitat utilisation differs between species in the post-larval, juvenile and adult stages (Dall et al., 1990). Direct impacts to benthic habitat due to a major spill has the potential to impact prawn stocks. For example, juvenile banana prawns are found almost exclusively in mangrove-lined creeks (Rönnbäck et al., 2002), whereas juvenile tiger prawns are most abundant in areas of seagrass (Masel and Smallwood, 2000). Adult prawns also inhabit coastline areas but tend to move to deeper waters to spawn. In a major spill, the model predicted shallow subtidal and intertidal habitats at the Muiron Islands, Montebello Islands, Barrow Island, Lowendal Islands, Pilbara Southern Islands Group, and mangrove and seagrass habitats of the Ningaloo Coast are located within the EMBA and could be exposed to hydrocarbon concentrations above threshold concentrations, depending on the trajectory of the plume. Localised loss of juvenile prawns in worse spill affected areas is possible. Whether lethal or sub-lethal effects occur will depend on duration of exposure, hydrocarbon concentration, weathering stage of the hydrocarbon and its inherent toxicity.

Furthermore, seafood consumption safety concerns and a temporary prohibition on fishing activities may lead to subsequent potential for economic impacts to affected commercial fishing operators.

Therefore, a worst-case credible hydrocarbon spill scenario has the potential to result in displacement of fishing activities in the spill-affected area for an extended period, detrimental impacts to seafood quality, and stress/mortality affects to target species including prawn stocks through critical habitat destruction across commercial fisheries within the EMBA.

Tourism including Recreational Activities

In the event of a major spill, the nearshore waters of offshore islands and reefs (e.g. Barrow/Montebello/Lowendal Islands Group, Muiron Islands, Pilbara Islands etc.) as well as the Ningaloo coast could be reached by entrained and dissolved hydrocarbons depending on prevailing wind and current conditions. There is also a low probability of shoreline accumulation above the socio-cultural threshold at a number of receptor sites. As these locations offer a number of amenities such as fishing, swimming and using beaches and surrounds, they have a recreational value for local residents and visitors. If a well blowout event resulted in hydrocarbon contact, there could be restricted access to beaches for a period of days to weeks, until natural weathering, tides, currents or oil spill response (e.g. shoreline clean-up if safe to do so) removes the hydrocarbons. In the event of a well blowout, tourists and recreational users may also avoid areas due to perceived impacts, including after the oil spill has dispersed.

Recreational fishers predominantly target large tropical species, such as emperor, snapper, grouper, mackerel, trevally and other game fish. 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.

A major loss of hydrocarbons from the Petroleum Activity may lead to exclusion of marine nature-based tourist activities, including charter based fishing and diving, resulting in a loss of revenue for operators. Tourism is a major industry for the region and visitor numbers would likely reduce if a hydrocarbon spill were to occur, based on the perception of hydrocarbon spills and associated impacts.

There is the potential for stakeholder perception that this environment will be contaminated over a large area and for the longer term, resulting in a prolonged period of tourism decline. Oxford Economics (2010) assessed the duration of hydrocarbon spill-related tourism impacts and found that, on average, it took 12 to 28 months to return to baseline visitor spending. There is likely to be significant impacts to the tourism industry, wider service industry (hotels, restaurants and their supply chain) and local communities in terms of economic loss as a result of spill impacts to tourism. Recovery and return of tourism to pre-spill levels will depend on the size of the spill, effectiveness of the spill clean-up, and change in any public perceptions regarding the spill (Oxford Economics 2010).

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Summary of Potential Impacts to environmental values

Therefore, a worst-case hydrocarbon spill scenario has the potential to result in moderate, medium-term impacts to tourism and recreation within the EMBA.

Offshore Oil and Gas Infrastructure

A hydrocarbon release during a loss of well containment event has the potential to result in disruptions to production at existing petroleum facilities (platforms and FPSOs), as well as activities such as drilling and seismic exploration. For example, facility water intakes for cooling and fire hydrants could be shut off if contacted by floating hydrocarbons, which could in turn lead to the temporary cessation of production activities. Spill exclusion zones established to manage the spill could also prohibit access for activity support vessels as well as offtake tankers approaching facilities off the North West Cape. The impact on ongoing operations of regional production facilities would be determined by the nature and scale of the spill and metocean conditions. Furthermore, decisions on the operation of production facilities in the event of a spill would be based primarily on health and safety considerations. The closest production facilities to Yodel updip or Wilcox will sites are:

- Pluto platform (operated by Woodside): ~50 km south-west
- Wheatstone platform (operated by Chevron): ~40 km south-west
- Reindeer platform (operated by Santos): ~70 km south-east
- Goodwyn Alpha platform (operated by Woodside):~ 20 km north-east
- North Rankin Complex: ~45 km north-east

Operation of these facilities is likely to be affected in the event of a well blowout spill. Therefore, a worst-case hydrocarbon spill scenario has the potential to result in slight, short-term impacts to oil and gas industry within the EMBA.

Cultural Heritage

There are a number of historic shipwrecks identified within 50 km of the Operational Area (Table 4-24) with the closest at 30km distant. Within the wider EMBA there are a further 71 shipwrecks.

The modelling results do not predict surface slicks contacting the identified wrecks, and the majority of entrained hydrocarbons are expected to occur close to the surface. However, shipwrecks in the subtidal zone could be exposed to entrained and dissolved hydrocarbons. 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 sub-lethal and lethal impacts (which may range from physiological issues to mortality).

Entrained hydrocarbons above the threshold concentration are predicted at the Montebello/Barrow/Lowendal islands. There is also a low probability of shoreline accumulation above the ecological threshold at Barrow/Montebello Islands. However, artefacts, scatter and rock shelters are on land above the high water mark on Barrow and Montebello islands; therefore, no contact is predicted for these areas.

Within the wider EMBA are several designated heritage places (Section 4.9.1). These places are also covered by other designations such as World Heritage Area. Potential impacts are discussed in the sections above.

In the highly unlikely event of a major hydrocarbon spill due to a loss of well integrity, the EMBA includes the areas listed in Section 4. This incorporates AMPs as well as other sensitive marine environments and associated receptors of the Muiron Islands, Ningaloo Coast, Rankin Bank, Montebello/Barrow/Lowendal Islands Group, the Pilbara Southern and Northern Islands Group and Shark Bay. Long-term impacts may occur at these locations, including socio cultural effects as a result of a major spill of condensate from drilling activities within the Operational Area.

In summary, long-term impacts may occur at sensitive nearshore and shoreline habitats, particularly areas of the Barrow and Montebello Islands, as a result of a major spill of hydrocarbon from a loss of well control within the Operational Area The overall environmental consequence is defined as 'B – Major, long-term impact (ten to 50 years) on highly valued ecosystem, species, habitat, physical or biological attributes'.

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Demonstration of ALARP				
Control Considered	***Control Feasibility (F) and Cost/Sacrifice (CS)[51]***	***Benefit in Impact/Risk Reduction***	***Proportionality***	***Control Adopted***
Legislation, Codes and Standards				
OPGGS (Resource Management and Administration) Regulations 2011: accepted WOMP which describes the well design and barriers to be used to prevent a loss of well integrity, specifically: • All zones with flow potential penetrated by the well bore, containing hydrocarbons, shall be isolated from the surface environment by a minimum of two barriers (primary and secondary). • The barriers shall: – be effective over the lifetime of well construction and abandonment (fluid barriers) remain monitored and provide sufficient pressure to counter pore pressure during well construction and abandonment (cementing barriers, including conductor, casing and liners) conform to the relevant minimum standards set out in the Woodside Barrier Standard.	F: Yes. CS: Minimal cost. Standard practice.	Compliance with an accepted WOMP will ensure a number of barriers are in place and verified, reducing the likelihood of a loss of well integrity event occurring. Although the consequence of a blowout would not be reduced, the reduction in likelihood reduces the overall risk.	Benefits outweigh cost/sacrifice	Yes C 6.2

[51] *Qualitive measure*

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Demonstration of ALARP				
Control Considered	***Control Feasibility (F) and Cost/Sacrifice (CS)[51]***	***Benefit in Impact/Risk Reduction***	***Proportionality***	***Control Adopted***
• Verification: – Effectiveness of primary and secondary barriers shall be verified (physical evidence of the correct placement and performance) during the permanent plugging of the well (if required).				
In the event of a spill, emergency response activities implemented in accordance with the OPEP (per Table 7-8).	F: Yes. CS: Costs associated with implementing response strategies vary dependent 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 11.1
Arrangements supporting the activities in the OPEP (per Table 7-8) will be tested to ensure the OPEP can be implemented as planned.	F: Yes. CS: Moderate costs associated with exercises. Standard practice.	Testing the OPEP activities would not reduce the likelihood, but response activities may reduce the consequence.	Benefits outweigh cost/sacrifice.	Yes C 11.2
As-built checks that shall be completed during well operations to establish a minimum acceptable standard of well integrity is achieved.	F: Yes. CS: Minimal cost. Standard practice.	Reduces the likelihood of occurrence. No reduction in consequence will occur.	Benefits outweigh cost/sacrifice.	Yes C 6.4
Implement requirements for permanent well abandonment: • well barrier as per the internal Woodside Standard and Procedure • placement, length, material and verification of a permanent barrier.	F: Yes. CS: Minimal cost. Standard practice.	This procedure will reduce the likelihood of a spill occurring from a suspended well. Although changes in consequence would occur, the reduction in likelihood results in a reduction in overall risk.	Benefits outweigh cost/sacrifice.	Yes C11.3

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Demonstration of ALARP				
Control Considered	***Control Feasibility (F) and Cost/Sacrifice (CS)[51]***	***Benefit in Impact/Risk Reduction***	***Proportionality***	***Control Adopted***
Well specific barrier elements, and the specified verification requirements, are identified in accordance with the Well Acceptance Criteria Procedure.	F: Yes. CS: Minimal cost. Standard practice.	This procedure will reduce the likelihood of a spill occurring from a suspended well. Although changes in consequence would occur, the reduction in likelihood results in a reduction in overall risk.	Benefits outweigh cost/sacrifice.	Yes C 11.4
Good Practice				
Subsea BOP installed and function tested during permanent plugging operations. The BOP shall meet the Woodside Well Control Standard, and shall be subject to API Standard 53 BOP Risk Assessment.	F: Yes. CS: Standard practice. Required by Woodside standards.	Testing of the BOP will reduce the likelihood of a blowout resulting in release of hydrocarbons to the marine environment. In the event of a blowout, this control would not reduce the consequence, although the reduction in likelihood reduces the overall risk ranking.	Benefits outweigh cost/sacrifice.	Yes C 11.5
Project specific Mooring Design-Analysis.	F: Yes. CS: Standard practice. Required by Woodside standards.	Ensure adequate MODU station holding capacity to prevent loss of station keeping. This will reduce the likelihood of a blowout resulting in release of hydrocarbons to the marine environment.	Benefits outweigh cost/sacrifice.	Yes C 3.4
Apply a 'living heritage[52]' management approach. Woodside seeks advice and incorporates Traditional Custodian cultural knowledges across our activities. Cultural safety considerations are factored for our workforce and the Traditional Custodian community.	F: Yes CS: Minimal	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 2.1

[52] 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.

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Demonstration of ALARP				
Control Considered	***Control Feasibility (F) and Cost/Sacrifice (CS)[51]***	***Benefit in Impact/Risk Reduction***	***Proportionality***	***Control Adopted***
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 2.2
Use of cultural heritage monitors on vessels to oversee implementation of controls protecting cultural values	F: No CS: Not feasible	Primary Installation Vessels are POB constrained with no ability to facilitate additional personnel	Not considered – control not feasible.	No
Project 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	Ensures workforce is suitably aware of cultural features and heritage values in the area they are operating.	Benefits outweigh cost/sacrifice.	Yes C2.3
The Petroleum activity will be carried out in accordance with protection declarations relevant to the PAA, under Sections 9,10,12 of the ATSIHP Act.	F: Yes CS: Minimal	Meets legislative requirements and community expectations	Benefits outweigh cost/sacrifice.	Yes C2.4
Professional Judgement – Eliminate				
Do not drill well.	F: No. CS: Inability to achieve program objectives.	A hydrocarbon release would not be credible.	Disproportionate. Given the extremely low likelihood of a loss of well control due to the systematic implementation of Woodside's policies, standards, procedures and processes relating to drilling activities, the cost/sacrifice outweighs the benefit gained.	No

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Demonstration of ALARP				
Control Considered	***Control Feasibility (F) and Cost/Sacrifice (CS)[51]***	***Benefit in Impact/Risk Reduction***	***Proportionality***	***Control Adopted***
Professional Judgement – Substitute				
No additional controls identified.				
Professional Judgement – Engineered Solution				
No additional controls identified.				
Risk Based Analysis				
A quantitative spill risk assessment was performed (refer Section 6.8.1).				
Company Values				
Corporate values require all personnel at Woodside to comply with appropriate policies, standards, procedures and processes while being accountable for their actions and holding others to account in line with the Woodside Compass. As detailed above, the Petroleum Activity will be performed in line with these policies, standards and procedures that include suitable controls to prevent loss of well integrity, and response should a loss of well integrity occur.				
Societal Values				
Due to the Petroleum Activity's potential extent of the EMBA, the loss of well integrity current risk rating presents a Decision Type B, in accordance with the decision support framework described in Section 0. Consultation was conducted for this program to identify the views and concerns of relevant persons and organisations, as described in Section 5. During consultation with relevant persons Woodside, AMSA and WA DTMI were consulted on the activity. DTMI was provided with a copy of the Oil Pollution First Strike Plan (Appendix H) detailing selected spill response strategies.				
ALARP statement: On the basis of the environmental risk assessment outcomes and use of the relevant tools appropriate to the decision type (i.e. Decision Type B, Section 0), Woodside considers the adopted controls appropriate to manage the risks and consequences of a highly unlikely unplanned hydrocarbon release as a result of a loss of well integrity. As no reasonable additional/alternative controls were identified that would further reduce the risks and consequences without grossly disproportionate sacrifice, the risks and consequences are considered ALARP.				

Demonstration of Acceptability
Acceptability Criteria and Assessment
Loss of well integrity has been evaluated as having a moderate level of current risk rating due to the scale of potential environmental impacts. However, the likelihood of a loss of well integrity occurring is considered highly unlikely. As outlined in Section 0, Woodside considers the current risk ratings for a Decision Type B to be acceptable, if ALARP is demonstrated using good industry practice, consideration of company and societal values and risk based analysis, if legislative requirements are met and societal concerns are accounted for, and the alternative control measures are grossly disproportionate to the benefit gained. ***Principles of ESD*** The impact and risk evaluation has taken into account the following relevant principles of ESD: • decision-making processes should effectively integrate both long-term and short-term economic, environmental, social and equitable considerations • the principle of inter-generational equity—that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations • the conservation of biological diversity and ecological integrity should be a fundamental consideration in decision-making. ***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 Environmental Performance Outcomes, including: • Woodside Environment and Biodiversity Policy (Appendix A)

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Demonstration of Acceptability
• Woodside Risk Management Policy (Appendix A) • Well Barrier Standard • Well Control Standard • Manage Campaign Operations Standard • Global Source Control Emergency Response Plan Oil spill preparedness and response strategies are considered applicable to the nature and scale of the risk and associated impacts of the response are reduced to ALARP (Appendix G). Monitoring and Evaluation (operational monitoring) as a key response in the unlikely event of a hydrocarbon release will assess and track the extent of the hydrocarbon contact and revise the predicted extent of impact. In addition, the Planning Area for scientific monitoring (refer to Annex C of the Oil Spill Preparedness and Response Mitigation Assessment – Appendix G) can be re-assessed in the highly unlikely event of hydrocarbon release with consideration of the conservation values and social-cultural values of state and commonwealth protected areas (including AMPs), National and Commonwealth Heritage Listed places; tourism and recreation; and fisheries. The post-response SMP will consider assessment and monitoring in line with the affected receptors such as habitat and species, AMPs and fisheries. Woodside corporate values include working sustainably with respect to the environment and communities in which we operate, listening to internal and external stakeholders, and considering HSE when making decisions. Consultation, outlined below, has been performed prior to the Petroleum Activity. ***External Context*** During consultation with relevant persons Woodside, AMSA and WA DTMI were consulted on the activity. DTMI was provided with a copy of the Oil Pollution First Strike Plan (Appendix H) detailing selected spill response strategies. Fish spawning and commercial fisheries in the event of an unplanned hydrocarbon released were raised during consultation however it was noted that the environmental performance outcome is to prevent any unplanned hydrocarbon release to the marine environment. ***Other Requirements*** 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: • API Standard 53 for subsea BOP function testing • AEP Memorandum of Understanding: Mutual Assistance for relief well drilling is in place. Woodside develops an activity SCERP, including the Relief Well Plan, which is signed off by the Drilling Engineering Manager and maintains a list of rigs that are currently operating in Australia (refer also to Appendix G). • OPGGS (Resource Management and Administration) Regulations 2011 to have an accepted WOMP and application to permanently plug for abandonment of the wells. NOPSEMA will be notified of reportable and recordable incidents, if required, in accordance with Section 7.11. A mutual aid MoU for relief well drilling is in place and the Drilling Engineering Manager maintains a list of rigs that are currently operating in WA. The EMBA overlaps a number of BIAs for threatened and migratory species, as well as a number of State and Commonwealth MPAs and the Ningaloo Coast WHA. As demonstrated in Section 4.8 the residual risk of accidental hydrocarbon release from loss of well integrity 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 during the assessment of potential impacts. The Petroleum Activity is not considered to be inconsistent with the overall recovery objectives and actions of these recovery plans and conservation advice (Section 4). ***Acceptability Statement*** The impact assessment has determined that an accidental hydrocarbon release as a result of a loss of well integrity represents a moderate current risk rating and may result in major, long-term impacts (10 - 50 years) on highly valued ecosystems, species, habitat or physical or biological attributes. A number of BIAs for protected species overlap with the EMBA. 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. In addition the Petroleum Activity is within the acceptable level of impact determined through the Goodwyn Area Infill OPP as the risk rating is consistent with the level rated in the OPP and the EPOs and controls from the OPP for a loss of well integrity have been adopted. The likelihood of a loss of well integrity occurring is highly unlikely, given the adopted controls. The adopted controls are considered consistent with industry legislation, codes and standards, and professional judgement and a risk-based assessment has been conducted to better understand the potential consequences and plan oil spill response. The adopted controls also meet the requirements and expectations of Australian Marine Orders, AMSA and AHO identified during impact assessment and consultation. As demonstrated in Section 6.9 the potential impacts of hydrocarbon

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Demonstration of Acceptability
release from loss of well integrity 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 during the assessment of potential risks. On the basis of the environmental impact assessment outcomes and Woodside's criteria for acceptability outlined in Section 2.2.7, this is considered an acceptable level of risk.

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Demonstration of Acceptability			
Environmental Performance Outcomes, Standards and Measurement Criteria			
Outcomes	***Controls***	***Standards***	***Measurement Criteria***
EPO 11 No unplanned release of hydrocarbons to the marine environment due to a loss of well integrity	C 6.2 OPGGS (Resource Management and Administration) Regulations 2011: accepted WOMP which describes the well design and barriers to be used to prevent a loss of well integrity, specifically: All zones with flow potential penetrated by the well bore, containing hydrocarbons, shall be isolated from the surface environment by a minimum of two barriers (primary and secondary). The barriers shall: • be effective over the lifetime of well construction and abandonment • (fluid barriers) remain monitored and provide sufficient pressure to counter pore pressure during well construction and abandonment • (cementing barriers, including conductor, casing and liners) conform to the relevant minimum standards set out in the Woodside Barrier Standard. • Verification: • Effectiveness of primary and secondary barriers shall be verified (physical evidence of the correct placement and performance) during the permanent plugging of the well (if required).	PS 6.2 See Section 6.7.5	MC 6.2.1 See Section 6.7.5 MC 6.2.2 See Section 6.7.5 MC 6.2.3 See Section 6.7.5
	C 11.1 In the event of a spill emergency response activities implemented in accordance with the OPEP (per Table 7-8).	PS 11.1 In the event of a spill the OPEP (per Table 7-8) requirements are implemented	MC 11.1.1 Completed incident documentation

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Demonstration of Acceptability			
	C 11.2 Arrangements supporting the activities in the OPEP (per Table 7-8) will be tested to ensure the OPEP can be implemented as planned.	PS 11.2.1 Exercises/tests will be conducted in alignment with the frequency identified in Table 7-10	MC 11.2.1 Testing of arrangement records confirm that emergency response capability has been maintained
		PS 13.2.2 Woodside's procedure demonstrates a minimum level of trained personnel, for core roles in the OPEP (per Table 7-9 are maintained	MC 13.2.2 Emergency Management dashboard confirms that minimum level of personnel trained for core OPEP roles are available.
	C 6.4 See Section 6.7.5	PS 6.4.1 See Section 6.7.5	MC 6.4.1 See Section 6.7.5
			MC 6.4.2 See Section 6.7.5
	C 11.3 Implement requirements for permanent well abandonment: • well barrier as per the internal Woodside Standard and Procedure • placement, length, material and verification of a permanent barrier	PS 11.3 Woodside abandons the wells according to internal Woodside procedure.	MC 11.3.1 Records demonstrate well acceptance criteria have been met.
	C 11.4 Well specific barrier elements, and the specified verification requirements, are identified in accordance with the Well Barrier Standard	PS 11.4 Well specific barrier elements and verification in accordance with internal Woodside standard..	MC 11.4.1 Records demonstrate well specific barrier elements and verification criteria have been met.
	C 11.5 Subsea BOP installed and function tested during permanent plugging operations. The BOP shall meet the Woodside Well Control Standard and shall be subject to API Standard 53 BOP Risk Assessment.	PS 11.5 Subsea BOP specification, installation and function testing compliant with internal Woodside Standards and international requirements (API Standard 53) as agreed by Woodside and MODU contractor	MC 11.5.1 Records demonstrate that BOP and BOP control system specifications and function testing were in accordance with minimum standards for the expected permanent plugging conditions as agreed by Woodside and MODU contractor.
	C 3.4 Refer Section 6.7.2	PS 3.4 Refer Section 6.7.2	MC 3.4.1 Refer Section 6.7.2
For oil spill response outcomes, standards and measurement criteria refer to Appendix G.			

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6.8.3 Unplanned Hydrocarbon Release: Vessel Collision

Context		
Relevant Activities Project Vessels - Section 3.11 Project-Vessel based activities – Section 3.11.5	***Existing*** Environment Physical Environment – Section 4.3 Habitats and Biological Communities – Section 4.5 Protected Species – Section 4.6 Socio-economic Environment – Section 4.9	***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
Loss of hydrocarbons to marine environment due to a vessel collision (e.g. project vessels or other marine users)		X		X	X	X	A	D	1	M	LCS GP	Broadly Acceptable	EPO 12

Description of Source of Impact

Background

The temporary presence of the MODU and project vessels in the Operational Area will result in a navigational hazard for commercial shipping within the immediate area. This navigational hazard could result in a third party vessel colliding with the MODU or a project vessel which could release hydrocarbons.

Spill scenarios involving the MODU are not considered likely for a hydrocarbon release given the collision points, vessel speeds and locations of the vessel tanks. MODU fuel tanks are located in the MODU pontoons, typically located on the inner sides of pontoons and can be over 10 m below the waterline.

The installation vessel may have multiple fuel tanks with the largest single tank capacity between 500 - 1000 m^3.

A typical project vessel (e.g. a support or survey vessel) is likely to have multiple isolated marine diesel tanks distributed throughout the hull of the vessel. The marine diesel storage capacity of a support vessel can be in the order of 1000 m^3 (total) that is distributed through multiple isolated tanks typically located mid-ships and can range in typical size from 22 to 105 m^3. Support vessels can have fuel tank sizes ranging from 111 m^3 – 247 m^3. The AHV is considered to have a maximum fuel tank size of 264 m^3, and the survey vessel a maximum of 275 m^3.

In the unlikely event of a vessel collision involving a project 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 in order to reduce the potential volume of fuel released to the environment.

Industry Experience

Registered vessels or foreign flag vessels in Australian waters are required to report events to the Australian Transport Safety Bureau (ATSB), AMSA or Australian Search and Rescue (AusSAR).

From a review of the ATSB marine safety and investigation reports, one vessel collision occurred in 2011/12 that resulted in a spill of 25–30 L of oil into the marine environment as a result of a collision between a tug and support vessel off Barrow Island. Two other vessel collisions occurred in 2010, one in the port of Dampier, where a support

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Description of Source of Impact
vessel collided with a barge being towed. Minor damage was reported and no significant injury to personnel or pollution occurred. The second 2010 vessel collision involved a vessel under pilot control in port connecting 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, the ATSB's annual publication defines the individual safety action factors identified in marine accidents and incidents: 42% related to navigation action (2011). Of those, 15% related to poor communication and 42% related to poor monitoring, checking and documentation (ATSB, 2011). The majority of these related to the grounding instances. ***Credible 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 as follows: • 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 of volume which is higher than the point of penetration. The environmental risk analysis and evaluation identified and assessed a range of 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. Spill scenarios involving the MODU are not considered likely for a hydrocarbon release given collision points, vessel speeds and locations of the vessel tanks. Instead, the most credible scenarios are associated with the collision of a PIV with a refuelling vessel in the event that one should be used within the field. In summary: • It is not a credible scenario that the total storage volume of the MODU would be lost, as fuel is stored in more than one tank. • It is not a credible scenario that a storage tank on the MODU would be damaged due to the location of the tanks within the hull, behind the bilge tanks, below the waterline. • It is highly unlikely that the full volume of the largest storage tank on a support vessel would be lost. The last scenario considered was a collision between a project vessel with a third-party vessel (i.e. commercial shipping, other petroleum related vessels and commercial fishing vessels). This was assessed as being credible but 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 in close proximity to the MODU (exclusion areas), and the construction and placement of storage tanks. Potential spill volumes for these scenarios are summarised in Table 6-20. Given the offshore location of the Operational Area, vessel grounding is not considered a credible risk.

Table 6-20: Summary of credible hydrocarbon spill scenario as a result of vessel collision

Scenario	Hydrocarbon Volumes	Preventative and Mitigation Controls	Credibility
Loss of containment from MODU as a result of vessel collision	Submerged marine diesel tanks up to an individual capacity of 500 m^3.	Fuel tanks are located on the inside of pontoons and protected by location below water line, protection from other tanks, e.g. bilge tanks. The draught of vessel and location of tanks in terms of water line prevent the tanks from being breached.	Not credible due to location of tanks.

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Description of Source of Impact			
Breach of support vessel fuel tanks due to support vessel – other vessel collision including commercial, shipping/fisheries.	Activity support vessel has multiple marine diesel tanks typically ranging between 22– 105 m³ each.	Typically, double wall, tanks which are located midship (not bow or stern). Vessels are not anchored and steam at low speeds when relocating within the Operational Area or providing stand-by cover. Normal maritime procedures would apply during such vessel movements.	Credible Activity support vessel – other vessel collision could potentially result in the release from a fuel tank.
Breach of PIV fuel tanks due to collision with another vessel including commercial shipping/fisheries.	The installation vessel has multiple isolated tanks; largest volume of a single tank is unlikely to exceed 500 to 1000 m³	Tank locations midship (not bow or stern). Installation vessel will be holding station during installation activities or steaming at low speeds when relocating within the Operational Area	Credible PIV – third party vessel collision could potentially result in the release from a fuel tank.
Breach of the largest single tank inventory of a fuel tanker due to collision with a primary installation vessel.	A fuel tanker will have a maximum single inventory tank of 1000 m³.	Refer to Section 6.7.4 for preventative and mitigation controls.	Credible –Worst case Installation vessel – fuel tanker collision could potentially result in the release from a fuel tank. It is noted that this scenario is only credible if refuelling of an installation vessel is required in the field.

Quantitative Hydrocarbon Risk Assessment

Two scenarios were identified:

- A short-term (instantaneous) surface release of 1000 m3 of marine diesel near the furthest nearfield well, representing loss of fuel tank integrity after a vessel collision
- A short-term (instantaneous) surface release of 1000 m3 of marine diesel near the Wilcox wells, representing loss of fuel tank integrity after a vessel collision

Modelling was performed by RPS, to determine the fate of marine diesel released from a collision within the Montebello Marine Park (20°03'1.4" S, 115°31'35.0" E) and at the GDA well site.

The modelling in the Montebello assessed the extent of a marine diesel spill volume of 2000 or 1000 m^3 (noting that 1000 m^3 was the credible scenario and that the 2000 m^3 was used as a conservative modelling analogue) for all seasons, using an historic sample of wind and current data for the region. A total of 200 replicate simulations were modelled over an annual period (50 per quarter).

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Impact Assessment

Potential Impacts Overview

Environment that May Be Affected

Surface Hydrocarbons

Quantitative hydrocarbon spill modelling results for surface hydrocarbons are shown in Table 6-21. If this scenario occurred, a surface hydrocarbon slick would form down-current of the release location, with the trajectory dependent on prevailing wind and current conditions at the time. The modelling indicates that the EMBA would be largely confined to open water. A socio-cultural EMBA for surface hydrocarbons which includes the threshold for visible surface hydrocarbons of 1 g/m^2 may extend beyond the EMBA in which ecological impacts may occur.

Entrained Hydrocarbons

Quantitative hydrocarbon spill modelling results are shown in Table 6-21. If this vessel collision scenario occurred, a plume of entrained hydrocarbons would form down-current of the release location, with the trajectory dependent on prevailing current conditions at the time. Table 6-21 provides details of receptors potentially contacted by entrained diesel at 1000 ppb.

Dissolved Hydrocarbons

Dissolved aromatic hydrocarbons at concentrations equal to or greater than the 10 ppb threshold are predicted to be predominantly confined to open water. Table 6 22 provides details of receptors potentially contacted

Accumulated Hydrocarbons

Accumulated hydrocarbons above threshold concentrations (≥100 g/m^2) were not predicted by the modelling to occur at any location.

Taking into consideration the EMBA derived from hydrocarbon spill modelling for a marine diesel spill, the environment that may be affected will fall within the EMBA of the spill from a loss of well integrity outlined in Section 0.

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Table 6-21: Probability of hydrocarbon spill contact above impact thresholds within the EMBA with key receptor locations and sensitivities for a Instantaneous release of marine diesel (table cell values correspond to highest probability of contact [%] from the two scenarios)

Environmental setting	Location / name	Environmental, Social, Cultural, Heritage and Economic Aspects presented as per the Environmental Risk Definitions (Woodside's Risk Management Procedure [WM0000PG10055394])																														Probability of hydrocarbon contact and fate (%) *Note: the probability is based on stochastic modelling of 200 hypothetical worst-case spills under a variety of weather and metocean conditions*					
		Physical		Biological																						Socioeconomic and Cultural					Socio-cultural EMBA		Ecological EMBA			
		Water Quality	*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 and/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/or migratory shorebirds	Pelagic fish populations	Resident /Demersal Fish	Fisheries – commercial	Fisheries – traditional	Tourism and Recreation	Protected Areas / Heritage – European and Indigenous / Underwater Cultural Heritage	Offshore Oil and Gas Infrastructure (topside and subsea)	Surface hydrocarbon (1-10 g/m^2)	Accumulated hydrocarbons (10–100 g/m^2)	Surface hydrocarbon (≥10 g/m^2)	Entrained hydrocarbon (≥1000 ppb)	Dissolved aromatic hydrocarbon (≥10 ppb)	Accumulated hydrocarbons (>100 g/m^2)
Offshore	Montebello AMP	✓	✓	✓			✓	✓							✓	✓			✓	✓	✓	✓	✓	✓	✓	✓		✓	✓		100		100	100	100	
	Gascoyne AMP	✓	✓												✓	✓			✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓				2	2	
	Rankin Bank	✓	✓	✓			✓	✓		✓						✓				✓		✓		✓	✓	✓		✓							3	
Islands/Banks/Shoals	Montebello Islands (including State Marine Park)	✓	✓	✓	✓	✓	✓	✓				✓		✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓		✓	✓					2	2	
	Pilbara Islands – Southern Island Group (Serrurier, Thevenard and Bessieres Islands – State Nature Reserves)	✓	✓		✓		✓		✓			✓		✓		✓	✓		✓	✓		✓	✓	✓	✓	✓		✓	✓					2	2	
	Lowendal islands	✓	✓	✓	✓	✓	✓	✓				✓		✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓			✓	✓					1		
	Barrow Island	✓	✓	✓			✓	✓			✓				✓	✓			✓	✓	✓	✓		✓	✓									1	2	
	Muiron Islands (WHA, State Marine Park)	✓	✓	✓	✓		✓	✓		✓		✓		✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓			✓	✓					7	1	

[61] Note: hydrocarbons cannot accumulate on open ocean, submerged receptors, or receptors not fully emergent.

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Environmental setting	Location / name	Environmental, Social, Cultural, Heritage and Economic Aspects presented as per the Environmental Risk Definitions (Woodside's Risk Management Procedure [WM0000PG10055394])																										Probability of hydrocarbon contact and fate (%) Note: the probability is based on stochastic modelling of 100 hypothetical worst-case spills under a variety of weather and metocean conditions					
		Physical		Biological																				Socioeconomic and Cultural					Socio-cultural EMBA		Ecological EMBA			
		Water Quality	Sediment Quality	Marine Primary Producers				Other Communities / Habitats						Protected Species								Other Species							Surface hydrocarbon (1-10 g/m²)	Accumulated hydrocarbons (10–100 g/m²)	Surface hydrocarbon (≥10 g/m²)	Entrained hydrocarbon (≥1000 ppb)	Dissolved aromatic hydrocarbon (≥10 ppb)	Accumulated hydrocarbons (>100 g/m²)
		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 and/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/or migratory shorebirds	Pelagic fish populations	Resident /Demersal Fish	Fisheries – commercial	Fisheries – traditional	Tourism and Recreation	Protected Areas / Heritage – European and Indigenous / Underwater Cultural Heritage	Offshore Oil and Gas Infrastructure (topside and subsea)						
Mainland (nearshore waters)	WA Coastline	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓				5		2	
	Ningaloo Coast (North, Middle & South; WHA, and State Marine Park)	✓	✓	✓	✓	✓	✓	✓		✓		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓		✓	✓				4		3	

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Summary of Potential Impacts to environmental value(s)

In the event of a 2000 m³ release of marine diesel spill due to vessel collision, the modelling predicts a low probability of receptors being contacted by entrained hydrocarbons >1000 ppb or dissolved aromatic hydrocarbons >10 ppb. The greatest likelihood of contact is at the Montebello AMP). Further, entrained hydrocarbons reaching these environments will be highly weathered, with the volatile and water soluble (often the most toxic) components expected to have dissipated. Surface hydrocarbons above 10 g/m^2 are predicted to contact the Montebello AMP only and no shoreline oiling above 100 g/m^2 is predicted.

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 socio-economic values are described in Section 0. The hydrocarbon EMBA for the Petroleum Activity is based on both the loss of well containment EMBA the marine diesel EMBA, as at points, the marine diesel EMBA extends further than the loss of well containment EMBA. Therefore, the potential impacts of entrained hydrocarbons provided in Section 6.8.2, and the scale of impact described provides a suitable assessment for potential impacts of a 2000 m³ release of marine diesel. Impacts specific to a spill of marine diesel are summarised below. It is noted that 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 that any potential impacts will be minor and short-term.

Protected Species

As identified in Section 4.6, protected species including migrating pygmy blue whales may be encountered near the Operational Area, and therefore could be impacted in close proximity to 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 following 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 are not predicted.

There is also the potential for migrating humpback whales, dugongs and coastal dolphin populations to be exposed in nearshore waters, however, the low concentrations and advanced degree of weathering of hydrocarbons in these nearshore waters is not expected to result in any discernible sublethal or lethal impacts to cetaceans.

The EMBA overlaps with BIAs for marine turtle internesting habitat, as identified in Section 4.6.2. Turtle internesting habitats, such as those in waters adjacent to Barrow Island and the Montebello Islands, are predicted to have very limited or no exposure to surface or dissolved hydrocarbons above their respective impact threshold concentrations. Some marine turtles in these areas may be exposed to patchy occurrences of entrained hydrocarbons, which would be in an advanced state of weathering with reduced toxicity. 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. The potential for lethal and sub-lethal impacts to marine turtles is limited to small numbers of transient individuals that may be present 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 to 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. Should sharks or rays be present in offshore waters near the Operational Area during the spill, direct impacts may occur if foraging within surface slicks or in the upper 20 to 30 m of the water column containing entrained hydrocarbons and dissolved aromatics. Contamination of their food supply and the subsequent ingestion of this prey may also result in long term impacts as a result of bioaccumulation. Impacts are again predicted to be limited to a small number of animals given the absence of key habitat and 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 that 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 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 (ITOPF, 2011). It is therefore considered that any potential impacts would be low magnitude and temporary in nature.

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Summary of Potential Impacts to environmental value(s)
Pelagic fish populations in the open water offshore environment of the EMBA are highly mobile and have the ability 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 that 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 to be negligible. Combined with these factors and the rapid dispersion of marine diesel, it is considered that 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 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 that 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 minor. ***Protected Areas*** Entrained hydrocarbons at or exceeding the 1000 ppb threshold have a low probability of contacting the Gascoyne AMP and Ningaloo AMP and WHA. Entrained hydrocarbons are only predicted within the surface waters of the deep open waters of these protected areas, with no contact to seabed habitats or to shoreline contact. Potential impacts to water quality and the natural values (e.g. mobile protected species) in these areas would be minor and short-term in nature due to the rapid dispersion and weathering of the marine diesel, as described above. Dissolved and visible surface hydrocarbons (at or exceeding 1 g/m^2) are not predicted to reach any other protected areas. ***Commercial Fisheries*** A marine diesel spill is considered highly unlikely to cause significant direct impacts on the target species fished by three Commonwealth and 21 State active fisheries (refer Section 4.9.2) which 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 >60–200 m depth, or pelagic species which are highly mobile. Therefore, a marine diesel spill is expected to only result in minor impacts, considering that hydrocarbons are confined to the upper layers of the water column. 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 therefore potentially lead to subsequent economic impacts on commercial fishing operators if they were planning to fish within the area of the spill. 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. ***Cultural Values and Heritage*** Through consultation and review of available literature (Section 4.9.1), Woodside understands that marine fauna that may be affected by unplanned discharges of hydrocarbon/chemicals, such as marine mammals, whale sharks and marine turtles, are culturally important to Traditional Custodians. 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 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. For example, activities that impact marine turtle populations and their marine environment may have an indirect impact on some Indigenous communities if they deplete hunting areas and threaten local food security (Delisle et al. 2018:251). Whale species may be subject of First Nations' increase ceremonies/rituals which are performed to enhance or maintain populations. As these Thalu ceremonies are performed to maintain and increase populations of marine species, it is considered that management applies at the species/population level and not to individuals. For example, it is anticipated 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. 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). Inter-generational transmission of cultural knowledge (including songlines) relating to marine reptiles may be impacted where changes 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). As described above, 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 these species are expected to be maintained

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Summary of Potential Impacts to environmental value(s)
Given the adopted controls, the overall risk rating for an unplanned hydrocarbon release resulting from a vessel collision is moderate based on a minor consequence (short term impact: 1-2 years), to the high value receptors (marine fauna, AMPs, KEFs and commercial fishing), and a highly unlikely likelihood.

Demonstration of ALARP				
Control Considered	***Control Feasibility (F) and Cost/Sacrifice (CS)[53]***	***Benefit in Impact/Risk Reduction***	***Proportionality***	***Control Adopted***
Legislation, Codes and Standards				
Marine Order 30 (Prevention of Collisions) 2016, including: • adherence to steering and sailing rules including maintaining look-outs (e.g. visual, hearing, radar etc.), proceeding at safe speeds, assessing risk of • collision and taking action to avoid collision (monitoring radar) • adherence to navigation light display requirements, including visibility, light position/shape appropriate to activity • adherence to navigation noise signals as required.	F: Yes. CS: Minimal cost. Standard practice.	Legislative requirements to be followed, reduces the likelihood of interference with other marine users resulting in a collision.	Controls based on legislative requirements – must be adopted.	Yes C 12.1
Marine Order 21 (Safety and emergency arrangements) 2016, including: • adherence to minimum safe manning levels • maintenance of navigation equipment in efficient working order (compass/ radar) • navigational systems and equipment required are those specified in Regulation 19 of Chapter V of Safety of Life at Sea	F: Yes. CS: Minimal cost. Standard practice.	Legislative requirements to be followed reduce the likelihood of interference with other marine users resulting in a collision.	Controls based on legislative requirements – must be adopted.	Yes C 12.2

[53] *Qualitative measure*

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Demonstration of ALARP				
Control Considered	***Control Feasibility (F) and Cost/Sacrifice (CS)[53]***	***Benefit in Impact/Risk Reduction***	***Proportionality***	***Control Adopted***
• 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.				
Establishment of a 500 m safety exclusion zone around MODU and relevant vessels and communicated to marine users.	F: Yes. CS: Minimal cost. Standard practice.	Legislative requirements to be followed reduce the likelihood of a collision	Controls based on legislative requirements – must be adopted.	Yes C 1.2
Arrangements supporting the activities in the OPEP (per Table 7-8) will be tested to ensure the OPEP can be implemented as planned.	F: Yes. CS: Minimal cost. Standard practice.	Legislative requirement based on vessel class. Unlikely to have a significant reduction in consequence.	Controls based on legislative requirements – must be adopted.	Yes C 11.1
Marine Order 27 (safety of navigation and radio equipment) 2016: • maintenance of navigation equipment in efficient working order (compass/radar) • navigational system and equipment required are those specified in Regulation 19 of Chapter V of Safety of Life at Sea • 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	F: Yes. CS: Minimal cost. Standard practice.	Legislative requirements to be followed, reduces the likelihood of interference with other marine users resulting in a collision.	Controls based on legislative requirements – must be adopted.	Yes C 12.3
Good Practice				
Support vessel on standby as required during the Petroleum Activity to assist in third-party vessel interactions.	F: Yes. CS: Minimal cost – support vessels available routinely in Operational Area during Petroleum Activity. Standard practice.	Given the legislative controls in place, use of a support vessel, as defined in the Marine Charterers Instructions, will provide a small reduction in likelihood	Benefits outweigh cost/sacrifice.	Yes C 12.4

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Demonstration of ALARP				
Control Considered	***Control Feasibility (F) and Cost/Sacrifice (CS)[53]***	***Benefit in Impact/Risk Reduction***	***Proportionality***	***Control Adopted***
When a support vessel is designated for standby it will undertake actions to prevent unplanned interactions, such as: • maintain a 24-hour radio watch on designated radio channel(s) • undertake continuous surveillance and warn the MODU/ installation vessel of any approaching vessels reaching 500 m safety exclusion zone. Surveillance shall be conducted by a combination of: • visual lookout • radar watch • other electronic systems available including Automatic Identification System (AIS) • monitoring any additional/ agreed radio communications channels • all other means available. While complying with the International Regulations for Preventing Collisions at Sea (COLREGS), approach any vessel attempting to transit through the 500 m zone and contact vessel by all available means. Monitor and advise the MODU if: • MODU navigation signals are defective. • visibility becomes restricted. • Any buoys in the area are not holding position or are not working as expected.		of a collision with a third-party vessel.		

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Demonstration of ALARP				
Control Considered	***Control Feasibility (F) and Cost/Sacrifice (CS)[53]***	***Benefit in Impact/Risk Reduction***	***Proportionality***	***Control Adopted***
Australian Hydrographic Office (AHO) will be notified of activities and movements no less than four working weeks prior to commencement of the Petroleum Activity.	F: Yes. CS: Minimal cost. Standard practice.	Notification of AHO will enable them to update maritime charts thereby reducing the likelihood of a collision with a third-party vessel.	Benefits outweigh cost/sacrifice. Control is also Standard Practice.	Yes C 1,5
Implement Woodside's Marine Offshore Vessel Assurance Procedure.	F: Yes. CS: Minimal cost. Standard practice.	Ensure the integrity of vessels to minimize the risk of equipment failure resulting in vessel collision	Benefits outweigh cost/sacrifice. Control is also Standard Practice.	Yes C 12.5
Notify relevant government departments, fishing industry representative bodies and licence holders of activities three months prior to commencement and upon completion of activities.	F: Yes. CS: Minimal cost. Standard practice.	Communication of the Petroleum Activity to other marine users ensures they are informed and aware, thereby reducing the likelihood of interference with other marine users.	Benefits outweigh cost/sacrifice. Control is also Standard Practice.	Yes C 1.6
Notify AMSA JRCC of activities and movements of the activity 24 to 48 hours before operations commence.	F: Yes. CS: Minimal cost. Standard practice.	Communication of the Petroleum Activity to other marine users ensures they are informed and aware, thereby reducing the likelihood of a collision with a third-party vessel occurring.	Benefits outweigh cost/sacrifice. Control is also Standard Practice.	Yes C 1.7

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Demonstration of ALARP				
Control Considered	***Control Feasibility (F) and Cost/Sacrifice (CS)[53]***	***Benefit in Impact/Risk Reduction***	***Proportionality***	***Control Adopted***
SIMOPS Plan in place when MODU working in vicinity of other facilities, vessels or live infrastructure i.e. during Xmas tree installation. SIMOPS Plan will contain information on: • Minimum separation distances • Communications • MODU / vessels / activities involved in SIMOPS • Exclusion zone entry and exit processes • ROV operations • Helicopter operations • Key roles, responsibilities and emergency contacts • PTW arrangements • Incident reporting and investigation • Management of Change	F: Yes. CS: Minimal cost. Standard practice.	SIMOPS Plan contains detail such as communications requirements, exclusion zones and entry/exit requirements and roles and responsibilities – which can help reduce likelihood of vessel collision.	Benefits outweigh cost/sacrifice. Control is also Standard Practice.	Yes C 1.10
DP Activity Specific Operating Guidelines (ASOGS) procedure	F: Yes. CS: Minimal cost. Standard practice.	Ensure safe and accurate DP throughout all activities	Benefits outweigh cost/sacrifice. Control is also Standard Practice.	Yes C 12.6
Mitigation: Oil Spill Response	Refer to Appendix G.			
Professional Judgement – Eliminate				
Eliminate use of vessels.	F: No. The use of vessels is required 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				
No additional controls identified				
Professional Judgement – Engineered Solution				
No additional controls identified				

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Demonstration of ALARP				
Control Considered	***Control Feasibility (F) and Cost/Sacrifice (CS)[53]***	***Benefit in Impact/Risk Reduction***	***Proportionality***	***Control Adopted***
ALARP statement: On the basis of the environmental risk assessment outcomes and use of the relevant tools appropriate to the decision type (i.e. Decision Type A), Woodside considers the adopted controls appropriate to manage the risks and consequences of an unplanned loss of hydrocarbon as a result of a vessel collision. As no reasonable additional/alternative controls were identified that would further reduce the risks and consequences without grossly disproportionate sacrifice, the risks and consequences are considered ALARP.				

Demonstration of Acceptability
Acceptability statement: The impact assessment has determined that an accidental hydrocarbon release as a result of a vessel collision represents a moderate current risk rating and a risk consequence of minor. 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. In addition the Petroleum Activity is within the acceptable level of impact determined through the Goodwyn Area Infill OPP as the risk rating is consistent with the level rated in the OPP and the EPOs and controls from the OPP for a vessel collision have been adopted. The adopted controls are considered consistent with industry legislation, codes and standards, good practice and professional judgement and meet the requirements and expectations of Australian Marine Orders, AMSA and AHO identified during impact assessment and consultation. The potential risks and consequences are considered acceptable if the adopted controls are implemented. Therefore, Woodside considers the adopted controls appropriate to manage the risks and consequences of a loss of vessel structural integrity to a level that is broadly acceptable.

EPOs, EPS and MCs			
EPO	***Controls***	***PS***	***MC***
EPO 12 No release of hydrocarbons to the marine environment due to a vessel collision associated with the Petroleum Activity.	C 12.1 Marine Order 30 – Prevention of collisions – 2016, including: • adherence to steering and sailing rules including maintaining look-outs (e.g. visual, hearing, radar, etc.), proceeding at safe speeds, assessing risk of collision and taking action to avoid collision (monitoring radar) • adherence to navigation light display requirements, including visibility, light position/shape appropriate to activity • adherence to navigation noise signals as required.	PS 12.1 MODU and project vessels compliant with Marine Order 30 (Prevention of Collisions) 2016 (which requires vessels to be visible at all times) to prevent unplanned interaction with marine users.	MC 12.1.1 Marine Assurance inspection records demonstrate compliance with standard maritime safety procedures (Marine Orders 21 and 30).

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EPOs, EPS and MCs			
EPO	***Controls***	***PS***	***MC***
	C 12.2 Marine Order 21 (Safety and emergency arrangements) 2016, including: • adherence to minimum safe manning levels • maintenance of navigation equipment in efficient working order (compass/ radar) • navigational systems and equipment required are those specified in Regulation 19 of Chapter V of Safety of Life at Sea • 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 12.2 MODU and project vessels compliant with Marine Order 21 (Safety and emergency arrangements) 2016 to prevent unplanned interaction with marine users.	
	C 1.2 Refer Section 6.7.1	PS 1.2 Refer Section 6.7.1	MC 1.2.1 Refer Section 6.7.1
			MC 1.2.2 Refer Section 6.7.1
	C 11.1 Refer to Section 6.8.2	PS 11.1.1 Refer to Section 6.8.2	MC 11.1.1 Refer to Section 6.8.2
		PS 11.1.2 Refer to Section 6.8.2	MC 11.1.2 Refer to Section 6.8.2
	C 12.3 Marine Order 27 (safety of navigation and radio equipment) 2016: • maintenance of navigation equipment in efficient working order (compass/radar) • navigational system and equipment required are those specified in Regulation 19 of Chapter V of Safety of Life at Sea • 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 12.3 MODU and project vessels compliant with Marine Order 27 (Safety of navigation and radio equipment) 2016 to prevent unplanned interaction with marine users.	MC 12.3.1 Marine Assurance inspection records demonstrate compliance with standard maritime safety procedures (Marine Order 27).

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EPOs, EPS and MCs			
EPO	***Controls***	***PS***	***MC***
	C 12.4 Support vessel on standby as required during the Petroleum Activity to assist in third-party vessel interactions. When a support vessel is designated for standby it will undertake actions to prevent unplanned interactions, such as: • Maintain a 24-hour radio watch on designated radio channel(s) • Perform continuous surveillance and warn the MODU/ installation vessel of any approaching vessels reaching 500 m safety exclusion zone. Surveillance shall be conducted by a combination of: – visual lookout – radar watch – other electronic systems available including Automatic Identification System (AIS) – monitoring any additional/agreed radio communications channels – all other means available. While complying with the International Regulations for Preventing Collisions at Sea (COLREGS), approach any vessel attempting to transit through the 500 m zone and contact vessel by all available means. Monitor and advise the MODU if: • MODU navigation signals are defective • visibility becomes restricted. • Advise if any buoys in the area are not holding position or are not working as expected.	PS 12.4 Define role of support vessels in maintaining safety exclusion zone, preventing unplanned third-party vessel interactions, monitoring the effectiveness of navigation controls (e.g. signals), and warning third-party vessels of navigation hazards.	MC 12.4.1 Records of non-conformance against controls maintained.
	C 1.5 Refer Section 6.7.1	PS 1.5 Refer Section 6.7.1	MC 1.5.1 Refer Section 6.7.1
	C 1.6 Refer Section 6.7.1	PS 1.6 Refer Section 6.7.1	MC 1.6.1 Refer Section 6.7.1
	C 1.7 Refer Section 6.7.1	PS 1.7 Refer Section 6.7.1	MC 1.7.1 Refer Section 6.7.1

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EPOs, EPS and MCs			
EPO	***Controls***	***PS***	***MC***
	C 1.10 Refer Section 6.7.1	PS 1.10 Refer Section 6.7.1	MC 1.10.1 Refer Section 6.7.1
	C 12.5 Implement Woodside's Marine Offshore Vessel Assurance Procedure	PS 12.5 Woodside's Marine Offshore Vessel Assurance Procedure is implemented	MC 12.5 Records demonstrate that Woodside's Marine Offshore Vessel Assurance Procedure has be appropriately implemented
	C 12.6 DP Activity Specific Operating Guidelines (ASOGS) procedure	PS 12.6 Follow ASOG guidelines	MC 12.6.1 Records demonstrate compliance with ASOG guidelines
	Detailed preparedness and response performance outcomes, standards and measurement criteria for the Petroleum Activity are presented in Appendix G.		

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6.8.4 Unplanned Release: Hydrocarbon and Chemicals (Minor Loss of Containment)

Context		
Relevant Activities Drilling Activities – Section 3.7 Subsea Installation Activities - Section 3.7.11 Contingent Activities – Section 3.10	***Existing*** Environment Physical Environment – Section 4.3 Habitats and Biological Communities – Section 4.5 Protected Species – Section 4.6 Socio-economic Environment – Section 4.9	***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
Accidental discharge of project fluids (WBM/NWBM/base oil) and cement to marine environment due to failure of slip joint packers, bulk transfer hose/fitting, emergency disconnect system or from routine MODU operations		X		X	X	X	A	E	1	L	LCS GP	Broadly Acceptable	EPO 13
Loss of hydrocarbons (diesel/jet fuel) to marine environment from bunkering/ refuelling		X		X	X	X							

Description of source of impact

MODU and vessel operations

An unplanned minor LOC of hydrocarbons or chemicals may occur during several activities, including:

- chemical use, transfer and storage
- hydraulic line failure from equipment
- marine diesel bunkering (refuelling)
- bulk chemical transfers between MODU and vessels.

Hydrocarbons and chemicals that may be used and accidentally released include non-process chemicals (e.g. those used for maintenance or cleaning), and non-process hydrocarbons (e.g. hydraulic fluids used in equipment or machinery, fuel).

A range of hydrocarbons and other chemicals are expected to be present on the vessels and/or MODU while within the Operational Area; however, the maximum credible volume associated with a single-point failure was estimated to be ~1 m^3 based on the loss of an entire intermediate bulk container due to rupture while handling. A hydraulic line failure on equipment is expected to result in a small volume only (i.e. <1 m^3).

AMSA (2015) suggests the maximum credible spill volume from a refuelling incident with continuous supervision is approximately the transfer rate × 15 minutes. Assuming failure of dry-break couplings and an assumed 200 m^3/h transfer rate, this equates to an instantaneous released volume of ~50 m^3.

For the bulk transfers of any bulk liquid (such as NWBM) between vessels and MODU, it is estimated that the worst-case credible spill could result in up to ~8 m^3 being discharged. This scenario represents a complete failure of the bulk transfer hose combined with a failure to follow procedures requiring transfer activities to be monitored, coupled with a

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Description of source of impact

failure to immediately shut off pumps (e.g. mud pumped through a failed transfer hose for a period of about five minutes).

Woodside's operational experience demonstrates that spills are most likely to originate from hydraulic hoses and have been less than 100 L, with an average volume <10 L (0.01 m^3).

Drilling Fluids - Slip Joint Packer Failure

The slip joint packer enables compensation for the dynamic movement of the MODU (heave) in relation to the static location of the BOP. A partial or total failure of the slip joint packer could result in a loss of mud to the marine environment. The likely causes of this failure include a loss of pressure in the pneumatic (primary) system combined with loss of pressure in the back up (hydraulic) system.

Catastrophic sequential failure of both slip joint packers (pneumatic and hydraulic) would trigger the alarm and result in a loss of the volume of fluid above the slip joint (conservatively 1.5 m^3) plus the volume of fluid lost in the one minute (maximum) taken to shut down the pumps. At a flow rate of 3,700 per minute this volume would equate to an additional 3.8 m^3. In total, it is expected that this catastrophic failure would result in a loss of 5.3 m^3.

Failure of either of the slip joint packers at a rate not large enough to trigger the alarms could result in an undetected loss of 20 bbl (3 m^3) maximum assuming a loss rate of 10 bbl/hr and that MODU personnel would likely walk past the moon pool at least every two hours.

Loss of a drilling chemical container or drum during transfer from the supply vessel to the MODU may occur due to crane operator error or machinery failure. The maximum container that could be lost is an intermediate Bulk Container IBC) which can hold 1 m^3 of chemicals. In the event that an IBC or drum is lost to the marine environment and cannot be recovered the contents will discharge, either immediately or over a period depending on the damage to the drum or container.

NWBM Drilling Fluid System

The selection of a NWBM drilling fluid system (if required) will be based on Woodside processes; however, for the purposes of this risk assessment, an example base oil (Saraline 185V) has been used. Saraline 185V is a mixture of volatile to low volatility hydrocarbons. Predicted weathering of base oil, based on typical conditions in the region, indicates that about 50% by mass is predicted to evaporate over the first day or two (refer Table 6-22). At this time, most of the remainder could be entrained into the water column. In calm conditions, entrained hydrocarbons are likely to resurface with up to 100% able to evaporate over time

Table 6-22: Characteristics of the non water-based mud base oil

Oil Type	Initial density (kg/m^3)	Viscosity (cP @ 20 °C)	Volatiles (%) < 180	Semi Volatiles (%) 180 -265	Low volatility (%) 265 -380	Residual (%) >380	Aromatic (%) of whole oil <380 °C BP
			Non-persistent		***Persistent***		
Base oil (Saraline 185V)	0.776	2.0 @ 40 °C	8.5	41.1	50.4	0	0

All chemicals that may be released or discharged to the marine environment during the Petroleum Activity are assessed as per Woodside Chemical Selection and Assessment. This procedure is used to demonstrate that the potential impacts of the chemicals that may be released are acceptable and ALARP.

Cement

Bulk cement is transferred as powder from the supply vessel to the MODU prior to being mixed into a slurry in the cement unit. Additives are required to form a cement slurry; these are transferred to the MODU in drums from the supply vessel to the MODU. Unplanned discharge to the marine environment may occur due to crane operator error or machinery failure resulting in loss of a drum of cement additive, which cannot be recovered. Cement additives are typically stored in drums <100 L.

Contingency Activities

Activation of the Emergency Disconnect Sequence

The EDS is an emergency system that provides a rapid means of shutting in the well (i.e. BOP closed) and disconnecting the MODU from the BOP. The EDS could be manually activated due to an identified threat to the safety of the MODU, including loss of MODU station keeping resulting from loss of multiple moorings, potential collision by a third-party vessel or a loss of well control. During operations, this could result in a subsurface release of a combination of WBM and/or NWBM and solids at the seabed and a release of base fluid. The volume of material released depends on the water depth and, hence, the length of the riser (i.e. the entire riser volume would be lost). The base oil of the

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Description of source of impact
NWBM would remain in an emulsion with the other components of the mud system. Approximately 103 m^3 of base oil could be released in the event of the riser being disconnected when drilling with NWBM

Impact assessment
Environmental value(s) potentially impacted
Water quality
An unplanned minor LOC of hydrocarbons and chemicals will result in localised and temporary changes to water quality. Changes in water quality will depend on the discharge volume, rate, and chemical composition.
Minor LOC releases would be infrequent and are typically small volumes (e.g. ~0.01 m^3 of hydraulic fluid, ~5 m^3 of drilling fluids), which are expected to rapidly mix and disperse in the open ocean.
The largest unplanned surface release that may occur is during vessel bunkering (estimated at ~50 m^3). A spill of marine fuel may have an acute impact on the water column within the immediate vicinity of the release. However, considering the hydrocarbon type, dispersion and weathering is expected to be rapid, and any effects on water quality would be localised and short term. Given the surface release, a sheen is expected to occur, however given the highly volatile nature of marine fuels, the hydrocarbon is expected to rapidly evaporate within days of release.
Therefore, an unplanned minor LOC of hydrocarbons or chemicals within the Operational Area is expected to have a slight, short-term effect on water quality.
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.
However, 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. Thus, any potential change to sediment quality has not evaluated further
Planktonic communities
Physicochemical changes in water quality resulting from an unplanned minor LOC of hydrocarbons or chemicals has the potential to change planktonic communities within the water column.
Plankton have a patchy distribution linked to localised and seasonal productivity that produces sporadic bursts in populations (DEWHA 2008b). Any effects to plankton have to be assessed in the context of natural mortality rates, which are generally considered high and variable.
As described in the consequence evaluation above, an unplanned minor LOC of hydrocarbons or chemicals within the Operational Area may result in slight, short-term changes to water quality. Given the patchy and variable plankton communities, these discharges are unlikely to cause a change in planktonic communities at a measurable level and will not change the viability of the population or ecosystem. Therefore, potential changes to planktonic communities from a minor LOC event are also expected to be slight.
Key Ecological Features
Physicochemical changes sediment or water quality resulting from an unplanned minor LOC of hydrocarbons or chemicals has the potential to change benthic habitats and communities. However, as described in the consequence evaluations above, an unplanned minor LOC of hydrocarbons or chemicals within the Operational Area is not expected to result in a lasting effect to water quality, and no change in sediment quality is predicted. Given the soft sediment and hard substrate, with sparse epifauna communities, within the Operational Area, 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. Therefore, potential changes to offshore habitats and biological communities and KEFs are not evaluated further.
Marine Fauna
Physicochemical changes in water quality resulting from an unplanned minor LOC of hydrocarbons or chemicals has the potential to cause toxic effects to marine fauna within the water column. As described in the consequence evaluations above, an unplanned minor LOC of hydrocarbons or chemicals within the Operational Area is not expected to result in a lasting effect to water quality. If marine fauna did come into direct contact with a release some minor fouling, ingestion, tissue irritation, or inhalation may occur. However, sublethal or lethal effects from toxicity are considered unlikely given the typically small volume of an unplanned minor LOC release, and the rapid dilution and dispersion of the discharge once entering the marine environment.
Therefore, while transient marine fauna, which includes fish, marine reptiles and marine mammals, would have the potential to be exposed to these unplanned releases, the concentration and duration of exposure is expected to be

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Impact assessment
below the levels required to cause toxicity effects. Therefore, an unplanned minor LOC of hydrocarbons or chemicals within the Operational Area is expected to have slight, short-term effects on marine fauna. ***Cultural Values and Heritage*** Through consultation and review of available literature (Section 4.9.1), Woodside understands that marine fauna that may be affected by unplanned discharges of hydrocarbon/chemicals, such as marine mammals, whale sharks and marine turtles, are culturally important to Traditional Custodians. 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 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. For example, activities that impact marine turtle populations and their marine environment may have an indirect impact on some Indigenous communities if they deplete hunting areas and threaten local food security (Delisle, et al. 2018). Whale species may be subject of First Nations' increase ceremonies/rituals which are performed to enhance or maintain populations. As these Thalu ceremonies are performed to maintain and increase populations of marine species, it is considered that management applies at the species/population level and not to individuals. For example, it is anticipated 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. 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). Inter-generational transmission of cultural knowledge (including songlines) relating to marine reptiles may be impacted where changes 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). As described above, 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 these species are expected to be maintained.
Summary of Potential Impacts to environmental value(s)
Given the adopted controls, it is considered that unplanned discharges of drilling fluids or cement to the marine environment will not result in a potential impact greater than slight and short-term impacts on species, habitat (but not affecting ecosystems function), physical and biological attributes (i.e. Environment Impact – E).

Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)[54]***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
Legislation, codes and standards				
Marine Order 91 – marine pollution prevention—oil (as relevant to vessel class) requirements, which includes mandatory measures for processing oily water prior to discharge • Machinery space bilge/oily water shall have IMO approved oil filtering	F: Yes. CS: Minimal cost. Standard practice.	No reduction in likelihood or consequence would result.	Controls based on legislative requirements – must be adopted.	Yes C 8.4

[54] *Qualitative measure*

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)54***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
equipment (oil/water separator) with an on-line monitoring device to measure Oil in Water (OIW) content to be less than 15 Parts per Million (ppm) prior to 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. • If machinery space bilge discharges cannot meet the oil content standard of • <15 ppm without dilution or be treated by an IMO approved oil/water separator, they will be contained on-board and disposed onshore. Valid International Oil Pollution Prevention Certificate.				
Good practice				
DP specific ASOGS procedure	F: Yes. CS: Minimal cost. Standard practice.	Reduced the likelihood of an unplanned release	Benefits outweigh cost/sacrifice	Yes C 12.6
Bunkering equipment controls:	F: Yes. CS: Minimal cost. Standard practice.	By ensuring the appropriate equipment is in place, tested and	Benefits outweigh cost/sacrifice	Yes 13.4

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)54***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
• All hoses that have a potential environmental risk following damage or failure shall be placed on a hose register that is linked to the MODU's preventative maintenance system. • All bulk transfer hoses shall be pressure-rated at purchase to reduce the risk of accidental hydrocarbon release during bunkering. • There shall be dry-break couplings and flotation on fuel hoses. • There shall be an adequate number of appropriately stocked, located and maintained spill kits.		maintained appropriately, the likelihood of a spill occurring is reduced. Although no significant reduction in consequence could result, the overall risk is reduced.		
Contractor procedures include requirements to be implemented during bunkering/refuelling operations, including: • A completed PTW and/or job safety analysis (JSA) shall be implemented for the hydrocarbon bunkering/refuelling operation. • Visually monitoring of gauges, hoses, fittings and the sea surface during the operation. • Hoses will be checked before starting. • Bunkering/refuelling will commence in daylight hours. If the transfer is to continue into darkness, the JSA risk assessment must consider lighting and the	F: Yes. CS: Minimal cost. Standard practice.	Reduces the likelihood of a spill occurring. Although no significant reduction in consequence could result, the overall risk is reduced.	Benefits outweigh cost/sacrifice	Yes 13.5

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)54***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
ability to determine if a spill has occurred. • Hydrocarbons shall not be transferred in marginal weather conditions				
Marine riser's telescopic joint to be: • comprised of a minimum of two packers (one hydraulic and one pneumatic) • pressure tested in accordance with manufacturers recommendations.	F: Yes. CS: Minimal cost. Standard practice.	Reduces the likelihood of equipment failure leading to an unplanned release of drilling fluids. Although the consequence of an unplanned release would be reduced, the reduction in likelihood reduces the overall risk providing an overall environmental benefit.	Benefits outweigh cost/sacrifice.	Yes 13.1
Contractor procedure for managing project fluids transfers onto, around and off the MODU, which requires: • emergency shutdown systems for stopping losses of containment (e.g. burst hoses) • break-away dry-break couplings for oil-based mud hoses • transfer hoses to have floatation devised to allow detection of a leak • the valve line-up will be checked prior to commencing mud transfers • constant monitoring of the transfer process • direct radio communications • completed PTW and JSA showing contractor procedures are implemented • recording and verification of volumes moved to identify any losses	F: Yes. CS: Minimal cost. Standard practice for Woodside to review contractor systems prior to performing activity.	Reduces the likelihood of an unplanned release occurring. Although no change in consequence would occur, the reduction in likelihood decreases the overall risk, providing environmental benefit.	Benefits outweigh cost/sacrifice.	Yes 13.2

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)54***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
• mud pit dump valves locked closed when not in use for mud transfers and operated under a PTW				
Check for the functionality of: • additional SCE (augers and cuttings dryers) • mud tanks • mud tank room • transfer hoses • NWBM base fluid transfer lines • NWBM base fluid transfer station • base fluid storage.	F: Yes. CS: Minimal cost. Standard practice	Reduces the likelihood of an event occurring and reduces the potential consequences (by limiting volume released).	Benefits outweigh cost/sacrifice.	Yes 13.3
Where there is potential for loss of primary containment of oil and chemicals on the project vessels, deck drainage must be collected via a deck drainage water management system.	F: Yes. CS: Minimal cost. Standard practice	Reduces the likelihood of contaminated deck drainage water being discharged to the marine environment. No change in consequence would occur.	Benefits outweigh cost/sacrifice.	Yes C 8.3
Primary installation vessels have self-containing hydraulic oil drip tray management system.	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 13.6
Professional judgement – Eliminate				
No additional controls identified				
Professional judgement – Substitute				
Only use WBM during drilling.	F: Not feasible. While the base case is to use WBM, a contingent NWBM drilling fluid system is required for safety and technical reasons; therefore option to use must be maintained. CS: Not considered – control not feasible.	Not considered – control not feasible.	Not considered – control not feasible.	No
Professional judgement – Engineered Solution				
Use a MODU which may have a larger tank storage capacity for	F: Not feasible. The use of a MODU with greater storage	Not considered – control not feasible.	Not considered – control not feasible.	No

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)54***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
WBM. As such, there would be fewer bulk transfer movements.	capacity cannot be confirmed. CS: Significant cost and schedule delay would occur if the MODU was limited to greater storage capacity.			
ALARP statement: On the basis of the environmental risk assessment outcomes and use of the relevant tools appropriate to the decision type, Woodside considers the adopted controls appropriate to manage the impacts and risks of unplanned release of project fluids. As no reasonable additional/alternative controls were identified that would further reduce the impacts without grossly disproportionate sacrifice, the impacts and risks are considered ALARP.				

Demonstration of acceptability
Acceptability statement: The impact assessment has determined that accidental discharge of project fluids represents a low current risk rating and a risk consequence of slight. BIAs within the Operational Area include the flatback turtle internesting, whale shark foraging, and wedge-tailed shearwater breeding areas. 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. The adopted controls are considered consistent with industry legislation, codes and standards, good practice and professional judgement and meet the requirements and expectations of Australian Marine Orders identified during impact assessment. In addition the Petroleum Activity is within the acceptable level of impact determined through the Goodwyn Area Infill OPP as the risk rating is consistent with the level rated in the OPP and the EPOs and controls from the OPP for an unplanned release of hydrocarbons or chemicals have been adopted. The potential risks and consequences are considered acceptable if the adopted controls are implemented. Therefore, Woodside considers the adopted controls appropriate to manage the risks and consequences of an unplanned discharge of chemicals /hydrocarbons to a level that is broadly acceptable, and compliance with those controls demonstrates that the EPOs are met.

EPOs, EPS and MC			
EPO	***Controls***	***PS***	***MC***
EPO-13: No unplanned release of hydrocarbons or chemicals to the marine environment.	C 8.4 Refer Section 6.7.7	PS 8.4 Refer Section 6.7.7	MC 8.4.1 Refer Section 6.7.7
	C12.6 Refer to Section 6.8.3	PS 12.6.1 Refer to Section 6.8.3	MC Refer Section 6.8.3
	C 13.1 Marine riser's telescopic joint to be: • comprised of a minimum of two packers (one hydraulic and one pneumatic) • pressure tested in accordance with manufacturer's recommendations.	PS13.1 MODU's joint packer designed and maintained to reduce hydrocarbons discharged to the environment.	MC 13.1 Environmental inspection records demonstrate that MODU's joint packer is compliant.

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EPOs, EPS and MC			
EPO	***Controls***	***PS***	***MC***
	C13.2 Contractor procedure for managing project fluids transfers onto, around and off the MODU, which requires: • emergency shutdown systems for stopping losses of containment (e.g. burst hoses) • break-away dry-break couplings for oil-based mud hoses • transfer hoses to have floatation devised to allow detection of a leak • the valve line-up will be checked prior to commencing mud transfers • constant monitoring of the transfer process • direct radio communications • completed PTW and JSA showing contractor procedures are implemented • recording and verification of volumes moved to identify any losses • mud pit dump valves locked closed when not in use for mud transfers and operated under a PTW	PS 13.2.1 Compliance with Contractor procedures to limit accidental loss to the marine environment.	MC 13.2.1 Records demonstrate drilling fluid transfers are performed in accordance with the applicable contractor procedures.
	C 13.3 Check for the functionality of: • additional SCE (augers and cuttings dryers) • mud tanks • mud tank room • transfer hoses • NWBM base fluid transfer lines • NWBM base fluid transfer station base fluid storage.	PS 13.3.1 Prevents unacceptable use or discharge of NWBM/base oil.	MC 13.3.1 Records demonstrate the presence and functionality of the specified equipment.
	C 13.4	PS 13.4.1	MC13.4.1 Environmental inspection records confirm the MODU

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EPOs, EPS and MC			
EPO	***Controls***	***PS***	***MC***
	Bunkering equipment controls: • All hoses that have a potential environmental risk following damage or failure shall be placed on the MODU's preventative maintenance system. • All bulk transfer hoses shall be pressure-tested at purchase to reduce the risk of accidental hydrocarbon release during bunkering. • There shall be dry-break couplings and flotation on fuel hoses. • There shall be an adequate number of appropriately stocked, located and maintained spill kits.	To ensure damaged equipment is replaced prior to failure.	bunkering equipment is subject to systematic integrity checks.
		PS 13.4.2 All diesel transfer hoses to have dry break couplings and pressure rating suitable for intended use.	MC 13.4.2 Inspection records confirm presence of dry break of couplings and flotation on fuel hoses.
		PS 13.4.3 To ensure adequate resources are available to allow implementation of SOPEP.	MC 13.4.3 Environmental inspection records confirm presence of spill kits.
	C 13.5 Contractor procedures include requirements to be implemented during bunkering/refuelling operations, including: • A completed PTW and/or JSA shall be implemented for the hydrocarbon bunkering/refuelling operation. • Visual monitoring of gauges, hoses, fittings and the sea surface during the operation. • Hose checks prior to commencement. • Bunkering/refuelling will commence in daylight hours. If the transfer is to continue into darkness, the JSA risk assessment must consider lighting and the ability to determine if a spill has occurred. • Hydrocarbons shall not be transferred in marginal weather conditions.	PS 13.5.1 Compliance with Contractor procedures for the management of bunkering/helicopter operations.	MC 13.5.1 Environmental inspection records demonstrate bunkering/refuelling undertaken in accordance with contractor bunkering procedures.

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EPOs, EPS and MC			
EPO	***Controls***	***PS***	***MC***
	PS 8.3 Refer Section 6.7.7	PS 8.3.1 Refer Section 6.7.7	MC 8.3.1 Refer Section 6.7.7
	C 13.6 Primary installation vessels have self-containing hydraulic oil drip tray management system	PS 13.6.1 Contain any on-deck spills of hydraulic oil	MC 13.6.1 Environmental inspection records demonstrate hydraulic oil drip tray management system present

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6.8.5 Physical Presence (Unplanned): Interaction with Marine Fauna

Context		
Relevant Activity Project Vessels - Section 3.11	***Existing*** Environment Protected Species – Section 4.6	***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
Accidental collision between MODU/project vessels and protected marine fauna					X		A	E	1	L	LCS GP	Broadly Acceptable	EPO 14

Description of source of impact

Vessel Operations

Activities associated with the Petroleum Activity will require vessels for drilling activities, subsea installation, contingency activities, support operations and supply/transport. The type and number of vessels in the Operational Area at any one time, and the duration of presence, will differ depending on the activities being undertaken (Section 2.1,Table 3-3).

Project vessels operating in and around the Operational Area may present a potential hazard to protected marine fauna, including cetaceans (e.g. pygmy blue whales), whale sharks and marine turtles. 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. Factors that contribute to the frequency and severity of impacts due to collision 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.

Project vessels would typically be stationary or moving at low speeds when supporting the Petroleum Activity; support vessels typically transit to and from the Operational Area between two and four trips per week (e.g. to port).

Impact assessment

Environmental value(s) potentially impacted

Fish, Sharks, and Rays

The potential for unplanned interactions with marine fauna may occur from the physical presence and transit of the MODUs and vessels within the Operational Area. Any potential interaction with the MODU or vessels is limited to the surface waters where these activities occur.

Vessel or MODU movements can result in a vessel strike, potentially resulting in superficial injury, serious injury that may affect life functions (e.g. movement, reproduction), or death.

Impacts resulting from vessel strike are highly influenced by vessel speed—the greater the speed at impact, the greater the risk of death (Jensen and Silber 2004; Laist et al. 2001). The fish species most vulnerable to unplanned interactions with moving MODUs or vessels include large sharks; because these species frequent the upper portions of the water column, they are the focus of this consequence evaluation.

As identified in Section 4.6, several fish species listed as either threatened and/or migratory under the EPBC Act have the potential to occur within the Operational Area. One BIA—foraging BIA for whale sharks—intersects with the Operational Area

The Conservation Advice for Whale Sharks (TSSC 2015f) identifies boat strike from large vessels as a threat to the species in Australia. Similarly, the National Strategy for Reducing Vessel Strike on Cetaceans and other Marine Megafauna (CoA 2017a) identifies whale sharks as a species at risk.

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Impact assessment
Whale sharks are known to aggregate at Ningaloo between March and July. Following this aggregation period, they migrate. Three potential migration routes have been identified, including one passing through the NWS along the shelf break and continental slope (Meekan and Radford 2010). This route corresponds to the foraging BIA and an expected seasonal presence during spring (DCCEEW 2016). The species is generally encountered close to or at the surface. Whale sharks tagged off WA spend ~25% of their time <2 m from the surface, and >40% of their time in the upper 15 m of the water column (Wilson et al. 2006; Gleiss et al. 2013). Whale shark presence within the Operational Area would not comprise significant numbers because no known aggregation areas occur there, and their presence would be seasonal, transitory, and of a short duration. There are no constraints (e.g. shallow water or shorelines) that prevent whale sharks from moving away from a moving MODU or vessels. If a vessel strike did occur, no significant impacts to populations are expected. ***Marine Reptiles*** The potential for unplanned interactions with marine fauna may occur from the physical presence and transit of the MODUs and vessels within the Operational Area. Any potential interaction with the MODU or vessels is limited to the surface waters where these activities occur. Marine reptile species most vulnerable to unplanned interactions with moving MODUs or vessels include marine turtles that frequent the upper portions of the water column while surfacing to rest or breathe; these are the focus of this consequence evaluation. However, it has been reported that turtles spend comparatively limited time (3–6%) at the surface, with dives generally lasting between 15 and 60 minutes (Milton and Lutz 2003). The typical response from turtles on the surface to the presence of vessels is to dive (a potential 'startle' response) (Hazel et al. 2007). As identified in Section 4.6.2, several marine reptile species listed as either threatened and/or migratory under the EPBC Act have the potential to occur within the Operational Area. An internesting buffer BIA for the flatback turtle and internesting habitat critical to the survival of the flatback turtle, intersect with the Operational Area The Recovery Plan for Marine Turtles in Australia (CoA 2017b) identifies vessel disturbance as a key threat to the species. However, it also notes that this is particularly an issue in shallow coastal foraging habitats. The Operational Area is in waters generally >70 m deep, except around the unnamed shoal; and at its closest is ~35 km from a coast (Montebello Islands). An internesting BIA and habitat critical for the survival of flatback turtles overlap the Operational Area; these internesting buffers are associated with the Montebello Islands (Section 4.6.2.1). The Recovery Plan (CoA 2017b) defines the habitat critical to the survival of a species for internesting as a distance 60 km seaward from nesting habitat critical to the survival of flatback turtles. A study by Whittock et al. (2016a) indicates that the internesting behaviour of flatback turtles on the NWS appears more spatially restricted than the Recovery Plan suggests. This study reported that during their internesting periods flatback turtles prefer habitats closer to the coast (maximum 27.8 km; mean <6.1 km) and at relatively shallow depths (maximum <44 m, mean <10 m). The preference for shallow (<40 m water depth) internesting habitat is also supported by other studies (Dobbs 2007; Guinea, Sperling, and Whiting 2006; Pendoley Environmental 2010). This suggests that although the Operational Area does overlap with some internesting habitat critical to the survival of flatback turtles and an internesting buffer BIA, because it is offshore (~35 km from the Montebello Islands) it is considered unlikely that flatback turtles would aggregate within theOperational Areaduring their internesting period If flatback turtles (or other marine turtles) are present within the Operational Area, their presence would not comprise significant numbers because no known aggregation areas occur there, and their presence would be seasonal, transitory, and of a short duration. If a vessel strike did occur, no significant impacts to populations are expected. Therefore, the physical presence of the MODU and vessels within the Operational Area is not expected to result in a consequence greater than slight short-term disruption to individuals or a small proportion of the population ***Marine Mammals*** The potential for unplanned interactions with marine fauna may occur from the physical presence and transit of the MODUs and vessels within the Operational Area. Any potential interaction with the MODU or vessels is limited to the surface waters where these activities occur. Whales react in various ways to the approach of a vessel—some species remain motionless when near a vessel, while others are curious and often approach vessels that have stopped or are slow moving, although they generally do not approach, and sometimes avoid, faster-moving vessels (Richardson et al. 1995). Impacts resulting from vessel strikes are highly influenced by vessel speed—the greater the speed at impact, the greater the risk of death (Jensen and Silber 2004; Laist et al. 2001). Vanderlaan and Taggart (2007) found that the chance of lethal injury to a large whale as a result of a vessel strike increases from 10% at a speed of 4 knots, to 20% at 8.6 knots, and to 80% at 15 knots. Vessel–whale strikes at this speed are uncommon and, based on reported data contained in the US NOAA database (Jensen and Silber 2004), only two known instances of collisions have occurred when the vessel was travelling <6 knots—both were from whale-watching vessels that were deliberately placed amongst whales. As described above, project vessels typically travel at relatively slow speeds (e.g. <8 knots) or are holding station.

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Impact assessment
As identified in Section 4.6.3, several marine mammal species listed as either threatened and/or migratory under the EPBC Act have the potential to occur within the Operational Area No BIAs for regionally significant marine mammals intersect with the Operational Area; however, two migration BIAs occur nearby—humpback whale (~15 km south) and pygmy blue whale (~25 km north-west). The Conservation Management Plan for the Blue Whale (CoA 2015a) identifies vessel disturbance as a threat to this species. Vessel strike is also identified as a threat to fin and sei whales (TSSC 2015b; 2015a). Migrating pygmy blue whales are likely to occur in the Exmouth to Montebello Islands region from April to August (northern migration) and November to December (southern migration); humpback whales are typically present from June to October. The migratory patterns of fin and sei whales within Australian waters is not well defined (refer to the Master Existing Environment.). Opportunistic cetacean sighting data from Woodside's facilities on the NWS indicate that humpback whales are the most commonly observed cetacean species. Marine mammal presence within the Operational Area are not expected to comprise significant numbers because no known aggregation areas occur there, and their presence would be seasonal, transitory, and of a short duration. There are no constraints (e.g. shallow water or shorelines) that prevent marine mammals from moving away from MODUs or vessels. If a vessel strike did occur, no significant impacts to populations are expected. Therefore, the physical presence of the MODU and vessels within the Operational Area is not expected to result in a consequence greater than slight short-term disruption to individuals or a small proportion of the population ***Seabirds and Migratory Shorebirds*** As identified in Section 4.6.4, several bird species listed as either threatened and/or migratory under the EPBC Act have the potential to occur within the Operational Area. Those present would predominately be migrating and foraging pelagic seabirds, noting that due to the distance to the Montebello Islands there also may be foraging nearshore seabirds. In addition, due to the overlap with the EAAF, shorebirds may migrate through the Operational Area. The physical presence of the vessels and MODU introduces a new emergent feature that may provide a temporary refuge for migratory / foraging seabirds and possibly shorebirds. Unlike nocturnal seabirds, which can be impacted by facility lighting through attraction or disorientated diurnal seabirds and shorebirds are attracted to vessels because of its presence and refuge potential. While there are reports of migratory shorebirds utilising ships as resting stopovers (e.g. Sara et al. 2023), reports of this behaviour within Australian waters are absent, reflecting either a lack of reporting or few such events. Occurrences of migratory shorebirds utilising offshore platforms of the NWMR would most likely be associated with a low number of individuals being blown off course during inclement weather events, rather than birds utilising facilities / vessels as a strategy to conserve energy during migration by large numbers of individuals. Considering behaviour and reports of seabird use of offshore platforms, noting that Woodside facilities located in the vicinity of the Operational Area such as Pluto (designed to be operated not-normally-attended or minimally attended) and Angel, have experienced bird roosting activities, species considered likely and possible to utilise vessels for resting and/or roosting include the brown booby, common noddy, crested tern, lesser crested tern and the roseate tern (Worley Consulting, 2024) It is noted that the two pelagic seabird species listed, have wide-ranging distributions but their designated BIAs do not overlap with Operational Area. The nearshore seabirds have been reported utilising not-normally-crewed offshore platforms on NWS however there is no overlap of designated BIAs. The use of the vessels may lead to a positive impact on these species by providing resting/roosting habitat. However, the increased presence of species may result in injury or death if individuals become entangled or trapped in topside infrastructure or as a result of collision with helicopters (Ronconi et al. 2015). The potential impacts of the vessel presence on seabird species considered likely to rest or roost on the vessels or MODU are considered negligible given that use of the FPU by seabirds is not expected to alter population size, habitat use or distribution at the NWMR level and will most likely result in a temporary behavioural change ***AMPs*** The Operational Area overlaps ~23 km^2 of the 3,413 km^2 Montebello Marine Park (i.e. ~0.67% of the marine park). The values of the Montebello Marine Park (as described in 4.8.1) include species listed as threatened, migratory, marine, or cetacean under the EPBC Act, as well as any identified BIAs for regionally significant marine fauna. The potential for changes to the values of the marine park from the physical presence of the MODUs and vessels within the Operational Area may occur as an indirect consequence of an impact to the marine megafauna identified as a value of the Montebello Marine Park. However, as described in the consequence evaluations for the marine fauna groups above, the physical presence of the MODU and vessels within the Operational Area is not expected to result in a consequence greater than slight short-term disruption to individuals or a small proportion of the population. Therefore, no significant long-term adverse impacts to the values of the Montebello Marine Park are expected to occur population, and no impact on critical habitat or fauna activity (E).

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Impact assessment
Cultural Values and Heritage Through consultation and review of available literature (Section 4.9.1), Woodside understands that marine fauna that may be affected by a collision with a support vessel, such as marine mammals, whale sharks and marine turtles, are culturally important to Traditional Custodians. 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 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. For example, activities that impact marine turtle populations and their marine environment may have an indirect impact on some Indigenous communities if they deplete hunting areas and threaten local food security (Delisle et al. 2018:251). Whale species may be subject of First Nations' increase ceremonies/rituals which are performed to enhance or maintain populations. As these Thalu ceremonies are performed to maintain and increase populations of marine species, it is considered that management applies at the species/population level and not to individuals. For example, it is anticipated 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. 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). Inter-generational transmission of cultural knowledge (including songlines) relating to marine reptiles may be impacted where changes 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) As described above, 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 these species are expected to be maintained.
Summary of Potential Impacts to environmental value(s)
Given the adopted controls, it is considered that a collision, were it to occur, will not result in a potential impact greater than slight, short term impact on species (i.e. Environment Impact – E).

Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)55***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
Legislation, codes and standards				
EPBC Regulations 2000 – Part 8 Division 8.1 Interacting with cetaceans, including the following measures71: Project vessels will not travel faster than six knots within 300 m of a cetacean or turtle (caution zone) and not approach closer than 100 m from a whale.	F: Yes. CS: Minimal cost. Standard practice.	Implementation of these controls will reduce the likelihood of a collision between a cetacean, whale shark or turtle occurring. The consequence of a collision is unchanged.	Controls based on legislative requirements – must be adopted.	Yes C 4.1

[55] *Qualitative measure*

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)55***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
Project vessels will not approach closer than 50 m for a dolphin or turtle and/or 100 m for a whale (with the exception of animals bow-riding). If the cetacean or turtle shows signs of being disturbed, project vessels will immediately withdraw from the caution zone at a constant speed of less than six knots. Vessels will not travel faster than eight knots within 250 m of a whale shark and not allow the vessel to approach closer than 30 m of a whale shark.				
Good practice				
Variation of the timing of the Petroleum Activity to avoid whale and whale shark migration periods.	F: Not feasible. Schedule of activities to be determined and migration seasons may not be able to be avoided. CS: Not considered – control not feasible	Not considered – control not feasible	Not considered – control not feasible	No
Key personnel (e.g. master and bridge crew) will be adequately trained to understand and adhere to Part 8 of the EPBC Regulations	F: Yes. CS: Minimal cost. Standard practice.	Personnel are trained, reducing likelihood of a collision.	Benefits outweigh cost/sacrifice.	Yes C 14.1

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)55***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
The use of dedicated MFOs on project 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.	F: Yes. However, support vessel bridge crews already maintain a constant watch during operations. CS: Additional cost of MFOs.	Given that support vessel bridge crews already maintain a constant watch during operations and trained crew as MFOs will monitor for pygmy blue whale presence prior to resupply/support vessel moves alongside the MODU and PIV, additional MFOs would not further reduce the likelihood of an individual being within close proximity of the acoustic source during introduction of sounds related to DP or during operations.	Disproportionate The cost/sacrifice outweighs the benefit gained.	No
Apply a 'living heritage[56]' management approach. Woodside seeks advice and incorporates Traditional Custodian cultural knowledges across our activities. Cultural safety considerations are factored for our workforce and the Traditional Custodian community.	F: Yes CS: Minimal	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 2.1
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 2.2
Use of cultural heritage monitors on vessels to oversee implementation of controls protecting cultural values	F: No CS: Not feasible	Primary Installation Vessels are POB constrained with no ability to facilitate additional personnel	Not considered – control not feasible.	No

[56] 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.

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)55***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
Project 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	Ensures workforce is suitably aware of cultural features and heritage values in the area they are operating.	Benefits outweigh cost/sacrifice.	Yes C2.3
The Petroleum activity will be carried out in accordance with protection declarations relevant to the PAA, under Sections 9,10,12 of the ATSIHP Act.	F: Yes CS: Minimal	Meets legislative requirements and community expectations	Benefits outweigh cost/sacrifice.	Yes C2.4
Professional judgement – Eliminate				
No additional controls identified.				
Professional judgement – Substitute				
No additional controls identified.				
Professional judgement – Engineered Solution				
No additional controls identified.				
ALARP statement: On the basis of the environmental risk assessment outcomes and use of the relevant tools appropriate to the decision type, Woodside considers the adopted controls appropriate to manage the impacts and risks of potential vessel collision with protected marine fauna. As no reasonable additional/alternative controls were identified that would further reduce the impacts without grossly disproportionate sacrifice, the impacts and risks are considered ALARP.				
Demonstration of acceptability				
Acceptability statement: The impact assessment has determined that, given the adopted controls, vessel collision with marine fauna represents a low current risk rating that is unlikely to result in significant localised impact with lasting effect. Further opportunities to reduce the impacts and risks have been investigated above. The adopted controls are considered good oil-field practice/industry best practice and meet the requirements of Part 8 (Division 8.1) of the EPBC Regulations 2000. In addition the Petroleum Activity is within the acceptable level of impact determined through the Goodwyn Area Infill OPP as the risk rating is consistent with the level rated in the OPP and the EPOs and controls from the OPP for interactions with marine fauna have been adopted. The potential impacts and risks are considered broadly acceptable if the adopted controls are implemented. Therefore, Woodside considers the adopted controls appropriate to manage the impacts and risks of vessel collision with marine fauna to a level that is broadly acceptable, and that compliance with those controls demonstrates that the EPOs are met.				

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.

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EPOs, EPS and MC			
EPO	***Controls***	***PS***	***MC***
EPO-14: Prevent injury or mortality to EPBC listed marine species and seabirds as a result of the petroleum activities	C 4.1 Refer Section 6.7.4	PS 4.1 Refer Section 6.7.4	MC 4.1.1 Refer Section 6.7.4
	C 14.1 Key personnel (e.g. master and bridge crew) will be adequately trained to understand and adhere to Part 8 of the EPBC Regulations.	PS 14.1 Induction includes an overview and understanding of Part 8 of the EPBC Regulations.	MC 14.1.1 Records demonstrate key personnel adequately trained to understand and adhere to Part 8 of the EPBC Regulations.

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6.8.6 Physical Prescence (Unplanned): Accidental Introduction and Establishment of Invasive Marine Species

Context		
Relevant Activities Project Vessels - Section 3.11 Project-Vessel based activities – Section 3.11.5 Subsea Installation Activities - Section 3.7.11	***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
Introduction and establishment of invasive marine species (IMS) within the Operational Area				X	X	X	A	E	0	L	LCS GP PJ	Broadly Acceptable	EPO 15

Description of source of impact

Installation of Subsea Infrastructure, and MODU and Vessel Operations

During the Petroleum Activity, vessels will be transiting to and from the Operational Area, potentially including vessels mobilising from beyond Australian waters. These project vessels may include the MODU, AHV, installation vessel or general support vessels (Section 3.11).

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, etc.). Organisms can also be drawn into ballast tanks during onboarding of ballast water as cargo is loaded or to balance vessels under load.

During the Petroleum Activity, project vessels have the potential to introduce IMS to the Operational Area through marine fouling (containing IMS) on vessels as well as within high risk ballast water discharge. Cross contamination between vessels can also occur (e.g. IMS translocated between project vessels) during times when vessels need to be alongside each other.

Impact 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 social/cultural, human health, economic and/or environmental values. NIMS may have the ability to survive, reproduce and establish founder populations. However, not all NIMS introduced into an area will thrive or cause demonstrable impacts; the majority of 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 and/or have social/cultural, economic and/or human health impacts.

IMS are considered a significant threat to Australia's marine environment and industries (Knight et al. 2007). Introducing IMS into the local marine environment may alter the ecosystem, as IMS have characteristics that make them superior (in a survival and/or reproductive sense) to non-endemic species. They may prey on local species (which had previously not been subject to this kind of predation and therefore not have evolved protective measures against the attack), they may outcompete non-endemic species for food, space or light, and can also interbreed with local species, creating hybrids such that the endemic species is lost. Other resulting impacts from changing

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Impact assessment
ecosystems include altering local nutrient cycles, increasing predation pressure, or changing the community structure/dynamics. Impacts can be temporary or permanent, depending on the receiving environment and the number of individuals introduced. ***Offshore Habitats and Biological Communities*** Benthic habitats are most at risk from the introduction of an IMS. Establishment of IMS may change habitat composition, which leads to the creation of new habitats or fragmentation of existing habitats. A new habitat type may allow other endemic species to increase their distribution or range, thus influencing population processes of existing species. In species with limited dispersal, habitat fragmentation can isolate subpopulations, with secondary impacts to population genetics, population dynamics, species distribution, ecosystem processes, resource consumption and nutrient cycling processes. Once established, some IMS can be difficult to eradicate; therefore, there is the potential for a long-term change in habitat structure (DAWE 2018). IMS can spread outside the area where they were introduced, potentially having widespread impacts. IMS typically require hard substrate in the photic zone; therefore, requiring shallow waters to become established. Ecosystems that are particularly susceptible to IMS colonisation are highly disturbed shallow water and coastal marine environments (Dafforn, Glasby, and Johnston 2009; Dafforn, Johnston, and Glasby 2009). Whereas IMS are generally unable to successfully establish in deep water ecosystems (Geiling 2014). The Australian Government's Bureau of Resource Sciences estimates that the median risk of establishment[57]at 3 nm, 12 nm and 24 nm is ~40%, ~28%, and ~9% respectively (Knight et al. 2007), which indicates that offshore waters are less susceptible to impacts associated with introducing an IMS. At its closest, the Operational Area is ~140 km (~75 nm) north-west of Karratha, and within waters typically >70 m deep, except around unnamed. The benthic habitat within the Operational Area is expected to be a soft sediment in the vicinity of the nearfield wells and then a mixture of soft sediments and hard substrates in the vicinity of the Wilcox wells. Two main shallow bathymetric features are known to occur in or within proximity to the Operational Area (Section 4.5.1) Wilcox Shoal (<2.8 km south-east of the Operational Area) and Rankin Bank (~5 km north-west of the proposed tie-in at LPA). Rankin Bank is considered to represent habitats that likely play an important role in the productivity of the Pilbara region—it has diverse reef and algae habitats, which support a diverse fish assemblage (AIMS 2014a; Abdul Wahab et al. 2018). Activities for the Petroleum Activity will occur in an open ocean offshore location more than 12 nm from the mainland, concentrated in waters >70 m deep. Despite the potential high consequence if an IMS does establish, the deep offshore open waters are not conducive to the settlement and establishment of IMS due to the open-water environments where the rate of dilution and the degree of dispersal are high (Williamson and Fitter 1996; Paulay et al. 2002; Geiling 2014). Therefore, the introduction of an IMS within the Operational Area is not expected to result in a consequence greater than a slight disturbance to benthic habitats but not affecting ecosystem functions ***Traditional Custodians*** Through consultation and review of available literature (Section 4.9.1), Woodside understands that ecosystem health that may be affected by accidental introduction and establishment of IMS, are culturally important to Traditional Custodians. 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 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. Listening and talking with Country, which includes Sea Country, through stories, songlines, and other practices are ways Traditional Custodians care for, navigate, and connect with Country. Songlines rely on the continued health of Country, and people's continued access and connection to it. When Country is damaged or altered, so too are songlines and the knowledge they embody and enact. As described above, translocation to, and colonisation of IMS to the Operational Area is not considered credible, as such, no impact pathway to a change in access to Country from an accidental introduction and establishment of IMS within the Operational Area are anticipated. Cultural values and intangible cultural heritage associated with ecosystem health are expected to be maintained ***Commercial Fisheries*** The potential for changes to the functions, interest or activities of commercial fisheries within the Operational Area may occur as an indirect consequence of an impact to the benthic habitats and communities of the marine environment if IMS became established.

[57] *In this context, establishment refers to an organism being able to find suitable habitat and survive.*

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Impact assessment
The establishment of IMS may cause changes to targeted species' prey abundance, distribution, or behaviour, thus impacting commercial fishery activities. IMS can also change fisheries' stock levels and locations as a result of changes in the dynamics of in the surrounding ecosystem. As identified in Section 4.9.2 five state-managed commercial fisheries may be active within the Operational Area . Fishing effort is typically low; during the 5-year (2019 – 2024) period. As described in the consequence evaluation above, the introduction of an IMS within the Operational Area is only expected to result in slight disturbance to localised areas of benthic habitat. Given the low level of fishing effort within the Operational Area, and the unsuitability of the benthic habitats to support widespread IMS establishment, any impacts to commercial fisheries are not considered credible and are not evaluated further **Tourism and Recreation** The potential for changes to the functions, interest or activities of tourism and recreational users within the Operational Area may occur as an indirect consequence of an impact to the benthic habitats and communities of the marine environment if IMS became established. Due to the water depths (typically >70 m except around unnamed) and distance offshore, tourism and recreational activities are expected to be limited in the Operational Area. ome fishing tour operators may be active within the Operational Area, but recent effort is low (typically <3 active licences; Section 4.9.4). Where it does occur, charter fishing is active in the southern part of the Operational Area (in the vicinity of the Montebello Marine Park) and within grid blocks known to contain shallow bathymetric features (such as banks and shoals). As described in the consequence evaluation above, the introduction of an IMS within the Operational Area is only expected to result in slight disturbance to localised areas of benthic habitat. Given the low level of tourism and recreation occurring within the Operational Area, and the unsuitability of the benthic habitats to support widespread IMS establishment, any impacts to tourism and recreational users are not considered credible and are not evaluated further.
Summary of Potential Impacts to environmental value(s)
Given the adopted controls, it is considered that the introduction of IMS is only expected to result in slight impacts to benthic populations and a likelihood as Remote (0),

Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)58***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
Legislation, codes and standards				
Project vessels will manage their ballast water using one of the approved ballast water management options, as specified in the Australian Ballast Water Management Requirements.	F: Yes. CS: Minimal cost. Standard practice.	Reduces the likelihood of transferring marine pests between survey vessels within the Operational Area No change in consequence would occur.	Controls based on legislative requirements under the Biosecurity Act 2015 – must be adopted.	Yes C15.1
Vessels must comply with legislative requirements, including *Protection of the Sea (Harmful Anti-fouling Systems) Act 2006* (Cth), *Biosecurity Act 2015* (Cth) and any subsequent marine	F: Yes. CS: Minimal cost. Standard practice.	Reduces the likelihood of transfer of marine pests between vessels within the Operational Area No change in consequence would occur.	Controls based on legislative requirements under the Biosecurity Act 2015 – must be adopted.	Yes C 15.2

[58] *Qualitative measure*

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)58***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
orders, and any national best practice guidance				
Good practice				
Woodside's IMS risk assessment process[59] will be applied to the MODU, project vessels and relevant immersible equipment undertaking the Petroleum Activity. Assessment will consider these risk factors: • For vessels/ MODU: • vessel/MODU/ type • recent IMS inspection and cleaning history, including for internal niches • out-of-water period before mobilisation • age and suitability of antifouling coating at mobilisation date • internal treatment systems and history • origin and proposed area of operation • number of stationary/slow speed periods>7 days • region of stationary or slow periods • type of activity - contact with seafloor. • For immersible equipment: • region of deployment since last thorough clean, particularly coastal locations	F: Yes. CS: Minimal cost. Good practice implemented across all Woodside Operations.	Identifies potential risks and additional controls implemented accordingly. In doing so, the likelihood of transferring marine pests between project vessels within the Operational Area is reduced. No change in consequence would occur.	Benefits outweigh cost/sacrifice.	Yes C 15.3

[59] Woodside's IMS risk assessment process was developed with regard to 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 Guidelines, 2011).

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)58***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
• duration of deployments • duration of time out of water since last deployment • transport conditions during mobilisation • post-retrieval maintenance regime. • Based on the outcomes of each IMS risk assessment, management measures commensurate with the risk (such as treating internal systems, IMS inspections or cleaning) will be implemented to minimise the likelihood of IMS being introduced.				
Professional judgement – Eliminate				
No discharge of ballast water during the Petroleum Activity.	F: No. Ballast water discharges are critical for maintaining vessel stability. Given the nature of the Petroleum Activity, the use of ballast (including the potential discharge of ballast water) is considered to be a safety critical requirement. CS: Not assessed, control not feasible	Not assessed, control not feasible.	Not assessed, control not feasible.	No
Eliminate use of MODU/vessels.	F: No. Given that vessels must be used to implement project, there is no feasible means to eliminate the source of risk. CS: Loss of the project.	Not assessed, control not feasible.	Not assessed, control not feasible.	No
Professional judgement – Substitute				

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)58***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
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
IMS inspection of all vessels.	F: Yes. Approach to inspect vessels could be a feasible option. CS: Significant cost and schedule impacts. In addition, Woodside's IMS risk assessment process (C 15.2) 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 to and resources to areas of greatest concern.	Inspection of all vessels for IMS would reduce the likelihood of IMS being introduced to the Operational Area However, this reduction is unlikely to be significant given the other control measures implemented. No change in consequence would occur.	Disproportionate . The cost/sacrifice outweighs the benefit gained, as other controls to be implement achieve an ALARP position.	No

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)58***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
Professional judgement – Engineered Solution				
None identified				
ALARP statement: On the basis of the environmental risk assessment outcomes and use of the relevant tools appropriate to the decision type, Woodside considers the adopted controls appropriate to manage the impacts and risks of IMS introduction. As no reasonable additional/alternative controls were identified that would further reduce the impacts without grossly disproportionate sacrifice, the impacts and risks are considered ALARP.				

Demonstration of acceptability
Acceptability statement: The risk assessment has determined that, given the adopted controls, introduction of IMS represent a slight risk rating that has a remote likelihood to result in an environmental consequence greater than a slight, short-term impact on marine communities within the Operational Area Further opportunities to reduce the impacts and risks have been investigated above. The adopted controls are considered good oil-field practice/industry best practice and meet Australian legislative requirements, including the Biosecurity Act 2015. In addition the Petroleum Activity is within the acceptable level of impact determined through the Goodwyn Area Infill OPP as the risk rating is consistent with the level rated in the OPP and the EPOs and controls from the OPP for the introduction of invasive marine species have been adopted. The potential impacts and risks are considered broadly acceptable if the adopted controls are implemented. Therefore, Woodside considers the adopted controls appropriate to manage the impacts and risks of invasive marine species to an acceptable level, and compliance with those controls demonstrates that the EPOs are met.

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EPOs, EPS and MC			
EPO	***Controls***	***PS***	***MC***
EPO-15: No introduction and establishment of an invasive marine species (IMS) into the Operational Area as a result of the Petroleum Activity	C 15.1 Project vessels will manage their ballast water using one of the approved ballast water management options, as specified in the Australian Ballast Water Management Requirements.	PS 15.1 Prevents the translocation of IMS within the vessel's ballast water from high risk locations to the Operational Area	MC 15.1.1 Ballast Water Records System maintained by vessels which verifies compliance against Australian Ballast Water Management Requirements.
	C 15.2 Internationally sourced project vessels will manage their biosecurity risk associated with biofouling as specified in the Australian Biofouling Management Requirements	PS 15.2 Compliance with Australian Biofouling Management Requirements.	MC 15.2 Records of implementation of biofouling management measure and pre-arrival reporting.
	C 15.3 Internationally sourced project vessels will manage their biosecurity risk associated with biofouling as specified in the Australian Biofouling Management Requirements. Woodside's IMS risk assessment process60 will be applied to the MODU, project vessels and relevant immersible equipment undertaking the Petroleum Activity. Assessment will consider these risk factors: • For vessels/ MODU: – vessel/MODU/ type – recent IMS inspection and cleaning history, including for internal niches – out-of-water period before mobilisation – age and suitability of antifouling coating at mobilisation date	PS 15.3.1 Before entering the Operational Area, project vessels, MODU and relevant immersible equipment are determined to be low risk of introducing IMS of concern, and maintain this low risk status to mobilisation.	MC 15.3.1 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 15.3.2 In accordance with Woodside's IMS risk assessment process, the IMS risk assessments will be undertaken by an authorised environment adviser who has completed relevant Woodside IMS training or by qualified and experienced IMS inspector	MC 15.3.2 Records confirm that the IMS risk assessments undertaken by an Environment Adviser or IMS inspector (as relevant).

[60] Woodside's IMS risk assessment process was developed with regard to 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 Guidelines, 2011).

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EPOs, EPS and MC			
EPO	***Controls***	***PS***	***MC***
	– internal treatment systems and history – origin and proposed area of operation – number of stationary/slow speed periods>7 days – region of stationary or slow periods – type of activity - contact with seafloor. • For immersible equipment: – region of deployment since last thorough clean, particularly coastal locations – duration of deployments – duration of time out of water since last deployment		

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6.8.7 Physical Presence (Unplanned): Seabed Disturbance from Dropped Objects and Loss of Station Keeping Leading to Anchor Drag

Context		
Relevant Activities Project Vessels - Section 3.11 Project-Vessel based activities – Section 3.11.5	***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
Dropped objects resulting in the disturbance of benthic habitat	X			X			A	E	1	L	GP PJ	Broadly Acceptable	EPO 16
Loss of station keeping of the MODU leading to anchor drag and the disturbance of benthic habitat	X			X									

Description of source of impact

During MODU and project vessel operations, the primary cause for unplanned seabed disturbance is through dropped objects from the MODU or project vessels. Additional unplanned disturbance to the seabed may occur from a loss of station keeping and subsequent anchor drag during MODU operations if a moored MODU is used for the Petroleum Activity.

Dropped Objects

There is the potential for objects to be dropped overboard from the MODU and project 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 also be dropped during the activity, particularly during recovery of infrastructure from the seabed. The spatial extent in which dropped objects can occur is restricted to the Operational Area

Anchor Drag

A moored/ hybrid MODU may be used for drilling the wells, secured on station by an 8 to 12-point mooring system deployed to the seabed, as dictated by the mooring analysis. High energy weather events such as cyclones, occurring while the MODU is on station, can lead to excessive loads on the mooring lines, resulting in failure (either anchor(s) dragging or mooring lines parting). A failure of mooring integrity may lead to the mooring lines and anchors attached to the MODU being trailed across the seabed. If mooring failure is sufficient, the MODU may move off station, increasing the likelihood of anchor drag across the seafloor.

For a moored MODU, personnel on-board are typically evacuated during cyclones. Woodside implements a risk-based assessment process to aid in decision-making for cyclone evacuations, with the well suspended prior to MODU evacuation. Support vessels also demobilise from the Operational Area during the passage of a cyclone. While the MODU is temporarily abandoned, the position of the MODU is monitored remotely for any deviation. Support vessels and MODU personnel return to the Operational Area as soon as safe to do so after a cyclone evacuation. Operational experience indicates cyclone evacuations typically last for seven days

Industry statistics from the North Sea show that a single mooring line failure for MODUs is the most common failure mechanism (33 × 10-4 per line per year), followed by a double mooring line failure (11 × 10-4 per line per year) (Petroleumstilsynet, 2014). Note that single and double mooring line failures do not typically result in the loss of

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Description of source of impact
station keeping. If partial or complete mooring failures are sufficient to result in a loss of station keeping, industry experience indicates that MODUs may drift considerable distances from their initial position (Offshore: Risk & Technology Consulting Inc., 2002). Partial mooring failures leading to a loss of station keeping resulted in smaller MODU displacements, due to the remaining anchors dragging along the seabed when compared to complete mooring failures; complete mooring failures resulted in a freely drifting MODU (Offshore: Risk & Technology Consulting Inc., 2002). NOPSEMA has recorded four cases of anchor drag due to loss of MODU holding station during cyclone activity between 2004 and 2015 (NOPSEMA 2015). Seabed disturbance area size from anchor drag will depend on the extent of the drag.

Impact assessment
Environmental value(s) potentially impacted
In the unlikely event of an object being dropped into the marine environment or failed mooring, potential environmental effects would be limited to minor physical impacts on benthic communities. In most cases, objects will be able to be recovered and therefore these impacts will also be temporary in nature. 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 minor but permanent. ***Water Quality*** Unplanned seabed disturbance has the potential to result in a localised and temporary decline in water quality due to an increase in suspended sediment. After a period, the suspended sediments settle and the turbidity in the water column returns to pre-disturbance levels. Each activity near the seabed is likely to cause a single brief disturbance resulting in a transient plume of suspended sediment, within an area of predominantly soft sand habitat. Therefore, unplanned seabed disturbance associated with activities within the Operational Area is expected to have no lasting effect on water quality ***Offshore Habitats and Biological Communities*** Unplanned seabed disturbance has the potential to change benthic habitats and communities within the Operational Area The benthic habitat within theOperational Areais expected to be comprised of soft sediment in proximity to the nearfield wells and a mixture of soft sediments and hard substrate in the vicinity of the Wilcox wells; this habitat is broadly represented throughout the NWMR (Worley 2025). Unplanned seabed disturbance footprints will typically range from ~15 m^2 (from tools or equipment) to ~150 m^2 (infrastructure). Note: Unplanned seabed disturbance from a mooring or anchor drag will vary, depending on the extent of the drag. This estimated extent of seabed disturbance is considered very small in relation to the extent of the soft sediment habitats, which are broadly represented within the Operational Area and the wider NWMR. Rankin Bank and Wilcox Shoal both occur within proximity to the Operational Area (Section 4.5.1). Wilcox Shoal is <2.8 km east Operational Area, and Rankin Bank is ~5 km north of the proposed tie-in at LPA. There is a smaller shoal feature (~2.5 km north-east of nominal Wilcox wells within the Operational Area and consequently could be at risk from unplanned seabed disturbance from dropped objects or mooring/anchor drag depending on the specific location and nature of any project activities. Dropped objects may result in a small permanent loss of habitat under the object however in most cases, these objects will be able to be recovered and the impacts will be temporary in nature. While the unplanned seabed disturbance from a mooring or anchor drag will vary, depending on the extent of the drag. This estimated extent of seabed disturbance is considered very small in relation to the extent of the soft sediment habitats, which are broadly represented within the Operational Area and the wider NWMR. Therefore, unplanned seabed disturbance within the Operational Area is not expected to result in a consequence greater than short-term disturbance to habitats or biological communities, or affect ecosystem function ***Key Ecological Features*** Unplanned seabed disturbance footprints will typically range from ~15 m^2 (from tools or equipment) to ~150 m^2 (infrastructure). Note: Unplanned seabed disturbance from a mooring or anchor drag will vary, depending on the extent of the drag. This unplanned seabed disturbance represents a very small proportion of the 16,190 km^2 area of the KEF. As described in Section 4.7, the values of this KEF include providing areas of hard substrate that may result in higher diversity and enhanced species richness relative to surrounding areas of predominantly soft sediment. However, an assessment of the seabed (including within the ancient coastline at 125 m depth contour KEF) indicate that benthic habitats within the KEF are characterised by soft sediments. In addition, while physical habitat modification is listed as a pressure within the Marine Bioregional Plan for the NWMR, it has not been identified a pressure of concern for this KEF (DSEWPaC 2012b).

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Impact assessment
Therefore, seabed disturbance within the KEF is not expected to result in a consequence greater than slight short-term disturbance to habitats or biological communities, or affect ecosystem function ***AMPs*** The potential for changes to the Montebello Marine Park may occur from an unplanned seabed disturbance within the marine park boundary as it is possible the MODU mooring system may extend within the marine park boundary, depending on the type of MODU selected for activities at Wilcox reservoir. The values of the Montebello Marine Park (as described in 4.8.1) include ecosystems representative of the Northwest Shelf Province, including areas of ancient coastline. Benthic habitat surveys within the northern section of the marine park indicate that it has a relatively flat and sandy seabed with variable coverage of benthic epifauna (e.g. sponges, corals) (Section 4.5; (Advisian 2019)). This is not dissimilar to the benthic habitats and communities expected to occur throughout most of the Operational Area, which are broadly represented throughout the NWMR (Section 4.3). Therefore, seabed disturbance within the Montebello Marine Park is not expected to result in a consequence greater than slight short-term disturbance to habitats or biological communities, or affect ecosystem function.
Summary of Potential Impacts to environmental value(s)
Given the adopted controls, the predicted small footprint of a dropped object, it is considered that unplanned seabed disturbance will result in slight impacts to a small area of the seabed and a small proportion of the benthic populations. However, no significant impact to environmental receptors and resulting in minor and short-term impacts (i.e. Environment Impact – E).

Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)[61]***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
Legislation, codes and standards				
No additional controls identified				
Good practice				
The MODU/PIV work procedures for lifts, bulk transfers and cargo loading, which require: • The security of loads shall be checked prior to commencing lifts. • Loads shall be covered if there is a risk of loss of loose materials. • Lifting operations shall 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.	Occurs after a dropped object event and therefore no change to the likelihood. Since the object may be recovered, a reduction in consequence is possible.	Benefits outweigh cost/sacrifice.	Yes C 16.1
Specifications and requirements for station	F: Yes.	Reduces the likelihood of mooring failure	Benefit outweighs cost sacrifice.	Yes

[61] *Qualitative measure*

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)61***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
keeping equipment (mooring systems), require that: • systems are tested and inspected in accordance with API RP 21 • systems have sufficient capability such that a failure of any single component will not cause progressive failure of the remaining anchoring arrangement	CS: Minimal cost. Standard practice.	leading to uncontrolled anchor drag. Should mooring failure occur, no significant reduction in consequence could occur.		C 16.2
Project-specific Mooring Design Analysis.	F: Yes. CS: Minimal cost. Standard practice.	By ensuring that a mooring analysis report is undertaken, the likelihood of mooring failure occurring is reduced. Although no reduction in consequence would occur, the overall risk is reduced.	Benefit outweighs cost sacrifice.	Yes C 3.4
Mooring system is tested to recommended tension as per API RP 2SK.	F: Yes. CS: Minimal cost. Standard practice	Reduces the likelihood of anchor drag leading to seabed disturbance.	Benefit outweighs cost sacrifice.	Yes C 16.3
MODU/project vessel ROV, crane or project vessel may be used to attempt recovery of solid wastes /equipment lost overboard. Where safe and practicable, this activity will consider: • risk to personnel to retrieve object • whether the location of the object is in recoverable water depths • objects proximity to subsea infrastructure • ability to recover the object (i.e. Nature of object, lifting equipment or, ROV availability and suitable weather).	F: Yes. CS: Minimal cost. Standard practice	Occurs after a dropped object event and therefore no change to the likelihood. Since the object may be recovered, a reduction in consequence is possible.	Benefit outweighs cost sacrifice.	Yes C 16.4

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)61***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
Any material dropped objects / waste that remain in the title will undergo an impact assessment and be added to the inventory.				
AMSA/AHS/potentially affected stakeholders (as identified in Section 5) will be notified in the event significant equipment is unable to be recovered. Notification will allow for stakeholder to raise Notice to Mariners if necessary.	F: Yes. CS: Minimal cost. Standard practice.	Occurs after a dropped object event and therefore no change to the likelihood. Will ensure stakeholders are aware of dropped object locations to be avoided when necessary.	Benefit outweighs cost sacrifice.	Yes C 16.5
Professional judgement – Eliminate				
No additional controls identified				
Professional judgement – Substitute				
No additional controls identified				
Professional judgement – Engineered Solution				
MODU tracking equipment operational when the MODU unmanned.	F: Yes. CS: Minimal cost. Standard practice.	Although no reduction in consequence would occur, the overall risk is reduced as the location of the MODU would be known at all times and response times could be improved in the event of a loss of station keeping.	Benefit outweighs cost sacrifice.	Yes C 16.6
SIMOPS Plan in place when MODU working in vicinity of other facilities, vessels or live infrastructure i.e. during Xmas tree installation. SIMOPS Plan will contain information on: • Minimum separation distances • Communications • MODU / vessels / activities involved in SIMOPS • Exclusion zone entry and exit processes • ROV operations	F: Yes CS: Minimal cost.	The SIMOPS plan will include protocols for entering titles not owned by Woodside, allowing other operators, particularly Chevron, to plan for the Petroleum Activity's presence.	Benefits outweigh cost/sacrifice.	Yes C 1.9

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)61***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
• Helicopter operations • Key roles, responsibilities and emergency contacts • PTW arrangements • Incident reporting and investigation Management of Change				
ALARP statement: On the basis of the environmental risk assessment outcomes and use of the relevant tools appropriate to the decision type, Woodside considers the adopted controls appropriate to manage the impacts and risks of unplanned seabed disturbance. As no reasonable additional/alternative controls were identified that would further reduce the impacts without grossly 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 represents or a loss of station keeping of the MODU 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. In addition the Petroleum Activity is within the acceptable level of impact determined through the Goodwyn Area Infill OPP as the risk rating is consistent with the level rated in the OPP and the EPOs and controls from the OPP for unplanned seabed disturbance have been adopted. The potential risks and consequences are considered broadly acceptable if the adopted controls are implemented. Therefore, Woodside considers the adopted controls appropriate to manage the risks of seabed disturbance from dropped objects to an acceptable level, and compliance with those controls demonstrates that the EPOs are met.

EPOs, EPS and MC			
EPO	***Controls***	***PS***	***MC***
EPO-16: No unplanned seabed disturbance within the Operational Area from dragged anchor or dropped object	C 16.1 The MODU/PIV work procedures for lifts, bulk transfers and cargo loading, which require: • The security of loads shall be checked prior to commencing lifts. • Loads shall be covered if there is a risk of loss of loose materials • Lifting operations shall be conducted using the PTW and JSA systems to manage the specific risks of that lift, including consideration	PS 16.1 All lifts conducted in accordance with applicable MODU/ installation vessel work procedures to limit potential for dropped objects.	MC 16.1.1 Records show lifts conducted in accordance with the applicable MODU/ installation vessel work procedures.

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EPOs, EPS and MC			
EPO	***Controls***	***PS***	***MC***
	of weather and sea state.		
	C 16.2 Specifications and requirements for station keeping equipment (mooring systems), require that: • systems are tested and inspected in accordance with API RP 21 • systems have sufficient capability such that a failure of any single component will not cause progressive failure of the remaining anchoring arrangement	PS 16.2 MODU mooring system tested and in place to ensure no complete mooring failure.	MC 16.2.1 Records demonstrate mooring system tests and inspection.
	C 2.4 Refer Section 6.7.2	PS 2.4 Refer Section 6.7.2	MC 2.4 Refer Section 6.7.2
	C 16.3 Mooring system is tested to recommended tension as per API RP 2SK.	PS 16.3 Monitoring compliant with ISO 19901-7:2013	MC 16.3.1 Records confirm mooring system is tested to recommended tension as per API RP 2SK.
	C 16.4 MODU/project vessel ROV, crane or project vessel may be used to attempt recovery of solid wastes /equipment lost overboard. Where safe and practicable, this activity will consider: • risk to personnel to retrieve object • whether the location of the object is in recoverable water depths • objects proximity to subsea infrastructure • ability to recover the object (i.e. Nature of object, lifting equipment or, ROV availability and suitable weather). Any material dropped objects / waste that remain in the title will undergo an impact assessment and be added to the inventory.	PS 16.4 Solid waste/equipment dropped to the marine environment wil lbe recovered where safe and practicable to do so. • Where retrieval is not practicable and/or safe, material items (property) that are lost to the marine environment will undergo an impact assessment and will be added to the inventory for the title.	MC 16.4 Records demonstrate outcomes of the safe and practicable evaluation, including an impact assessment for the objects remaining.
	C 16.5	PS 16.5	MC 16.5.1

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EPOs, EPS and MC			
EPO	***Controls***	***PS***	***MC***
	AMSA/AHS/potentially affected stakeholders (as identified in Section 5) will be notified in the event significant equipment is unable to be recovered. Notification will allow for stakeholder to raise Notice to Mariners if necessary.	Notification to AMSA/ AHS/ potentially affected stakeholders to prevent activities interfering with other marine users	Consultation records demonstrate that AMSA/ AHS/ potentially affected stakeholders have been notified in the event of a significant equipment loss
	C 16.6 MODU tracking equipment operational when the MODU unmanned.	PS 16.6 Tracking of the MODU is possible when the MODU is unmanned.	MC 16.6.1 Records show the moored MODU has functional tracking equipment for instances when MODU is unmanned.
	C 1.9 Refer Section 6.7.1	PS 1.9 Refer Section 6.7.1	MC 1.9.1 Refer Section 6.7.1

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6.8.8 Physical Presence (Unplanned): Interaction with Live Infrastructure

Context		
Relevant Activities Project Vessels - Section 3.11 Project-Vessel based activities – Section 3.11.5	***Existing Environment*** Socio-economic Environment – Section 4.9	***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 17
Interaction with live infrastructure from anchor drag						X							

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 GWA Platform. During the Petroleum Activity, activities may be conducted that present a risk of dropped objects or anchor drag over the nearby live infrastructure.

During the Petroleum Activity, activities may be conducted that present a risk of dropped objects or anchor drag over the nearby live infrastructure. The purpose of the following assessment is to determine the risk associated with interaction between dropped objects and/ or anchor drag and existing live subsea infrastructure. This risk assessment does not consider risk of a spill from existing subsea infrastructure. For these events risk ratings are determined in the below approved EPs:

- Goodwyn Alpha (GWA) Facility Operations Environment Plan
- Pluto Facility Operations Environment Plan

Dropped Objects

There is the potential for objects to be dropped overboard from the MODU and project 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 potential for larger equipment to be dropped during the activity, particularly during recovery of infrastructure from the seabed. The spatial extent in which dropped objects can occur is restricted to the Operational Area

Anchor Drag

A hybrid MODU will be used for drilling the wells, secured on station by an 8 to 12-point mooring system deployed to the seabed, as dictated by the mooring analysis. High energy weather events such as cyclones, occurring while the MODU is on station, can lead to excessive loads on the mooring lines, resulting in failure (either anchor(s) dragging or mooring lines parting). A failure of mooring integrity may lead to the mooring lines and anchors attached to the MODU being trailed across the seabed and over live infrastructure.

For a moored MODU, personnel on-board are typically evacuated during cyclones. Woodside implements a risk-based assessment process to aid in decision making for cyclone evacuations, with the well suspended prior to evacuation. Support vessels also demobilise from the Operational Area during the passage of a cyclone. While the MODU is temporarily abandoned, the position of the MODU is monitored remotely for any deviation. Support vessels and MODU personnel return to the Operational Area as soon as safe to do so after a cyclone evacuation. Operational experience indicates cyclone evacuations typically last for seven days.

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Description of source of impact
Industry statistics from the North Sea show that a single mooring line failure for MODUs is the most common failure mechanism (33 × 10-4 per line per year), followed by a double mooring line failure (11 × 10-4 per line per year) (Petroleumstilsynet, 2014). Note that single and double mooring line failures do not typically result in the loss of station keeping. If partial or complete mooring failures are sufficient to result in a loss of station keeping, industry experience indicates that MODUs may drift considerable distances from their initial position (Offshore: Risk & Technology Consulting Inc., 2002). Partial mooring failures leading to a loss of station keeping resulted in smaller MODU displacements, due to the remaining anchors dragging along the seabed when compared to complete mooring failures; complete mooring failures resulted in a freely drifting MODU (Offshore: Risk & Technology Consulting Inc., 2002). NOPSEMA has recorded four cases of anchor drag due to loss of MODU holding station during cyclone activity between 2004 and 2015 (NOPSEMA 2015).

Impact assessment
Environmental value(s) potentially impacted
Interactions with other marine users In the unlikely event of an object being dropped on, or anchors dragging over, live infrastructure there is potential impacts to the infrastructure. Within the Operational Area, there is the infrastructure associated with the Goodwyn Alpha Platform Field Production System 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 EPs[72] 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*** In the unlikely event of an object being dropped on, or anchors dragging over, 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: • Goodwyn Alpha (GWA) Facility Operations Environment Plan, Section 6.8.4 (NOPSEMA Doc A825979,https://docs.nopsema.gov.au/A825979) • Pluto Facility Operations Environment Plan, Section 6.9.11 (NOPSEMA Doc A1197328,docs.nopsema.gov.au/A1197328) As detailed in these Sections above and below, this EP addresses the risks and impacts (interaction with live infrastructure) that arise from the activities under this EP (interaction from dropped objects and interaction from anchor drag). This EP also contains controls to prevent such an event from occurring that are within the operational control of this EP. As detailed in this Section, the operational control, 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 values(s)
Given the adopted controls, it is considered that a 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 slight, short term (i.e. Environment Impact – E).

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)62***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
Legislation, codes and standards				
No additional controls identified				
Good practice				
The MODU/PIV work procedures for lifts, bulk transfers and cargo loading, which require: • The security of loads shall be checked prior to commencing lifts. • Loads shall be covered if there is a risk of loss of loose materials. • Lifting operations shall 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.	Occurs after a dropped object event and therefore no change to the likelihood. Since the object may be recovered, a reduction in consequence is possible.	Benefits outweigh cost/sacrifice.	Yes C 16.1
Specifications and requirements for station keeping equipment (mooring systems), require that: • systems are tested and inspected in accordance with API RP 21 • systems have sufficient capability such that a failure of any single component will not cause progressive failure of the remaining anchoring arrangement	F: Yes. CS: Minimal cost. Standard practice.	Reduces the likelihood of mooring failure leading to uncontrolled anchor drag. Should mooring failure occur, no significant reduction in consequence could occur.	Benefit outweighs cost sacrifice.	Yes C 16.2

[62] *Qualitative measure*

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)62***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
Project-specific Mooring Design Analysis.	F: Yes. CS: Minimal cost. Standard practice.	By ensuring that a mooring analysis report is undertaken, the likelihood of mooring failure occurring is reduced. Although no reduction in consequence would occur, the overall risk is reduced.	Benefit outweighs cost sacrifice.	Yes C 2.4
Mooring system is tested to recommended tension as per API RP 2SK.	F: Yes. CS: Minimal cost. Standard practice	Reduces the likelihood of anchor drag leading to seabed disturbance.	Benefit outweighs cost sacrifice.	Yes C 16.3
MODU/project vessel ROV, crane or project vessel may be used to attempt recovery of solid wastes /equipment lost overboard. Where safe and practicable, this activity will consider: • risk to personnel to retrieve object • whether the location of the object is in recoverable water depths • objects proximity to subsea infrastructure • ability to recover the object (i.e. Nature of object, lifting equipment or, ROV availability and suitable weather). Any material dropped objects / waste that remain in the title will undergo an impact assessment and be added to the inventory.	F: Yes. CS: Minimal cost. Standard practice	Occurs after a dropped object event and therefore no change to the likelihood. Since the object may be recovered, a reduction in consequence is possible.	Benefit outweighs cost sacrifice.	Yes C 16.4

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)62***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
AMSA/AHS/potentially affected stakeholders (as identified in Section 5) will be notified in the event significant equipment is unable to be recovered. Notification will allow for stakeholder to raise Notice to Mariners if necessary.	F: Yes. CS: Minimal cost. Standard practice.	Occurs after a dropped object event and therefore no change to the likelihood. Will ensure stakeholders are aware of dropped object locations to be avoided when necessary.	Benefit outweighs cost sacrifice.	Yes C 16.5
Professional judgement – Eliminate				
No additional controls identified				
Professional judgement – Substitute				
No additional controls identified				
Professional judgement – Engineered Solution				
MODU tracking equipment operational when the MODU unmanned.	F: Yes. CS: Minimal cost. Standard practice.	Although no reduction in consequence would occur, the overall risk is reduced as the location of the MODU would be known at all times and response times could be improved in the event of a loss of station keeping.	Benefit outweighs cost sacrifice.	Yes C 16.6
ALARP statement: On the basis of the environmental risk assessment outcomes and use of the relevant tools appropriate to the decision type, Woodside considers the adopted controls appropriate to manage the impacts and risks of unplanned interaction with live infrastructure. As no reasonable additional/alternative controls were identified that would further reduce the impacts without grossly disproportionate sacrifice, the impacts and risks are considered ALARP				

Demonstration of acceptability
Acceptability statement: The impact assessment has determined that interaction with live infrastructure from dropped objects or a loss of station keeping of the MODU 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. The potential risks and consequences are considered broadly acceptable if the adopted controls are implemented. Therefore, Woodside considers the adopted controls appropriate to manage the risks of unplanned interaction with live infrastructure from dropped objects and loss of station keeping of the MODU to an acceptable level, and compliance with those controls demonstrates that the EPOs are met.

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EPOs, EPS and MC			
EPO	***Controls***	***PS***	***MC***
EPO-17: No interactions with live infrastructure resulting in loss of hydrocarbons to the marine environment during the Petroleum Activity	C 16.1 Refer Section 6.8.7	PS 16.1 Refer Section 6.8.7	MC 16.1.1 Refer Section 6.8.7
	C 16.2 Refer Section 6.8.7	PS 16.2 Refer Section 6.8.7	MC 16.2.1 Refer Section 6.8.7
	C 16.3 Refer Section 6.8.7	PS 16.3 Refer Section 6.8.7	MC 16.3.1 Refer Section 6.8.7
	C 16.4 Refer Section 6.8.7	PS 16.4 Refer Section 6.8.7	MC 16.4.1 Refer Section 6.8.7
	C 16.5 Refer Section 6.8.7	PS 16.5 Refer Section 6.8.7	MC 16.5.1 Refer Section 6.8.7
	C 16.6 Refer Section 6.8.7	PS 16.6 Refer Section 6.8.7	MC 16.6.1 Refer Section 6.8.7

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6.8.9 Unplanned Release: Hazardous and Non-Hazardous Wastes

Context		
Relevant Activities Project Vessels - Section 3.11	***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
Accidental loss of hazardous or non-hazardous solid wastes / equipment to the marine environment		X			X	X	A	F	2	L	LCS GP	Broadly Acceptable	EPO 18

Description of source of impact

The MODU and project vessels will generate a variety of 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 may also be accidentally lost overboard. 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.

Impact assessment

Environmental value(s) potentially impacted

The potential impacts of hazardous or non-hazardous solid waste / equipment accidentally discharged to the marine environment include contamination of the environment as well as secondary impacts relating to potential contact of marine fauna with wastes. This could result in entanglement or ingestion and lead to injury and death of individual animals and changes to aesthetic values. 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.

Water Quality

Change in Water Quality

Hazardous solid wastes such as paint cans, oily rags, etc., can cause localised contamination of the water through a release of toxins and chemicals. The level of impact to water quality will depend on the nature of the discharge, however volumes of the hazardous components are generally low (such as residual paint in cans or oily rags).

Modelling of small volumes of hydrocarbons such as this (e.g. Shell, 2010) indicate rapid dilution in the offshore marine environment, with impacts limited to the immediate vicinity of the contamination.

Given likely small volumes, and the occasional nature of the event, these would result in temporary and highly localised changes to the water quality.

Injury/Mortality to 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

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Impact assessment
feeding/foraging behaviours and thus can result in mortalities. Injury and fatality to vertebrate marine life caused by ingestion of, or entanglement in, harmful marine debris was listed as a key threatening process under the EPBC Act in August 2003 (Department of the Environment and Energy (DoEE), 2018). The Threat Abatement Plan for the impacts of marine debris on the vertebrate wildlife of Australia's coasts and oceans (DoEE, 2018) identifies EPBC Act-listed species for which there are scientifically documented adverse impacts resulting from marine debris. Marine turtles and seabirds in particular may be at risk from plastics which may cause entanglement or be mistaken for food (e.g. DoEE, 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 affect to an individual. Marine debris has been identified as threat in the Recovery Plan for Marine Turtles in Australia (2017–2027). Impacts to species including fish, birds, marine mammals and marine reptiles from the unplanned discharge of solid waste is unlikely given 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 the 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 (Department of Environment, Water, Heritage and the Arts (DEWHA), 2009), management controls will reduce the risk of unplanned discharge of solid waste. ***Cultural Values and Heritage*** Through consultation and review of available literature (Section 4.9.1), Woodside understands that marine fauna that may be affected by unplanned loss of hazardous and non-hazardous waste/equipment, such as marine turtles, are culturally important to Traditional Custodians. 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 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. For example, activities that impact marine turtle populations and their marine environment may have an indirect impact on some Indigenous communities if they deplete hunting areas and 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 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 (Fijn,2021). As described above, 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 these species are expected to be maintained.
Summary of Potential Impacts to environmental value(s)
Given the adopted controls, it is considered that the accidental discharge of solid waste described will result in no significant localised impact, with no lasting effect on environmental receptors (i.e. Environment Impact – F).

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)63***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
Legislation, codes and standards				
Marine Order 95 – marine pollution prevention— garbage (as appropriate to vessel class), 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.	F: Yes. CS: Minimal cost. Standard practice.	Legislative requirements to be followed reduces the likelihood of an unplanned release. The consequence is unchanged.	Controls based on legislative requirements – must be adopted.	Yes C 8.1
Good practice				
Global Wells and Seismic Waste Management Plan, which requires: • dedicated space for waste segregation bins and skips provided on the MODU • records of all waste to be disposed, treated or recycled • waste streams handled and managed according to their hazard and recyclability class • all non-putrescible waste (excludes all food, greywater or sewage waste) to be transported from the MODU and disposed of onshore	F: Yes. CS: Minimal cost. Standard practice.	Controls outlined in the management plan will reduce the likelihood of an unplanned release. The consequence is unchanged.	Benefit outweighs cost sacrifice.	Yes C 18.1
Project vessel waste arrangements, which require: • dedicated waste segregation bins • records of all waste to be disposed, treated or recycled	F: Yes. CS: Minimal cost. Standard practice.	Reduces the likelihood of an unplanned release. The consequence is unchanged.	Benefit outweighs cost sacrifice.	Yes C 18.2

[63] *Qualitative measure*

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)63***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
• waste streams to be handled and managed according to their hazard and recyclability class. • implementation of waste management procedures which provide for safe handling and transportation, segregation and storage and appropriate classification of all waste generated.				
MODU, project vessels, ROV, or crane may be used to attempt recovery of hazardous solid wastes lost overboard. Where safe and practicable, this activity will consider: • risk to personnel to retrieve object • whether the location of the object is in recoverable water depths • object's proximity to subsea infrastructure ability to recover the object (i.e. nature of object, lifting equipment or, and suitable weather). Any material dropped	F: Yes. CS: Minimal cost. Standard practice.	Occurs after an unplanned release of solid waste and therefore no change to the likelihood. Since the waste objects may be recovered, a reduction in consequence is possible.	Benefit outweighs cost sacrifice.	Yes C16.4
Professional judgement – Eliminate				
No additional controls identified				
Professional judgement – Substitute				
No additional controls identified				
Professional judgement – Engineered Solution				
None identified				

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Demonstration of ALARP				
Control considered	***Control feasibility (F) and cost/sacrifice (CS)63***	***Benefit in impact/risk reduction***	***Proportionality***	***Control adopted***
ALARP statement: On the basis of the environmental risk assessment outcomes and use of the relevant tools appropriate to the decision type, Woodside considers the adopted controls appropriate to manage the impacts and risks of accidental loss of hazardous or non-hazardous solid wastes/equipment to the marine environment. As no reasonable additional/alternative controls were identified that would further reduce the impacts without grossly disproportionate sacrifice, the impacts and risks are considered ALARP				

Demonstration of acceptability
Acceptability statement: The impact assessment has determined that, given the adopted controls, accidental discharge of solid waste represents a low current risk rating with no lasting effect of localised impacts. Further opportunities to reduce the impacts and risks have been investigated above. The adopted controls are considered good oil-field practice/industry best practice and meet legislative requirements (Marine Order 95). In addition the Petroleum Activity is within the acceptable level of impact determined through the Goodwyn Area Infill OPP as the risk rating is consistent with the level rated in the OPP and the EPOs and controls from the OPP the unplanned release of hazardous and non-hazardous waste have been adopted. The potential impacts and risks are considered broadly acceptable if the adopted controls are implemented. Therefore, Woodside considers the adopted controls appropriate to manage the impacts and risks of these discharges to a level that is broadly acceptable, and compliance with those controls demonstrates that the EPOs are met.

EPOs, EPS and MC			
EPO	***Controls***	***PS***	***MC***
EPO-18: No release of solid hazardous or non-hazardous waste[64] to the marine environment.	C 8.1 Refer Section 6.7.7	PS 8.1 Refer Section 6.7.7	MC 8.1.1 Refer Section 6.7.7
	C 18.1 Global Wells and Seismic Waste Management Plan, which requires: • dedicated space for waste segregation bins and skips shall be provided on the MODU. • records of all waste to be disposed, treated or recycled. • waste streams to be handled and managed according to their hazard and recyclability class. • all non-putrescible waste (excludes all food, greywater or sewage waste) to be transported from the	PS 18.1 Hazardous and non-hazardous waste will be managed in accordance with the Global Wells and Seismic Waste Management Plan.	MC 18.1.1 Records demonstrate compliance against Global Wells and Seismic Waste Management Plan.

[64] *Waste is defined in the relevant waste management plans*

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EPOs, EPS and MC			
EPO	***Controls***	***PS***	***MC***
	MODU and disposed of onshore		
	C 18.2 Project vessel waste management arrangements, which require: • 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 classi mplementation of waste management procedures which provide for safe handling and transportation, segregation and storage and appropriate classification of all waste generated	PS 18.2 Hazardous and non-hazardous waste will be managed in accordance with the project vessel waste management arrangements.	MC 18.2 Records demonstrate compliance against project vessel waste management arrangements.
	C 16.4 Refer Section 6.8.7	PS 16.4 Refer Section 6.8.7	MC 16.4.1 Refer Section 6.8.7

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6.9 Recovery plan and threat abatement assessment

As described in Section 1.7.2.1, an EP must not be inconsistent with a recovery plan or threat abatement plan for a listed threatened species or ecological community. This section describes the assessment that Woodside has undertaken to demonstrate that 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).
- Sawfishes 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).

Table 6-23 lists the objectives and (where relevant) the action areas of these plans and also describes whether these objectives/action areas are applicable to government, the Titleholder and/or the Petroleum Activity. For those objectives/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 activity are clearly inconsistent with that action or not. The results of this assessment against relevant actions are presented in Table 6-23 to Table 6-28.

The assessment of potential impacts and risks to pygmy blue whales from underwater noise emissions in Section 6.7.4has taken into account the definitions of terminology in the CMP, as described in the DCCEEW and NOPSEMA guidance released in September 2021. Similarly, the assessment against relevant actions in the CMP in Table 6-25 has been undertaken in the context of the definitions included in the guidance note.

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Table 6-23: 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***
Marine Turtle Recovery Plan			
Long-term Recovery Objective: Minimise anthropogenic threats to allow for 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. Adaptively manage turtle stocks to reduce risk and build resilience to climate change and variability	Y		
A3. Reduce the impacts of marine debris	Y	Y	Y
A4. Minimise chemical and terrestrial discharge	Y	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		
B. Enabling and measuring recovery			
B1. Determine trends in index beaches	Y	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 for their conservation status to improve so that they can be removed from the EPBC Act threatened species list	Y	Y	Y

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EPBC Act Part 13 Statutory Instrument	Applicable to:		
	Government	***Titleholder***	***Petroleum Activity***
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: Assessing and addressing anthropogenic noise	Y	Y	Y
A.3: Understanding impacts of climate variability and change	Y		
A.4: Minimising vessel collisions	Y	Y	Y
B. Enabling and Measuring Recovery			
B.1: Measuring and monitoring population recovery	Y		
B.2: Investigating population structure	Y		
B.3: Describing spatial and temporal distribution and defining biologically important habitat	Y	Y	Y
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 that 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 Objective			
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		

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EPBC Act Part 13 Statutory Instrument	Applicable to:		
	Government	***Titleholder***	***Petroleum Activity***
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 • ensuring that anthropogenic activities do not hinder recovery in the near future, or impact on the conservation status of the species in the future	Y	Y	Y
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	

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EPBC Act Part 13 Statutory Instrument	Applicable to:		
	Government	***Titleholder***	***Petroleum Activity***
Improve community understanding and awareness in relation to sawfish and river shark conservation and management	Y		
Marine Debris Threat Abatement Plan			
Objectives			
Contribute to long-term prevention of the incidence of marine debris	Y	Y	Y
Understand the scale of impacts from marine plastic and microplastic on key species, ecological communities and locations	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		
Increase public understanding of the causes and impacts of harmful marine debris, including microplastic and hazardous chemical contaminants, to bring about behaviour change	Y		

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Table 6-24: Assessment against relevant actions of the Marine Turtle Recovery Plan

Part 13 Statutory Instrument	Relevant Action Areas/Objectives	Relevant Actions	Evaluation	EPO, Controls and PS
Marine Turtle Recovery Plan	Action Area A3: Reduce the impacts from marine debris	Action: Support the implementation of the Marine Debris Threat Abatement Plan (TAP) Priority actions at stock level: G-NWS – understand the threat posed to this stock by marine debris LH-WA – determine the extent to which marine debris is impacting loggerhead turtles F-Pil and H-WA – no relevant actions	Refer Section 6.8.9 Not inconsistent assessment: The assessment of accidental release of solid hazardous and non-hazardous wastes has considered the potential risks to marine turtles.	EPO 18
	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', e.g. nesting habitat, seagrass meadows or coral reefs Priority actions at stock level: G-NWS – ensure that spill risk strategies and response programs include management for turtles and their habitats LH-WA, F-Pil – ensure that spill risk strategies and response programs include management for turtles and their habitats, particularly in reference to slow to recover habitats, e.g. seagrass meadows or corals H-WA – no relevant actions	Refer Sections 6.8.2 6.8.3, 6.8.4, Appendix G. Not inconsistent assessment: The assessment of accidental release of chemicals / hydrocarbons has considered the potential risks to marine turtles. Spill risk strategies and response program include management measures for turtles and their nesting habitats.	Refer Sections 6.8.2 6.8.3, 6.8.4 Detailed oil spill preparedness and response performance outcomes, standards and measurement criteria for the Petroleum Activity are present in Appendix G.
		Action: Routine discharges from MODU and project vessels are managed such that marine turtles are not adversely affected by changes in water quality. Priority actions at stock level: G-NWS – as above LH-WA, F-Pil – as above	Refer Sections 6.7.6, 6.7.7 6.7.8 6.7.9 Not inconsistent assessment: The assessment of routine discharges of chemicals, deck drainage, treated sewerage, putrescible wastes and grey water has considered the potential risks to marine turtles. Individuals transiting the localised	EPO 7, 8, 9, 10

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Part 13 Statutory Instrument	Relevant Action Areas/Objectives	Relevant Actions	Evaluation	EPO, Controls and PS
		H-WA – no relevant actions	area may come into contact with routine discharges, however these are sporadic and in small quantities, and are unlikely to pose a significant risk.	
	Action Area A8: Minimise light pollution	Action: Artificial light within or adjacent to habitat critical to the survival of marine turtles will be managed 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 and H-WA – manage artificial light from onshore and offshore sources to ensure biologically important behaviours of nesting adults and emerging/dispersing hatchlings can continue	Refer Section 6.7.3 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 offshore vessels. Vessel light emissions could cause 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.	EPO 3, 4
	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 and H-WA – no relevant actions	Not inconsistent assessment: Woodside contributes to Action Area B1 via its support of the Ningaloo Turtle Program[65]. Given the offshore location of the Operational Area, impacts to turtle nesting beaches will not occur.	N/A

[65] http://www.ningalooturtles.org.au/media_reports.html

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Part 13 Statutory Instrument	Relevant Action Areas/Objectives	Relevant Actions	Evaluation	EPO, Controls and PS
	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 North-West Shelf stock to other stocks LH-WA, F-Pil - no relevant actions H-WA – investigate mixed stock genetics at foraging grounds	Refer Section 6.7.4 Not inconsistent assessment: The assessment of acoustic emissions has considered the potential impacts to flatback and olive ridley turtles. Vessel and seismic acoustic emissions could cause localised and short-term behavioural disturbance to isolated transient individuals, which is unlikely to result in displacement of adult turtles from internesting or nesting Habitat Critical	EPO 4, 5
Assessment Summary The Marine Turtle Recovery Plan has been considered during the assessment of impacts and risks, and the Petroleum Activity is not considered to be inconsistent with the relevant actions of this plan.				

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Table 6-25: Blue Whale Conservation Management Plan

Part 13 Statutory Instrument	Relevant Action Areas/Objectives	Relevant Actions	Evaluation	EPO, Controls and PS
Blue Whale Conservation Management Plan	Action Area A.2: Assessing and addressing anthropogenic noise	Action 2: Assessing 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 Section 6.7.4 Not inconsistent assessment: The assessment of acoustic emissions has considered the potential impacts to pygmy blue whales.	EPO 4, 5
	Action Area A.4: Minimising 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 Section 6.8.5 Not inconsistent assessment: The assessment of vessel collision with marine fauna has considered the potential risks to pygmy blue whales. Vessel collisions with pygmy blue whales are highly unlikely to occur, given the very slow vessel speeds and presence of crew trained in marine fauna observations.	EPO 14
	Action Area B.3: Describing spatial and temporal distribution and defining 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 B3 via its support of targeted research initiatives (e.g. satellite tracking of pygmy blue whale migratory movements[66]).	N/A
Assessment Summary The Blue Whale Conservation Management Plan has been considered during the assessment of impacts and risks, and the Petroleum Activity is not considered to be inconsistent with the relevant actions of this plan.				

[66] *Double, M.C., Andrews-Goff, V., Jenner, K.C.S., Jenner, M.-N., Laverick, S.M., Branch, T.A., 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, e93578*

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Table 6-26: Assessment against relevant actions of the Grey Nurse Shark Recovery Plan

Part 13 Statutory Instrument	Relevant Action Areas/Objectives	Relevant Actions	Evaluation	EPO, Controls and PS
Grey Nurse Shark Recovery Plan	Improve understanding of the threat of pollution and disease to the grey nurse shark	Review and assess the potential threat of introduced species, pathogens and pollutants	Refer Section 6.8.9 Not inconsistent assessment: The assessment of accidental release of solid hazardous and non-hazardous wastes has considered the potential risks to grey nurse sharks.	EPO 18
			Refer Sections 6.8.2 6.8.3, 6.8.4, Appendix G. Not inconsistent assessment: The species was identified to potentially occur within the EMBA and therefore the assessment of accidental release of hydrocarbons has considered the potential risks to grey nurse sharks.	Refer Sections 6.8.2 6.8.3, 6.8.4 Detailed oil spill preparedness and response performance outcomes, standards and measurement criteria for the Petroleum Activity are present in Appendix G.
Assessment Summary The Grey Nurse Shark Recovery Plan has been considered during the assessment of impacts and risks, and the Petroleum Activity is not considered to be inconsistent with the relevant actions of this plan.				

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Table 6-27: Assessment against relevant actions of Sawfish and River Shark Recovery Plan

Part 13 Statutory Instrument	Relevant Action Areas/Objectives	Relevant Actions	Evaluation	EPO, Controls and PS
Sawfish and River Shark Recovery Plan	Reduce and, where possible, eliminate adverse impacts of habitat degradation and modification on sawfish and river shark species	Identify risks to important sawfish and river shark habitat and measures needed to reduce those risks	Refer Sections 6.8.2 6.8.3, 6.8.4, Appendix G. Not inconsistent assessment: The species was identified to potentially occur within the EMBA and therefore the assessment of accidental release of hydrocarbons has considered the potential risks to sawfish and river shark.	Refer Sections 6.8.2 6.8.3, 6.8.4 Detailed oil spill preparedness and response performance outcomes, standards and measurement criteria for the Petroleum Activity are present in Appendix G.
	Reduce and, where possible, eliminate any adverse impacts of marine debris on sawfish and river shark species	Assess the impacts of marine debris including ghost nets, fishing gear and plastics on sawfish and river shark species	Refer Section 6.8.9. Not inconsistent assessment: The assessment of accidental release of solid hazardous and non-hazardous wastes has considered the potential risks to sawfish and river sharks.	EPO 18
Assessment Summary The Sawfish and River Shark Recovery Plan has been considered during the assessment of impacts and risks, and the Petroleum Activity is not considered to be inconsistent with the relevant actions of this plan.				

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Table 6-28: Assessment against relevant Marine Debris Threat Abatement Plan

Part 13 Statutory Instrument	Relevant Action Areas/Objectives	Relevant Actions	Evaluation	EPO, Controls and PS
Marine Debris TAP	Objective 1: Contribute to long-term prevention of marine debris.	Action 1.02: Limit the amount of single use plastic material lost to the environment in Australia.	Refer Section 6.8.9. Not inconsistent assessment: The assessment of accidental release of solid hazardous and non-hazardous wastes has considered the potential risks to vertebrate wildlife.	EPO 18
Assessment Summary The Marine Debris TAP has been considered during the assessment of impacts and risks, and the Petroleum Activity is not considered to be inconsistent with the relevant actions of this plan.				

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7. IMPLEMENTATION STRATEGY

7.1 Overview

Regulation 22 of the Environment Regulations requires an EP to contain an implementation strategy for the activity. The implementation strategy for the Petroleum Activity confirms fit-for-purpose systems, practices and procedures are in place to direct, review and manage the activities so that environmental risks and impacts are continually being reduced to ALARP and are acceptable, and that EPOs and EPS outlined in this EP are achieved.

Woodside, as Operator, is responsible for ensuring that 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 (Section 6).

Processes are implemented to verify controls to manage environmental impacts and risks to:

- a level that is ALARP and acceptable
- meet EPOs
- comply with EPSs defined in this EP.

Document names and reference numbers may change during the statutory duration of this EP and will be managed through a Change Register and update process.

7.2.1 Assessment of project chemicals

As part of Woodside's chemical approval process, chemicals required by the Petroleum Activity are selected and approved in accordance with the Woodside Environment Chemical Selection and Assessment Guideline. This procedure is used to demonstrate the potential impacts of the chemicals selected are acceptable and ALARP, in line with Woodside's Environmental Management Standard. The procedure requires selecting chemicals that have the lowest practicable environmental impacts and risks, subject to technical constraints.

Woodside's Environment Chemical Selection and Assessment Guideline includes the requirements set out by the Australian Government under the Industrial Chemicals Environmental Standard. Chemicals proposed for this activity will be assessed against those listed in the Industrial Chemicals Environmental Standard Register under one of 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.

No chemical discharges are planned as part of this Petroleum Activity. AFFF may be discharged where project vessel helideck testing requirements (typically annual) fall within the on-hire period, or in an emergency.

The chemical assessment process follows the principles outlined in the OCNS, which manages chemical use and discharge in the United Kingdom (UK) and the Netherlands. It applies the requirements of the Convention for the Protection of the Marine Environment of the North-East Atlantic (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.

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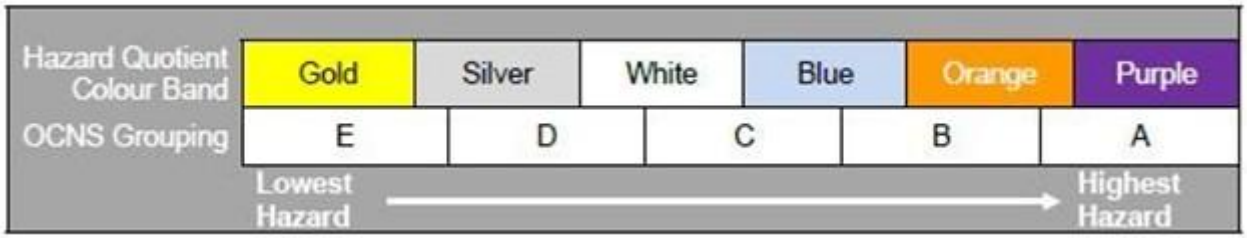


Figure 7-1: Offshore Chemical Notification Scheme ranking

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:
  - chemicals with no OCNS ranking
  - chemicals with an HQ band of White, Blue, Orange or Purple or an OCNS ranking of A, B or C
  - 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 DMPE Environmental Risk Assessment of Chemicals used in WA Petroleum Activities Guideline.

7.2.1.1 Ecotoxicity

Chemical ecotoxicity is assessed using the criteria used by CEFAS to group chemicals based on ecotoxicity results (Table 7-1). 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 to 10	>10 to 100	>100 to 1,000	>1,000
Results for sediment toxicity data (ppm)	<10	>10 to 100	>100 to 1,000	>1,000 to 10,000	>10,000

Note: Aquatic toxicity refers to the Skeletonema costatum EC50, Acartia tonsa LC50 and Scophthalmus maximus (juvenile turbot) LC50 toxicity tests; sediment toxicity refers to Corophium volutator LC50 test.

7.2.1.2 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 three 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 >20% and <60% to an OSPAR HOCNF-accepted ready biodegradation protocol or result of >20% by OSPAR-accepted inherent biodegradation study

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- not biodegradable: results from OSPAR HOCNF-accepted ready biodegradation protocol or inherent biodegradation protocol of <20%, or half-life values derived from aquatic simulation test indicate persistence.

Chemicals with >60% biodegradation in 28 days to an OSPAR HOCNF-accepted ready biodegradation protocol are considered acceptable in terms of biodegradation:

- 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.

7.2.1.3 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.

7.2.1.4 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.

7.2.1.5 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 introducing IMS because of the Petroleum Activity, all applicable project 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.

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The IMS risk assessment process does not apply to:

- vessels or immersible equipment that do not plan to enter the IMS Management Area[67]
- 'new build' vessels or immersible equipment launched less than 14 days before mobilisation
- locally sourced vessels or immersible equipment from within the Western Locally Sourced Zone[68]. Vessels, or immersible equipment are defined as locally sourced when the same supply facilities/port have been used since their last IMS inspection, full hull clean in dry dock, or application of antifouling coating (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 project 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 planned to undertake activities within an IMS Management Area 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 it conducts, where a secondary trained environment adviser verifies the assessment to minimise the risk of misapplication and errors within the process.

[67] The IMS Management Area 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 IMS Management Area also includes: (i) all waters that 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 IMS Management Area 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.

[68] 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.

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Table 7-2: Key factors considered as a part of the risk assessment process for project vessels

Factors	Details
Vessel type	The risk of IMS infection depends on the type of vessel undertaking the activity. A higher risk rating is applied for more complex, slow-moving vessels (e.g. dredges) compared 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, risk ratings depend on whether out-of-water or in-water 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 the contract begins), 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, therefore becoming air dried over an extended period. 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 3 knots), and 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	Differing risk ratings are assigned in relation to 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 exceeding seven days	A risk factor is calculated based on the number of seven-day periods the vessel has been stationary or operated at low speed (<3 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 and slow speed periods. The highest risk rating is applied if these periods occurred within ports or coastal waters of the same climatic region.
Type of activity – contact with seafloor	The potential for introducing IMS varies based on the planned vessel activity. Those activities that touch 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.

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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). Highest risk rating is applied to similar climatic regions. Activities occurring in nearshore areas (<50 m deep or within 12 NM of land) are given the highest risk rating.
Duration of deployment	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, but 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 and dissembled between project sites, while a higher risk rating is applied where no routine cleaning occurs.

After the risk assessment process is implemented, project 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 so the precautionary approach is adopted, and additional management options may be required
- high – high risk of introducing IMS, which means additional management options are required before this vessel mobilises to the Operational Area.

After allocating a ‘low’ risk rating for a project vessel or immersible equipment, the information provided by the vessel operator for the purposes of risk assessment must be confirmed before mobilisation. For project 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 risk is ‘high’ and driven by the age of the AFC on the project vessel and its time spent in similar climatic region ports
- limiting the duration the vessel spends within the IMS Management Area to a maximum of 48 hours (cumulative entries); applicable for ‘uncertain’ risk project 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 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 that must be approved by the relevant Business Vice President and HSE Vice President.

Before they enter the Operational Area, project vessels and immersible equipment are required to be a low risk of introducing IMS.

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7.2.3 Offshore Seabird Management Plan

Project vessels will implement Woodside's Offshore Seabird Management Plan, which aligns with recommendations in the National Light Pollution Guidelines for Wildlife (DCCEEW 2023). When implemented, the SBMP addresses seabird interaction reporting and management for offshore and inshore activities within the NWMR, specifically where the activity is located within a nocturnal seabird species BIA.

The SBMP is used 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 guidance to manage seabird interactions and related potential impacts identified as caused by Woodside's activities.

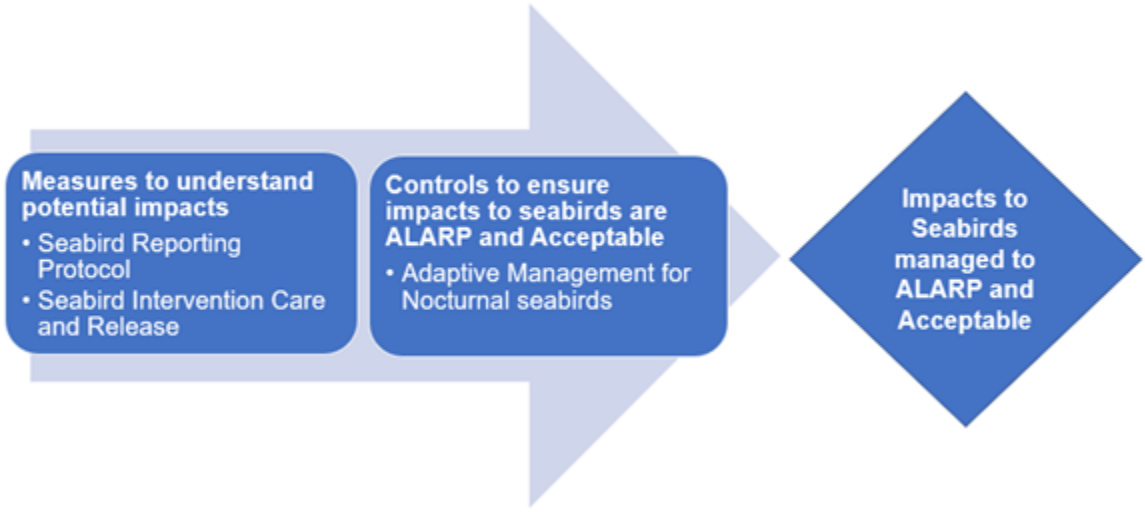


Figure 7-2: Schematic for Offshore Seabird Management Plan to manage seabird impacts to acceptable and as low as reasonably practicable levels

Woodside has established the SBMP adaptive management framework to manage the uncertainty of potential impacts of artificial night at light on nocturnal seabirds. It is applied when a project is within a nocturnal seabird BIA and more than 20 km from a known rookery. Where interactions with nocturnal seabirds are identified, adaptive management controls under the 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.

The SBMP will be available aboard the project vessels during the Petroleum Activity. Vessel crew will be made aware of the SBMP through the environment induction. This induction will include the requirement to report seabird sightings to the offshore HSE advisers on the seismic survey vessel and the onshore Woodside Environment Adviser. The SBMP will be implemented by frontline personnel with support from Woodside activity-focused Environmental Advisers, the Science Team and a dedicated seabird subject matter expert.

7.2.4 Unexpected finds procedure

In the event of the discovery of what appears to be Underwater Cultural Heritage (defined as 'any trace of human existence that has a cultural, historical or archaeological character and is located under water'); the following Unexpected Finds Procedure will apply:

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- All activities with the potential to impact the suspected Underwater Cultural Heritage must cease immediately. Retain all records of the potential Underwater Cultural Heritage, including any imagery, description and location.
- Person who discovers the heritage object must inform the Activity Supervisor.
- Activity Supervisor must notify Woodside's Principal Heritage Adviser.
- Woodside will specify an appropriate buffer around the potential Underwater Cultural Heritage, taking into consideration the nature and scale of the potential Underwater Cultural Heritage and the activities to be managed.
- No seabed disturbance may occur within the buffer area around the potential Underwater Cultural Heritage 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 Underwater Cultural Heritage.
- If the potential Underwater Cultural Heritage appears to be Aboriginal underwater cultural heritage, 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 Underwater Cultural Heritage 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* (UCH Act), Woodside's Principal Heritage Advisor must notify the Minister responsible for the UCH Act, the Department of Climate Change, Energy, Environment and Water (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:
- 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 that Traditional Custodians and a maritime archaeologist are present during any handling of the remains
- the Office of the Federal Environment Minister in accordance with Section 20 of the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984*.
- Work must not recommence 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 Underwater Cultural Heritage is confirmed to not be Underwater Cultural Heritage.

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 (refer to Appendix A) in their areas of responsibility and must be suitably trained and competent in their respective roles.

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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 relevant supervisor with respect to environmental protection. Cease operations which 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 Project Manager	Monitor and manage the activity so it is undertaken as per the relevant standards and commitments in this EP. Notify the Woodside Environment Adviser of any scope changes in a timely manner. Liaise with regulatory authorities as required. Review this EP as necessary and manage change requests. Ensure all project and support vessel crew members complete an HSE induction. Verify that contractors meet environmental related contractual obligations. Confirm environmental incident reporting meets regulatory requirements (as outlined in this EP) and Woodside's Health, Safety and Environment 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 drilling operations are undertaken as per this EP and approval conditions. Provide sufficient resources to implement the drilling-related management measures (i.e. controls, EPOs, PSs and MC) in this EP. Ensure MODU and project vessel personnel are given an Environmental Induction as per Section 7.4 of this EP at the start of the drilling programs. Confirms controls and performance standards in this EP are actioned, as required, before drilling commences. Ensures the MODU start-up meets the requirements of the Drilling and Managing Rig Operations Process.

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Title (role)	Environmental Responsibilities
Subsea Delivery Lead	Ensure the subsea installation activities are undertaken as per this EP and approval conditions. Provide sufficient resources to implement the subsea installation-related management measures (i.e. controls, EPOs, PSs and MC) in this EP. Ensure installation vessel personnel are given an Environmental Induction as per Section 7.4 this EP at the start of the installation activities. Confirm controls and performance standards in this EP are actioned, as required, before installation activities commence. Ensure relevant vessels meet the requirements of Woodside's Marine Operations Operating Standard. Manage change requests for the activity and notify the Woodside Environment Adviser of any scope changes in a timely manner. Ensure all chemicals proposed to be discharged are assessed and approved as per the requirements of the EP.
Woodside Drilling Superintendent	Ensure the drilling program meets the requirements detailed in this EP. Ensure changes to the drilling program are communicated to the Woodside Environmental Adviser. Ensure the Woodside's Well Site Manager is provided with the resources required to ensure the management measures (i.e. controls, EPOs, EPs and MC) in this EP are undertaken. Confirm environmental incident reporting meets regulatory requirements (as outlined in this EP) and Woodside's Health, Safety and Environment Reporting and Investigation Procedure. Monitor and close out corrective actions identified during environmental monitoring or audits.
Woodside Drilling Engineers	Ensure changes to the drilling program are communicated to the Woodside Environmental Adviser. Ensure all drill and completions fluid chemical components and other fluids that may be used downhole have been reviewed by the Global Wells and Seismic Environmental Adviser.
Woodside Environmental Adviser	Verify relevant Environmental Approvals for the activities exist prior to commencing activity. Track compliance with performance outcomes and performance standards as per the requirements of this EP. Prepare environmental component of relevant Induction Package. Assist with the review, investigation and reporting of environmental incidents. Ensure environmental monitoring and inspections/audits are undertaken as per the requirements of this EP. Liaise with relevant regulatory authorities as required. Assist in preparation of external regulatory reports required, in line with environmental approval requirements and Woodside incident reporting procedures. Monitor and close out corrective actions (Campaign Action Register (CAR)) identified during environmental monitoring or audits. Provide advice to relevant Woodside personnel and contractors to assist them to understand their environment responsibilities. Liaise with primary installation contractors to ensure communication and understanding of environment requirements as outlined in this EP and in line with Woodside's Compass values and management systems.

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Title (role)	Environmental Responsibilities
Woodside Corporate Affairs Adviser	Prepare and implement the Consultation Plan for the Petroleum Activity. Report on consultation. Ongoing liaison and notification as required as per Section 7.10
Woodside Marine Assurance Superintendent	Conducts relevant audit and inspection to confirm vessels comply with relevant Marine Orders and Woodside Marine Charters Instructions requirements to meet safety, navigation and emergency response requirements.
Woodside CIMT Duty Manager	On receiving notification of an incident, the Woodside CIMT Duty Manager shall: • establish and take control of the IMT and establish an appropriate command structure for the incident • assess 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 (IAP) including setting objectives for action • approve, implement and Manage the IAP • communicate within and beyond the incident management structure • manage and review safety of responders • address the broader public safety considerations • conclude and review activities.
MODU-based Personnel	
MODU Offshore Installation Manager (OIM)	Ensure the MODU's management system and procedures are implemented. Ensure personnel starting work on the MODU receive an environmental induction that meets the requirements specified in this EP. Ensure personnel are competent to undertake the work they have been assigned. Verify that emergency drills are conducted as per the MODU's schedule. Ensure the MODU's Emergency Response Team has been given sufficient training to implement the MODU'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. Close out of actions is communicated to the Well Site Manager.
Woodside Offshore HSE Adviser	Ensure periodic environmental inspections/reviews are completed. Corrective actions from inspections are developed, tracked and closed out in a timely manner.

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Title (role)	Environmental Responsibilities
	Support the Well Site Manager to ensure the controls detailed in this EP relevant to offshore activities are implemented on the MODU and help collect and record evidence of implementation (other controls are implemented, and evidence collected onshore). Support the Well Site Manager to ensure the Environmental Performance Outcomes are met and the performance standards detailed in this EP are implemented on the MODU. Confirm actions in the Well Delivery HSE Improvement Plan are undertaken. Support the Well Site Manager 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.
Drilling Logistics Coordinator	Waste is managed on the MODU and sent to shore as per the Global Wells and Seismic Waste Management Plan.
Vessel-based Personnel	
Installation Vessel Master Activity Support Vessel Master	Ensure the vessel management system and procedures are implemented. Ensure personnel commencing work on the vessel receive an environmental induction that meets the relevant requirements specified in this EP. Ensure personnel are competent to undertake the work they have been assigned. Verify SOPEP drills are conducted as per the vessel's schedule. Ensure the vessel Emergency Response Team (ERT) has been given sufficient training to implement the SOPEP. Ensure any environmental incidents or breaches of relevant Environmental Performance Outcomes or performance standards detailed in this EP are reported immediately to the Woodside Representative. Ensure corrective actions for incidents or breaches are developed, communicated to the Woodside Representative, and tracked to close out in a timely manner. Close out of actions is communicated to the Woodside Representative.
Vessel Logistics Coordinators	Ensure waste is managed on the relevant support vessels or installation vessel and sent to shore as per the relevant Waste Management Plan.
Vessel HSE Advisers	Refer to Woodside HSE Offshore Adviser responsibilities detailed above under MODU-based personnel.

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Title (role)	Environmental Responsibilities
Contractor Project Manager	Confirm that activities are undertaken in accordance with this EP, as detailed in the Woodside approved Contactor Environmental Management Plan Ensure personnel commencing work on the project receive a relevant environmental induction that meets the requirements specified in this EP. Ensure personnel are competent to undertake the work they have been assigned. Ensure any environmental incidents or breaches of objectives, standards or criteria outlined in this EP, are reported immediately to the Woodside Responsible Engineer or Vessel Master.
Woodside Site Representative/ Resident Engineer	Ensure activities are undertaken as detailed in this EP. Ensure the management measures made in this EP are implemented on the vessel. Ensure environmental incidents or breaches of objectives, standards or criteria outlined in this EP, are reported as per the Woodside Corporate Event Notification Matrix. Verify HSE improvement actions identified during the project are implemented where practicable Ensure periodic environmental inspections are completed.
Woodside Well Site Manager	Ensure the drilling program is undertaken 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 MODU (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. Corrective actions for incidents and breaches are developed, tracked and closed out in a timely manner. Ensure actions in the Well Delivery HSE Improvement Plan are undertaken.

It is the responsibility of all Woodside employees and contractors to implement the Woodside's Corporate Environment and Biodiversity Policy (Appendix A) in their areas of responsibility and that the personnel are suitably trained and competent in their respective roles.

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7.4 Training and competency

7.4.1 Overview

Woodside as part of its contracting process assesses a proposed contractor's environmental management systems to determine the level of compliance with the standard AS/NZ ISO 14001. This assessment is performed for the Petroleum Activity as part of the pre-mobilisation process. The assessment determines whether there is a clearly defined organisational structure that sets out the roles and responsibilities for key positions. The assessment also assesses whether there is an up-to-date training matrix that defines any corporate and site/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 EMS.

7.4.2 Inductions

Inductions are provided to all relevant personnel (e.g. contractors and Company representatives) before mobilising to or on arrival at the activity location. The induction covers the HSE requirements and environmental information specific to the activity location. Attendance records will be maintained.

The induction may include, but is not limited to:

- description of the activity
- ecological and socio-economic values of the activity location
- regulations relevant to the activity
- Woodside's Environmental Management System – Health Safety and Environment 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 standards using measurement criteria
- incident reporting
- Unexpected Finds Procedure and reporting requirements (Section 7.2.1).

7.4.3 Petroleum Activity-specific environmental awareness

Before commencing the subsea campaigns associated with the Petroleum Activity, a pre-activity meeting will be held with all relevant personnel. The pre-activity meeting provides an opportunity to reiterate specific environmental sensitivities or commitments associated with the 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 presented.

7.5 Monitoring, auditing, and managing non-conformance and review

7.5.1 Monitoring

Regulation 22(5) states that the implementation strategy is to provide for the monitoring, audit, management of non-conformance and review of operator's environmental performance and the implementation strategy itself.

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 MCs, with a view to continuous improvement of environmental performance. The effectiveness of the implementation strategy is also reviewed periodically as part of the monitoring and assurance process.

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A key tool that is used throughout the implementation of the EP is Woodside's environmental compliance and action register (ECAR). This is an internal tool that is developed at EP acceptance and is maintained until the EP is closed. The ECAR contains all the commitments, controls, performance standards and measurement criteria 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 ECAR, the specific records that will be provided by the vessel contractor during the offshore campaign. This provides Woodside with the opportunity to confirm the records provided during the activity are sufficient for demonstrating compliance against the EP. It also serves as a central depository for compliance information relevant to each activity under the Petroleum Activity.

7.5.1.1 Offshore Seabird Management Plan

Vessels will implement Woodside's Frontline Offshore Seabird Management Plan (SBMP), which aligns with recommendations in the National Light Pollution Guidelines for Wildlife (Commonwealth of Australia, 2023). When implemented, the SBMP addresses seabird interaction reporting and management for offshore/inshore activities within the Operational Area, specifically where the activity is located within a nocturnal seabird species BIA.

The purpose of the 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 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 7-3.

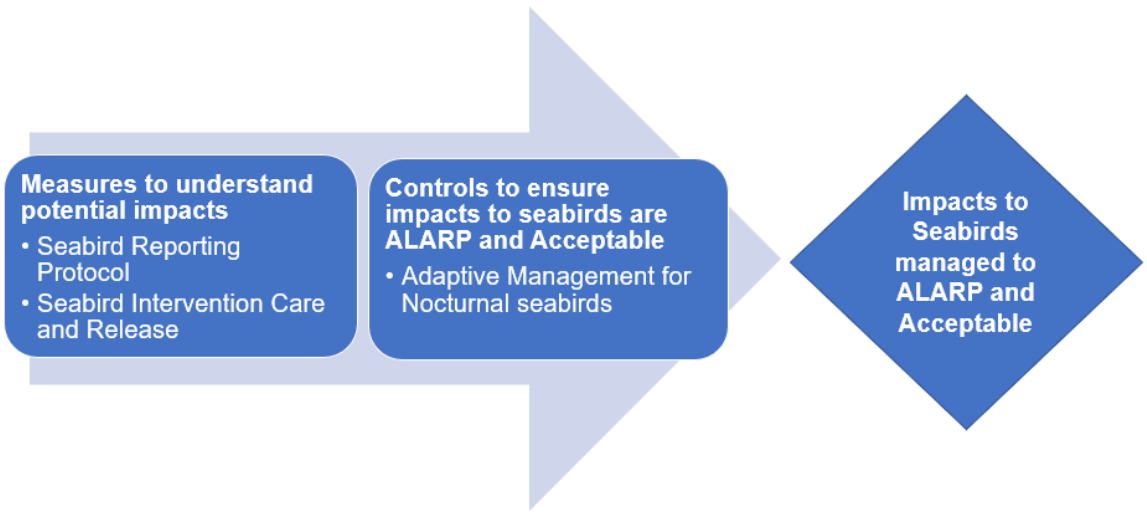


Figure 7-3: Schematic for SBMP to manage seabird impacts to ALARP and acceptable

The 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 Petroleum Activity is within a nocturnal seabird BIA and greater than 20 km from a known rookery. Where interactions[69] with nocturnal seabirds are identified, adaptive management controls under the 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 consideration of controls and mitigation actions, for example:

[69] *Interaction is defined as a death, injury, entanglement or impact to seabird; or a grounding of a nocturnal seabird.*

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- Extinguish outdoor/deck lights not necessary for safety and navigation at night,
- Use of block-out-blinds on portholes and windows not necessary for safety and/or navigation.

7.5.1.2 Cetacean Adaptive Management

Acoustic emissions were identified as a potential impact to cetaceans and therefore adaptive management will be implemented to achieve the EPO 5 and manage impacts to an ALARP and acceptable level. The objective of the primary installation vessel and MODU adaptive management is to achieve EPO-3b, specifically the *Conservation Management Plan for the Blue Whale, Management Action A.2.3*: *Anthropogenic noise in BIAs will be managed such that any blue whale continues to utilise the area without injury, and is not displaced from a foraging area.* A risk-based approach to management actions will be applied so greatest risk reduction is implemented during migration season/BIA and then controls cascade commensurate with the level of risk (i.e. peak migration, distribution area etc.).

Evidence demonstrates that PBW on their north-bound migration are generally found within the pygmy blue whale migration BIA while there is more uncertainty on the southbound migration. Noting that modelling has indicated the effect zones (120 db) did not extend into either the pygmy blue whale migration biologically important area (BIA) or the humpback whale migration BIA. The following adaptive management will be implemented during daylight hours:

- Peak south-bound migration, *activity occurs within 50 km of the migration BIA*: trained crew as marine fauna observers monitor for pygmy blue whales for 30 minutes prior to resupply vessel moving alongside MODU or PIV, proceed with move only when no pygmy blue whales or large unidentified whales have been sighted, to the limits of visibility, over the 30-minute monitoring period.

7.5.2 Auditing

Environmental performance auditing will be performed to:

- identify potential new, or changes to existing environmental impacts and risk, and methods for reducing those to ALARP
- confirm that 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 Performance Outcomes, Controls and Standards detailed in this EP.
- Internal auditing will be performed to cover each key project activity as summarised below.

7.5.2.1 MODU activities

Internal auditing is performed on a MODU specific schedule, rather than a schedule to align with the Petroleum Activity. This enables continuous review and improvement of environmental performance over the term of the vessel's contract. The following internal audits, inspections and reviews will be performed to review the environmental performance of the activities:

- Survey environment rig equipment for a newly contracted MODU (if not previously contracted to Woodside within the last 2 years). An environment rig equipment survey scope typically includes functional and technical requirements for mud and solids control systems, environmental discharge control (including drainage management), and loss of containment management.
  - Complete a minimum of monthly environmental inspection (conducted by offshore Woodside personnel or a delegate) which may include verifying:
  - bunkering/transfers between support vessels and MODU /project vessels
  - environment containment including chemical storage, spill response equipment and housekeeping
  - general MODU environment risks including waste management, drilling fluids oil/water separation, and inspection of subsea and moonpool areas.
- Perform environment audits during the Petroleum Activity, while the MODU is on location (by a Woodside Environment Adviser or delegate), which may include, but is not limited to:

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- 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 close out of items from previous audits
- inspection of selected risk areas/activities (which may include shaker house, drill floor and mud management while commencing riser drilling or reservoir interception) during routine visits throughout the drilling campaign, determined by risk, previous incidents or operation specification requirements.
- audit findings relevant to continuous improvement of environmental performance will be tracked through the MODU or vessel compliance action register, a contractor register between the MODU operator or vessel contractor and Woodside.

7.5.2.2 Subsea scope activities

The following internal auditing will be performed for the subsea scope activities:

- Pre-mobilisation inspection/audit report will be conducted by a relevant person (before commencing). The scope of the audits are risk-based and specific to the relevant activity, but will generally focus on aspects relating to ensuring appropriate understanding of environmental commitments and the operational readiness of the activity scope, including appropriate environmental controls in place. The primary installation vessel will be audited by Woodside. Support or transport vessels will be assessed on a risk-based approach, but will be audited via the primary subsea installation contractor's process.
- At least one operational compliance audit relevant to applicable EP commitments will be conducted by a Woodside Environment Adviser for the subsea campaign. The audit may be conducted offshore or office-based, subject to the duration of the activity and logistics of performing the audit offshore for short duration scopes.
- Contractor-specific HSE audits will also be conducted of the associated support vessels. The audits will consider the implementation of HSE management, risk management, as well as pre-mobilisation and offshore readiness.
- Vessel-based HSE inspections will be conducted fortnightly by vessel HSE personnel. Each inspection will focus on a specific risk area relevant to the project activity and a formal report will be issued (e.g. bunkering controls, chemical and discharge management, cetacean reporting).

The internal audits and reviews, combined with the ongoing monitoring described in this EP, and collection of evidence for MC are used to assess EPOs and standards.

As part of Woodside's Environmental Management System (EMS) and/or assurances processes, activities may also be periodically selected for environmental audits as per Woodside's internal auditing process. Audit, inspection and review findings relevant to continuous improvement of environmental performance are tracked through the ECAR.

Non-conformances identified will be reported and/or tracked in accordance with this EP.

7.5.2.3 Marine assurance

Woodside's marine assurance is managed by the Marine Assurance Team of the Logistics Function in accordance with Woodside's Marine Offshore Vessel Assurance Procedure. The Woodside process is based on industry standards and consideration of 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 vessels (other than tankers and floating production storage and offloading vessels) hired for Woodside operations, including for short-term hires (i.e. <3 months in duration). It defines applicable marine offshore assurance activities, ensuring all 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 (OVMSA)

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- dynamic positioning (DP) system verification
- vessel inspections
- offshore vessel inspection database (OVID) or condition and suitability assessment
- project support for tender review, evaluation and pre/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 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, and are not limited to:

- Woodside Marine Vessel Inspection
- Oil Companies International Marine Forum OVID Inspection
- International Marine Contractors Association Common Marine Inspection Document Inspection
- Marine Warranty Survey.

Upon completion of the marine assurance process, to confirm that 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 and/or OVMSA 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.

7.5.2.4 Vessel risk assessment

Woodside conducts a risk assessment of vessels where either an OVMSA Verification Review and/or 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(s). The Marine Vessel Risk Assessment will be conducted by the Marine Assurance Specialist, where the vessel meets the short-term hire prerequisites.

The risk assessment is a semi-quantitative method of determining what further assurance process activity, if any, is required to assure a vessel for a particular task or role. The process compares the level of management control a 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:
  - Company audit score (i.e. management system)
  - vessel HSE incidents
  - vessel Port State Control deficiencies
  - instances of Port State Control vessel detainment
  - years since previous satisfactory vessel inspection
  - age of vessel
  - contractors' prior experience operating for Woodside.
- Activity risk factors:
  - people health and safety risks (a function of the nature of the work and the area of operation)
  - environmental risks (a function of environmental sensitivity, activity type and magnitude of potential environment damage (e.g. largest credible oil spill scenario))

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- value risk (likely time and cost consequence to Woodside if the vessel becomes unusable)
- reputation risk
- exposure (i.e. exposure to risk based on duration of project)
- 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/or vessel inspection may be required 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 standards 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 Investigations Work Instruction 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 for classification of 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 relevant Environment teams, regular reviews of the effectiveness of the EP Implementation Strategy are undertaken at a frequency commensurate with activity duration and risk. This review may consider:

- Well Delivery key performance indicators (KPIs)
- Effectiveness of tools and systems to monitor environmental performance
- Lessons learned from implementation during previous campaigns or activities
- Reviews of oil spill arrangements and testing performed in accordance with this EP.

Within each Asset, 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 required to address key or recurring environmental performance matters.

7.5.4.2 Learning and knowledge sharing

Learning and knowledge sharing occurs via several different 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 MODU operators
- formal and informal industry benchmarking
- cross-asset learnings
- engineering and technical authorities discipline communications and sharing.

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7.5.4.3 Review of impacts, risks and controls across the life of the EP

In the unlikely case that activities described in this EP do not occur continuously or sequentially, before recommencing activities after a cessation 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 commencing activity and will identify or review controls to ensure impacts and risks remain/are reduced to ALARP and acceptable levels. Information learned from previous activities conducted under this EP will be considered. Controls which have previously been excluded on the basis of proportionality will be reconsidered. Any required changes will be managed by the MOC process outlined below.

7.6 Management of knowledge

Review of knowledge relevant to the existing environment is undertaken 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 but not limited to species and habitats) as well as EPBC Act Matters of National Environmental Significance (Part 3) and Part 13 statutory instruments.
- Socio-economic environment and stakeholder information – update checks conducted via desktop reviews: scientific literature, government publications and Woodside consultation; and,
- Environmental legislation – monitoring of emerging regulatory changes and the subsequent management of regulatory change (as outlined in the 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 Consolidation 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 on cultural values and heritage will be assessed using the EP Management of Change Process.

Under the Oil Spill Operational and Scientific Monitoring Program preparedness, 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 Environment 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 EP management of change

Management of changes are managed in accordance with Woodside's Environmental Approval Requirements Australia Commonwealth Guideline. Management of changes relevant to this EP, concerning the scope of the activity description 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

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requirements for AMPs; and potential new advice from external stakeholders, will be managed in accordance with Regulation 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 Regulation 39 of the Environment Regulations.

Minor changes where a review of the activity and the environmental risks and impacts of the activity do not trigger a requirement for a formal revision under Regulation 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, etc.), 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 OPEP management of change

Relevant documents from the OPEP will be reviewed in the following circumstances:

- 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 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 & 39 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, project records and incorporated during internal updates of the OPEP or the five-yearly revision.

7.9 Record keeping

Compliance records (outlined in MC in Section 6) will be maintained.

Compliance records referenced in the measurement criteria contained within this EP will be maintained. Many of the measurement criteria listed in this EP refers to 'records', in this context Woodside considers 'records' 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/or provided to internal and external auditors (i.e. NOPSEMA) on request.

Record keeping will be in accordance with Regulation 22(6) that 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(9) 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 undertake the engagements with relevant interested persons throughout the life of the EP. Recent new information identified during ongoing consultation will be assessed as appropriate using the EP Management of Knowledge system and Management of Change Process.

Woodside hosts community forums at which members are provided updates on Woodside activities on a regular basis (for example community reference group meetings). Representatives who are present at those meetings are from community and industry and include Woodside, State Government (for instance relevant

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Regional Development Commissions), Local Government, Indigenous Groups, Industry representative bodies, Community and industry organisations.

Relevant persons and those who are simply interested in the activities, can otherwise remain up-to-date on this 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 following 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 and Management of Change Process 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, 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.

Table 7-5: Ongoing consultation engagements

Report/information	Recipient	Purpose	Frequency	Content
Notification (email)	AHO	As requested by AMSA and AHO during consultation.	No less than 4 weeks prior to commencement	PS 1.5 (Section 6.7.1). Date of activity start and end.
Updates (email)			As required.	Changes to planned activities.
Notification (email)	AMSA	As requested by AMSA during consultation.	At least 24-48 hours before operations commence.	PS 1.7 (Section 6.7.1). Date of activity start.
Updates (email)			Provide updates to the AHO and ARC should there be changes to the activity.	Changes to planned activities.
Notification (email)	DoD	Standard practice (overlap with Defence Area).	No less than five weeks before the scheduled activity commencement date.	PS 1.10 (Section 6.7.1). Date of activity start.
Notification (email)	DMPE	Good practice.	At least 10 days prior to commencement and following the completion of activities.	Activity start and end date.
Notification (email)	NOPSEMA	Standard practice per regulation	At least 10 days prior to commencement and	As per Regulation 54

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Report/information	Recipient	Purpose	Frequency	Content
			following the completion of activities	
Notification (email)	DNP	As requested during consultation.	Notification on EP acceptance and 10 days prior to activities occurring within the Montebello Multiple Use Zone (excluding transiting) and following completion of activities.	PS 1.11 (Section 6.7.1). EP acceptance date Date of activity start and end in the Montebello Marine Park.
Notification (email)	DAFF – Fisheries DPIRD CFA	Standard practice	At least 10 days prior to commencement and following completion of activities.	PS 1.6 (Section 6.7.1). Date of activity start and end.
Notification (email)	AFMA WAFIC Recfishwest	As requested during consultation and/or organisation.	At least 10 days prior to commencement and following completion of activities.	PS 1.6 (Section 6.7.1) Date of activity start and end.
Notification (email)	Australasian Underwater Cultural Heritage Database Any other stakeholders as required in the Unexpected Finds Procedure (Section 7.2.1)	Report any unexpected finds of potential Underwater Cultural Heritage	If triggered by unexpected Finds Procedure	Details of the potential Underwater Cultural Heritage 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) (UCH Act),
Notification (email)	All relevant persons for the proposed activity.	Notification of significant change.	As appropriate.	Notification of significant change. Any relevant new information will be assessed using the EP Knowledge Management System (refer to Section 7.6) and Management of Change Process (refer to Section 7.8).
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 be assessed using the EP Management of Knowledge (refer to Section 7.6) and Management of Change Process (refer to 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.

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7.11.1 Routine reporting (internal)

7.11.1.1 Regular health, safety and environment meetings

The project support vessel will hold regular HSE meetings which 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 attendances sheets are retained by the project vessel contractor. Daily meetings held onboard 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 KPI targets, which include environmental metrics
- outstanding actions as a result of audits or incident investigations
- technical high and low lights.

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 the activity commences and will notify NOPSEMA within 10 days of completing the activity.

7.11.2.2 Environmental performance review and reporting

In accordance with applicable environmental legislation for the activity, Woodside is required to report information about environmental performance to the appropriate regulator. Regulatory reporting requirements are summarised in Table 7-6.

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Table 7-6: Routine external reporting requirements

Report	Recipient	Frequency	Content
Monthly Recordable Incident Reports (Appendix E)	NOPSEMA	Monthly, by the 15th of each month	Details of recordable incidents that have occurred during the Petroleum Activity for previous month (if applicable)
Environmental Performance Report	NOPSEMA	Annually, with the first report submitted within 12 months of the commencement of the Petroleum Activity covered by this EP (as per the requirements of Regulation 22(7))	• Compliance with EPOs, controls and EPSs outlined in this EP, in accordance with the Environment Regulations • Decommissioning progress update

7.11.2.3 End of the Environmental Plan

The EP will end when Woodside notifies NOPSEMA that the Petroleum Activity has ended and all of 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 reporting requirements as detailed in the Woodside HSE Event Reporting and Investigation Work Instruction and this section of this 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)
- an incident that has the potential to cause environmental damage with a Consequence Level of Moderate (C) or above (as defined under Woodside’s Risk Table).

The environmental risk assessment for the Petroleum Activity identifies those risks with a potential consequence level of C+ for environment. The incidents that have the potential to cause this level of impact include hydrocarbon loss of containment events to the marine environment resulting from a vessel fuel tank rupture.

Any such incidents represent potential events which would be reportable incidents. Incident reporting is performed with consideration of NOPSEMA (2014) guidance, 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.

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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 2 hours of the incident or of its detection by Woodside
- provide a written record of the reported incident to NOPSEMA, the National Offshore Petroleum Titles Administrator 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 E) which must be submitted to NOPSEMA as soon as possible (ASAP), but within 3 days of the incident or of its detection by Woodside
- provide a copy of the written report to the National Offshore Petroleum Titles Administrator and DMPE, within 7 days of the written report being provided to NOPSEMA.

Australian Maritime Safety Authority (AMSA) will be notified of oil spill incidents ASAP after their occurrence, and DCCEEW notified if MNES are to be affected by the oil spill incident.

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 activity that 'breaches an EPO or EPS, in the EP that applies 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(4), no later than 15 days after the end of the calendar month using the NOPSEMA Form – Recordable Environmental Incident Monthly Summary Report (Appendix E), detailing:

- all recordable incidents that occurred during the calendar month
- all material facts and circumstances concerning the recordable incidents that the operator knows or is able, by reasonable search or enquiry, to find out
- any action taken to avoid or mitigate any adverse environment impacts of the recordable incidents
- the corrective action that has been taken, or is proposed to be taken, to prevent similar recordable incidents
- the action that has been taken, or is proposed to be taken, to prevent a similar incident occurring.

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 Areas.

The pollution activities that should also be reported to AMSA via RCC Australia by the 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.

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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[70] and the First Strike Plan (Appendix H).

External incident reporting requirements under the OPGGS (Safety) Regulations, including under Sub regulation 2.42, notices and reports of dangerous occurrences will be reported to NOPSEMA under the approved activity safety cases.

[70] *In accordance with Regulation 56 of the Environmental 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 Environment Plan, which is available on NOPSEMA's website using the following link: https://docs.nopsema.gov.au/A1282745*

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Table 7-7: External incident reporting requirements

Event	Responsibility	Notifiable party	Notification requirements	Contact	Contact detail
Any marine incidents during Petroleum Activity	Vessel Master	AMSA	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 Rescue Coordination Centre (RCC)	As per Article 8 and Protocol I of MARPOL within 2 hours via the national emergency 24-hour notification contacts and a written report within 24 hours of the request by AMSA	AMSA RCC Australia	If the ship is at sea, reports are to be made to: Free call: 1800 641 792 Phone: 08 9430 2100 (Fremantle)
Oil pollution incidents in Commonwealth waters	Vessel Master	AMSA	Without delay as per the Commonwealth *Protection of the Sea (Prevention of Pollution from Ships) Act 1983*, part II, section 11(1), AMSA RCC notified verbally via the national emergency 24-hour notification contact of the hydrocarbon spill; follow up with a written Pollution Report ASAP after verbal notification	RCC Australia	Phone: 1800 641 792 OR +61 2 6230 6811
Any oil pollution incident which 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, ASAP	DNP	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 7 days of becoming aware	Secretary of the DCCEEW	Phone: 1800 803 772 Email: protected.species@environment.gov.au

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Event	Responsibility	Notifiable party	Notification requirements	Contact	Contact detail
Within 2 hours of becoming aware of a marine oil pollution (MOP) incident that occurs in or may impact state waters	CIMT Incident Commander or delegate	DTMI	Verbally notify DTMI that a spill has occurred and, if required, request use of equipment stored in Karratha. Follow up with a written pollution report as soon as practicable after verbal notification. Additionally, notify DTMI if spill is likely to extend into WA waters. Request DTMI to provide liaison to Woodside CIMT.	DTMI Maritime Environmental Emergency Response Unit 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)	Corporate Incident Management Team 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/introduction of any marine pest in WA waters	Qualified IMS inspector, Woodside Environment Adviser or contractor	DPIRD	Report suspected or confirmed presence/ 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

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7.12 Emergency preparedness and response

7.12.1 Overview

Under Regulation 22(8), the implementation strategy must contain an oil pollution emergency plan (OPEP) and provide for the updating of the OPEP. Regulation 22(9) outlines the requirements for the OPEP which must include adequate arrangements for responding to and monitoring of 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	Regulation 21 (5), 21(6), 22 (2)	Oil Spill Preparedness and Response Mitigation Assessment (Appendix G)
Describes the oil pollution emergency plan	Regulation 22(8)	Woodside's oil pollution emergency plan has the following components: Hydrocarbon Spill Australia Regulatory Framework[70] 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	Regulation 22(8), 22(12), 22(13), 22(14)	EP: Section 7.12.6 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 that the response arrangements in the oil pollution emergency plan are consistent with the national system for oil pollution preparedness and response	Regulation 22(16)	Hydrocarbon Spill Australia Regulatory Framework[70]

7.12.2 Emergency response training

Regulation 22(4) requires that the implementation strategy includes measures to ensure that 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. Following the mapping of training to Woodside identified competencies, training was then mapped to positions based on their required competencies (Table 7-9).

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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 has 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 aligns 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 baseline incident management 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, which involves completing two online AMSA Modules (Introduction to National Plan and Incident Management; and Introduction to Oil Spills) 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 oil spill role (IMT/operational).	

7.12.3 Emergency response preparation

The Emergency Operations Centre, based in Woodside's head office in Perth, is the onshore coordination point for an offshore emergency, 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 rescues, minimises damage to the environment and facilities, and liaises with external agencies. 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[70]. Roles and responsibilities for emergency response are detailed in Woodside's Incident Management Handbook. Woodside will have an Emergency Response Plan (ERP) in place relevant to the Petroleum Activity. The ERP provides procedural guidance specific to the asset and location of operations to control, coordinate and respond to an emergency or incident.

In an emergency of any type:

- On the MODU the OIM will assume overall onsite command and act as the Incident Controller (IC). All persons aboard the MODU will be required to act under the IC's directions. The MODU/vessels will maintain communications with the onshore Drilling Superintendent and/or other emergency services in the event of an emergency. Emergency response support can be provided by the contractor's emergency centre or WCC if requested by the IC.
- Vessel Master (depending on the location of the emergency) will assume overall onsite command and act as the IC. All persons will be required to act under the IC's directions. The vessels will maintain communications with the onshore project manager and/or other emergency services in the event of an emergency. Emergency response support can be provided by the contractor's emergency centre or WCC if requested by the IC.

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- The MODU and project vessels will have on-board equipment for responding to emergencies including medical equipment, fire-fighting equipment and oil spill response equipment.

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 Woodside Oil Pollution Emergency Arrangements (Australia) document, supported by the Petroleum Activity's Oil Pollution First Strike Plan which provides tactical response guidance to the activity/area (Appendix H), cover spill response for this Petroleum Activity.

The Crisis and Emergency Management 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.

Vessels will have shipboard oil pollution emergency plans (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 vessel activities. The Petroleum Activity's Oil Pollution First Strike Plan is intended to work in conjunction with the SOPEPs, if hydrocarbons are released to the marine environment from a vessel.

Woodside has established EPOs, EPSs and MCs 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 activity by activating all or part of the responsible CIMT.
- **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 in order to respond to and recover from the threat to the company (material impacts, litigation, legal and commercial, reputation and such). The CIMT may also be activated as required 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 Emergency and Crisis Management Procedure. 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 emergency and crisis 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, 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.

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Table 7-10: Testing of response capability

Response category	Scope	Response testing frequency	Response testing objective
Level 1 Response	Exercises are MODU/ vessel specific	One Level 1 'First Strike' drill conducted within two weeks of commencing activity. For campaigns with an operational duration of greater than one month this will occur within the first two weeks of commencing the activity and then at least every 6 month hire period thereafter	• Comprehensive exercises test elements of the Oil Pollution First Strike Plan (Appendix H). • Emergency drills are scheduled to test other aspects of the Emergency Response Plan
Level 2 Response	Exercises are MODU specific	A minimum of one Emergency Management exercise per MODU per campaign [Note: must be conducted within one month of campaign commencing and at least one Level 2 exercise per 6 month hire period].	Testing both the facility IMT response and/or 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 CMT 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) in 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 that Woodside maintains an ability to respond to a hydrocarbon spill, specifically to:

- ensure relevant responders, contractors and key personnel understand and practise 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, testing of relevant response arrangements will be undertaken as soon as practicable.

In addition to the testing of response capability described in Table 7-10, up to eight formal exercises are planned annually, across Woodside, to specifically test arrangements for responding to a hydrocarbon spill to the marine environment.

7.12.8 Testing of arrangements schedule

Woodside's Testing of Arrangements Schedule (Figure 7-4) aligns with international good practice for spill preparedness and response management; the testing is compatible with the International Petroleum Industry Environmental Conservation Association 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.

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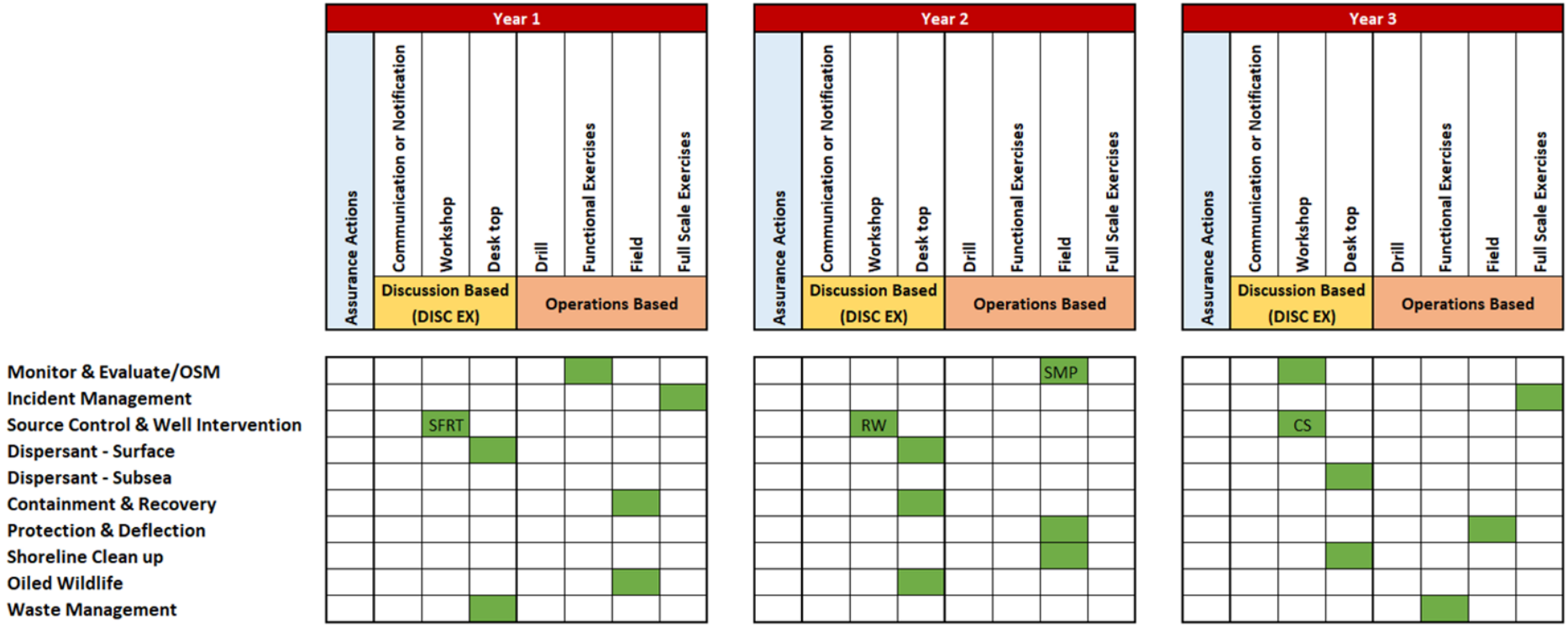


Figure 7-4: Indicative 3-yearly testing of arrangements schedule

Note: Schedule is subject to change, additional detail is included in live document

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The hydrocarbon spill arrangements shown in the rows of the schedule are tested against Woodside's regulatory commitments. Each arrangement has a support agency/company and an area to be tested (e.g. capability, equipment and personnel). For example, an arrangement could be to test Woodside's personnel capability for conducting scientific monitoring, or the ability of the Australian Marine Oil Spill Centre to provide response 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 that also constitute sufficient evidence of testing of arrangements (e.g. audits, no-notice drills, internal exercises, assurance drills).

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7.13 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 and/or damaged vessels.

Facilities and relevant support vessels on hire to Woodside receive regular forecasts from Woodside Meteorologists, who liaise closely with the Bureau of Meteorology (BOM). If a cyclone (or severe weather event) is forecast, the path and its development is plotted and monitored using the BOM 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).

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9. LIST OF TERMS AND ACRONYMS

Table 9-1: List of terms and definitions

Term	Definition
ACN	Australian Company Number
AFC	Antifouling Coating
ALARP	As Low as Reasonably Practicable
AMP	Australian Marine Park
AMSA	Australian Maritime Safety Authority
AS	Australian Standard
ASAP	As soon as possible
BCF	Bioconcentration Factor
BOM	Bureau of Meteorology
CEFAS	Centre for Environment, Fisheries and Aquaculture Science
CIMT	Corporate Incident Management Team
CMMS	Computerised Maintenance Management System
CS	Cost/sacrifice
CV	Company Values
DCCEEW	Commonwealth Department of Climate Change, Energy, Environment and Water
DMPE	Western Australian Department of Mines, Petroleum and Exploration (formerly Western Australian Department of Energy, Mining, Industry Regulation and Safety)
DNP	Director of National Parks
DTMI	Western Australian Department of Transport and Major Infrastructure (formerly Western Australian Department of Transport)
DP	Dynamic Positioning
ECAR	Environmental Compliance Action Register
EMBA	Environment that May be Affected
EMS	Environmental Management System
ENVID	Environment Identification
EOC	Emergency Operations Centre
EP	Environment Plan
EPBC Act	Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*
EPO	Environmental Performance Outcome
EPS	Environmental Performance Standards
ERP	Emergency Response Plan
ESD	Ecologically Sustainable Development
F	Feasibility
GHG	Greenhouse Gas
GP	Good Industry Practice
HOCNF	Harmonised Offshore Chemical Notification Format
HQ	Hazard Quotient

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HSE	Health, Safety and Environment
IC	Incident Controller
ICLDP	Incident and Crisis Leadership Development Program
ID	Identity / identification
IMMR	Inspection, Maintenance, Monitoring and Repair
IMS	Invasive Marine Species
IMSMA	IMS Management Area
IMT	Incident Management Team
ISO	International Organization for Standardization
IUCN	International Union for Conservation of Nature
KPI	Key Performance Indicator
LAT	Lowest Astronomical Tide
LCS	Legislation, Codes and Standards
MAE	Major Accident Events
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
MEE	Major Environmental Events
MEER	Maritime Environmental Emergency Response Unit
MNES	Matters of National Environmental Significance
MOC	Management of Change
MODU	Mobile Offshore Drilling Unit
MOPO	Manual of Permitted Operations
MSPS	Management System Performance Standard
N/A	Not Applicable
NOPSEMA	National Offshore Petroleum Safety and Environmental Management Authority
NZ	New Zealand
OCNS	Offshore Chemical Notification Scheme
OPEP	Oil Pollution Emergency Plan
OPGGS Act	Commonwealth *Offshore Petroleum and Greenhouse Gas Storage Act 2006*
OPP	Offshore Project Proposal
OSREC	Oil Spill Response Skills Enhancement Course
OSRO	Oil Spill Response Organisation
OVID	Offshore Vessel Inspection Database
OVMSA	Offshore Vessel Management System Assessment
PJ	Professional Judgement
PS	Performance Standard
PSM	Process Safety Management
PSRA	Process Safety Risk Assessment
PSZ	Petroleum Safety Zone

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QA/QC	Quality Assurance, Quality Control
RBA	Risk-based Analysis
RCC	Regional Coordination Centre
SAP-PM	Woodside's CMMS
SCE	Safety and Environment Critical Element
SCQ	Safety and Environment Critical Equipment
SIMAP	Spill Impact Mapping and Analysis Program
SOPEP	Ship Oil Pollution Emergency Plan
SV	Societal Value
The Regulations	Commonwealth Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023
UCH Act	Commonwealth *Underwater Cultural Heritage Act 2018*
UK	United Kingdom
WA	Western Australia
WHP	World Heritage Property
WLS	Woodside Learning System
WMS	Woodside Management System
WOMP	Well Operations Management Plan

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APPENDIX A WOODSIDE ENVIRONMENT AND BIODIVERSITY, CLIMATE AND RISK MANAGEMENT POLICIES

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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

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Commonwealth legislation	Summary
Aboriginal and Torres Strait Islander Heritage Protection Act 1984	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. Damage or interference with Aboriginal objects or places is not an offence under the Act except within Victoria under Section 21U.
Air Navigation Act 1920 *Air Navigation Regulations 1947* *Air Navigation (Aerodrome Flight Corridors) Regulations 1994* *Air Navigation (Aircraft Engine Emissions) Regulations 1995* *Air Navigation (Aircraft Noise) Regulations 1984* *Air Navigation (Fuel Spillage) Regulations 1999*	This Act relates to managing air navigation.
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.
Aquatic Resources Management Act 2016	The *Aquatic Resources Management Act 2016* aims to conserve aquatic ecosystems, eimponsure sustainable development of fishing and aquaculture, and balance economic, social, and cultural benefits among fishery resource user groups.
Australian Radiation Protection and Nuclear Safety Act 1998	This Act relates to protecting the health and safety of people, and protecting the environment from the harmful effects of radiation.
Biosecurity Act 2015 *Quarantine Regulations 2000* *Biosecurity Regulation 2016* *Australian Ballast Water Management Requirements 2022* *Biosecurity Amendment (Biofouling Management) Regulations 2021*	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 *Biofouling Management Regulations* requires ships to report information about biofouling management and the voyage history of the ship in the past 12 months through a pre-arrival report.

Commonwealth legislation	Summary
Environment Protection and Biodiversity Conservation Act 1999 *Environment Protection and Biodiversity Conservation Regulations 2000*	This Act protects MNES. It streamlines the national environmental assessment and approvals process, protects Australian biodiversity and integrates management of important natural and culturally significant places. Under this Act, actions that may be likely to have a significant impact on MNES must be referred to the Minister for the Environment and Water.
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.
Fisheries Management Act 1991	The *Fisheries Management Act 1991* is pursued by the Minister and Australian Fisheries Management Authority (AFMA). The Act objectives include the establishment of efficient, cost-effective fisheries management that ensure ecologically sustainable practice, maximin economic return, maintained accountability, and compliance to government cost-recovery targets.
Fish Resources Management Act 1994	The *Fish Resources Management Act 1994* relates to the management of fish resources, including the development and management of fisheries and aquaculture and the conservation of fish and other aquatic resources and their habitats, and for related purposes.
Hazardous Waste (Regulation of Exports and Imports) Act 1989 (Cth)	The Act regulates the export, import, and transit of hazardous waste to ensure it is managed in an environmentally sound manner, protecting human health and the environment both within and outside Australia. It implements Australia's obligations under the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal.
Industrial Chemicals Environment Management (Register) Act 2021	This Act provides for the Minister to make one or more scheduling decisions for a relevant industrial chemical and to vary or revoke such a decision.
Industrial Chemicals (Notification and Assessment Act) 1989 *Industrial Chemicals (Notification and Assessment) Regulations 1990*	This Act creates a national register of industrial chemicals. The Act also provides for restricting the use of certain chemicals that could have harmful effects on the environment or health.
National Environment Protection Measures (Implementation) Act 1998 *National Environment Protection Measures (Implementation) Regulations 1999*	This Act and Regulations provide for implementing National Environment Protection Measures to protect, restore and enhance the quality of the environment in Australia and ensure the community has access to relevant and meaningful information about pollution. The National Environment Protection Council has made National Environment Protection Measures relating to ambient air quality, movement of controlled waste between states and territories, the National Pollutant Inventory, and used packaging materials.
National Greenhouse and Energy Reporting Act 2007 *National Greenhouse and Energy Reporting (Safeguard Mechanism) Rule 2015*	This Act and associated Rule 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.
Native Title Act 1993	The *Native Title Act 1993* establishes processes to recognise and protect Native Title, and the rights afforded to Native Title holders and registered Native Title claimants in relation to thirdparty land use addresses Native Title rights and interests, which may include rights and interests in heritage. This Act does not apply where Native Title has not been determined to exist.

Commonwealth legislation	Summary
Navigation Act 2012 *Marine Order 12: Construction – subdivision and stability, machinery and electrical installations* *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 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.
Offshore Petroleum and Greenhouse Gas Storage Act 2006 *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* *Offshore Petroleum and Greenhouse Gas Storage (Resource Management and Administration) Regulations 2011* *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.
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.
Protection of the Sea (Powers of Intervention) Act 1981	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.
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* *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.

Commonwealth legislation	Summary
Protection of the Sea (Harmful Antifouling Systems) Act 2006 *Marine Order 98: Marine pollution – anti-fouling systems*	This Act relates to protecting the sea from the effects of harmful anti-fouling systems. It prohibits applying or reapplying harmful anti-fouling compounds on Australian ships or foreign ships that are in an Australian shipping facility.
Recycling and Waste Reduction (Mandatory Product Stewardship – Mercury-added Products) Rules 2021 (Minamata Convention on Mercury 2017)	This Convention is an agreement to protect human and environmental health from the effects of releases of mercury and mercury-containing compounds to the environment. The convention has been ratified by Australia and is implemented in Commonwealth law.
Underwater Cultural Heritage Act 2018 *Underwater Cultural Heritage Guidance for Offshore Developments* *Guidelines to Protect Underwater Cultural Heritage*	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*.

APPENDIX C ABORIGINAL CULTURAL HERITAGE SEARCH TOOL RESULTS

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Aboriginal Cultural Heritage Inquiry System

List of Aboriginal Cultural Heritage (ACH) Register

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Search Criteria

44 Aboriginal Cultural Heritage (ACH) Register in Shapefile - AU_ENVT_WEL_EP_EMBA_GWF4_Infill_Cwth_2024_v3_Part_2, AU_ENVT_WEL_EP_EMBA_GWF4_Infill_Cwth_2024_v3_Part_1

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.

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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.

Coordinates

Map coordinates are based on the GDA 2020 Datum.

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Aboriginal Cultural Heritage Inquiry System

List of Aboriginal Cultural Heritage (ACH) Register

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ID	Name	Boundary Restricted	Boundary Reliable	Culturally Sensitive	Culturally Sensitive Nature	Status	Place Type	Knowledge Holders	Legacy ID
564	POINT MURAT 02	No	Yes	No	No Gender / Initiation Restrictions	Register	Artefacts / Scatter; Midden	*Registered Knowledge Holder names available from DPLH	P07502
873	MONTEBELLO IS: NOALA CAVE.	No	Yes	No	No Gender / Initiation Restrictions	Register	Artefacts / Scatter; Midden; Rock Shelter	*Registered Knowledge Holder names available from DPLH	P07287
926	MONTEBELLO IS: HAYNES CAVE.	No	Yes	No	No Gender / Initiation Restrictions	Register	Sub surface cultural material; Artefacts / Scatter; Midden; Rock Shelter	*Registered Knowledge Holder names available from DPLH	P07286
1113	LEGENDRE 10.	No	No	No	No Gender / Initiation Restrictions	Register	Artefacts / Scatter; Rock Shelter; Shell	*Registered Knowledge Holder names available from DPLH	P07203
6117	MOWBOWRA POOL.	No	Yes	No	No Gender / Initiation Restrictions	Register	Camp; Grinding areas / Grooves; Other	*Registered Knowledge Holder names available from DPLH	P07006
6118	Qualing Pool	No	Yes	No	No Gender / Initiation Restrictions	Register	Water Source	*Registered Knowledge Holder names available from DPLH	P07007
6498	DIRK HARTOG ISLAND	No	No	No	No Gender / Initiation Restrictions	Register	Traditional Structure	*Registered Knowledge Holder names available from DPLH	P06448
6754	OSPREY BAY 6	No	Yes	No	No Gender / Initiation Restrictions	Register	Artefacts / Scatter; Midden	*Registered Knowledge Holder names available from DPLH	P06165
6755	OSPREY BAY INTERDUNAL 1	No	No	No	No Gender / Initiation Restrictions	Register	Artefacts / Scatter; Midden	*Registered Knowledge Holder names available from DPLH	P06166
6756	OSPREY BAY INTERDUNAL 2	No	Yes	No	No Gender / Initiation Restrictions	Register	Midden	*Registered Knowledge Holder names available from DPLH	P06167
6757	BLOODWOOD CREEK MIDDEN 1	No	Yes	No	No Gender / Initiation Restrictions	Register	Artefacts / Scatter; Midden	*Registered Knowledge Holder names available from DPLH	P06168
6758	BLOODWOOD CREEK MIDDEN 2	No	Yes	No	No Gender / Initiation Restrictions	Register	Artefacts / Scatter; Midden	*Registered Knowledge Holder names available from DPLH	P06169
6759	BLOODWOOD CREEK MIDDEN 3	No	Yes	No	No Gender / Initiation Restrictions	Register	Artefacts / Scatter; Midden	*Registered Knowledge Holder names available from DPLH	P06170
6760	BLOODWOOD CREEK SHORELINE	No	Yes	No	No Gender / Initiation Restrictions	Register	Artefacts / Scatter; Midden	*Registered Knowledge Holder names available from DPLH	P06171
6761	LOW POINT MIDDEN	No	Yes	No	No Gender / Initiation Restrictions	Register	Artefacts / Scatter; Midden	*Registered Knowledge Holder names available from DPLH	P06172
6782	28 MILE CREEK NORTH 1	No	No	No	No Gender / Initiation Restrictions	Register	Artefacts / Scatter; Midden	*Registered Knowledge Holder names available from DPLH	P06140
6784	MANDU MANDU CREEK SOUTH	No	No	No	No Gender / Initiation Restrictions	Register	Artefacts / Scatter; Midden	*Registered Knowledge Holder names available from DPLH	P06142

Aboriginal Cultural Heritage Inquiry System

List of Aboriginal Cultural Heritage (ACH) Register

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ID	Name	Boundary Restricted	Boundary Reliable	Culturally Sensitive	Culturally Sensitive Nature	Status	Place Type	Knowledge Holders	Legacy ID
6785	MANDU MANDU CREEK NORTH	No	No	No	No Gender / Initiation Restrictions	Register	Artefacts / Scatter; Midden	*Registered Knowledge Holder names available from DPLH	P06143
6790	YARDIE CREEK SOUTH 1	No	Yes	No	No Gender / Initiation Restrictions	Register	Artefacts / Scatter; Midden	*Registered Knowledge Holder names available from DPLH	P06148
6798	YARDIE INTERDUNAL SWALE	No	Yes	No	No Gender / Initiation Restrictions	Register	Artefacts / Scatter; Midden	*Registered Knowledge Holder names available from DPLH	P06156
6799	YARDIE BEACH MIDDEN	No	Yes	No	No Gender / Initiation Restrictions	Register	Artefacts / Scatter; Midden	*Registered Knowledge Holder names available from DPLH	P06157
6802	OSPREY BAY 1	No	Yes	No	No Gender / Initiation Restrictions	Register	Artefacts / Scatter; Midden	*Registered Knowledge Holder names available from DPLH	P06160
6803	OSPREY BAY 2	No	Yes	No	No Gender / Initiation Restrictions	Register	Artefacts / Scatter; Midden	*Registered Knowledge Holder names available from DPLH	P06161
6804	OSPREY BAY 3	No	Yes	No	No Gender / Initiation Restrictions	Register	Artefacts / Scatter; Midden	*Registered Knowledge Holder names available from DPLH	P06162
6805	OSPREY BAY 4	No	Yes	No	No Gender / Initiation Restrictions	Register	Artefacts / Scatter; Midden	*Registered Knowledge Holder names available from DPLH	P06163
6806	OSPREY BAY 5	No	Yes	No	No Gender / Initiation Restrictions	Register	Artefacts / Scatter; Midden	*Registered Knowledge Holder names available from DPLH	P06164
6827	CORAL BAY SKELETON	No	No	No	No Gender / Initiation Restrictions	Register	Burial	*Registered Knowledge Holder names available from DPLH	P06132
7123	BERNIER ISLAND	No	No	No	No Gender / Initiation Restrictions	Register	Burial	*Registered Knowledge Holder names available from DPLH	P05789
7124	DORRE ISLAND	No	No	No	No Gender / Initiation Restrictions	Register	Burial	*Registered Knowledge Holder names available from DPLH	P05790
7126	MESA CAMP	No	No	No	No Gender / Initiation Restrictions	Register	Artefacts / Scatter; Midden	*Registered Knowledge Holder names available from DPLH	P05792
7203	BAUBOODJOO POINT (Bruboodjoo Midden Site)	No	Yes	No	No Gender / Initiation Restrictions	Register	Artefacts / Scatter; Camp; Hunting Place; Midden	*Registered Knowledge Holder names available from DPLH	P05707
7205	TWIN HILL FISHING PLACE.	No	No	No	No Gender / Initiation Restrictions	Register	Hunting Place	*Registered Knowledge Holder names available from DPLH	P05709
7206	WEALJUGOO MIDDEN.	No	Yes	No	No Gender / Initiation Restrictions	Register	Artefacts / Scatter; Camp; Hunting Place; Midden	*Registered Knowledge Holder names available from DPLH	P05710
7254	SANDY BAY NORTH	No	Yes	No	No Gender / Initiation Restrictions	Register	Artefacts / Scatter; Midden	*Registered Knowledge Holder names available from DPLH	P05652

Aboriginal Cultural Heritage Inquiry System

List of Aboriginal Cultural Heritage (ACH) Register

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ID	Name	Boundary Restricted	Boundary Reliable	Culturally Sensitive	Culturally Sensitive Nature	Status	Place Type	Knowledge Holders	Legacy ID
7299	YARDIE CREEK	No	No	No	No Gender / Initiation Restrictions	Register	Artefacts / Scatter; Midden	*Registered Knowledge Holder names available from DPLH	P05645
7300	MANDU MANDU CK ROCKSHELTERS	Yes	Yes	Yes	No Gender / Initiation Restrictions	Register	Artefacts / Scatter	*Registered Knowledge Holder names available from DPLH	P05646
7304	PILGRAMUNNA BAY MIDDEN	No	Yes	No	No Gender / Initiation Restrictions	Register	Artefacts / Scatter; Midden	*Registered Knowledge Holder names available from DPLH	P05650
7305	MANGROVE BAY.	No	Yes	No	No Gender / Initiation Restrictions	Register	Burial; Artefacts / Scatter; Hunting Place; Midden	*Registered Knowledge Holder names available from DPLH	P05651
8301	NINGALOO STATION	No	No	No	No Gender / Initiation Restrictions	Register	Artefacts / Scatter	*Registered Knowledge Holder names available from DPLH	P04353
10381	VLAMING HEAD	Yes	No	Yes	No Gender / Initiation Restrictions	Register	Ritual / Ceremonial; Creation / Dreaming Narrative	*Registered Knowledge Holder names available from DPLH	P01799
11458	NINGALOO (near)	No	No	No	No Gender / Initiation Restrictions	Register	Painting	*Registered Knowledge Holder names available from DPLH	P00701
16594	Cardabia Station	No	Yes	No	No Gender / Initiation Restrictions	Register	Midden; Shell	*Registered Knowledge Holder names available from DPLH	
16597	Baler Bluff	No	Yes	No	No Gender / Initiation Restrictions	Register	Artefacts / Scatter; Midden; Shell	*Registered Knowledge Holder names available from DPLH	
17193	Ningaloo Station	No	No	No	No Gender / Initiation Restrictions	Register	Burial	*Registered Knowledge Holder names available from DPLH	

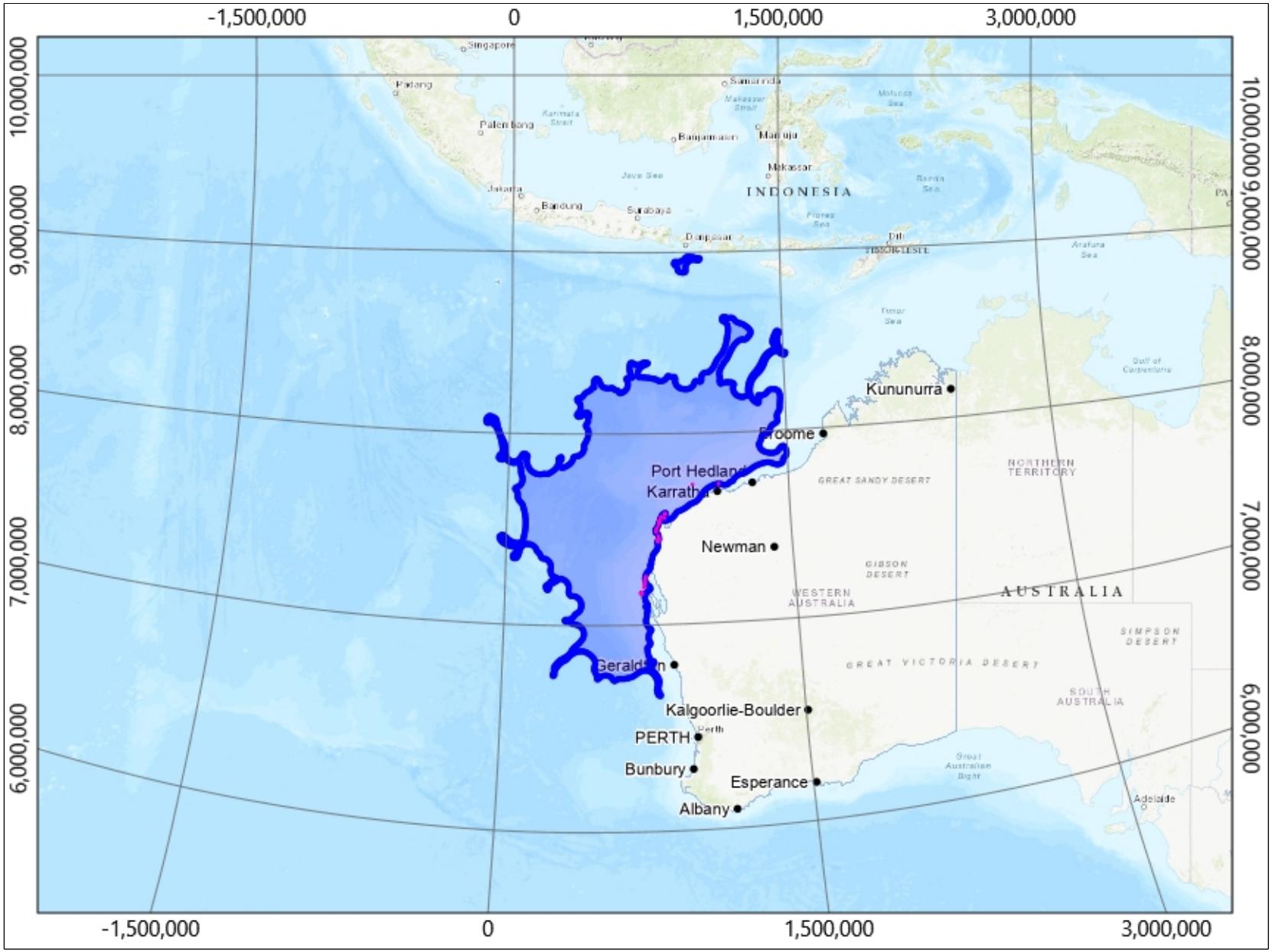
Department of **Planning, Lands and Heritage**

GOVERNMENT OF WESTERN AUSTRALIA

Aboriginal Cultural Heritage Inquiry System

Map of Aboriginal Cultural Heritage (ACH) Register

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Legend

- Aboriginal Cultural Heritage (ACH) Register
- Search Area
- Aboriginal Community
  - *Permanent*
  - *Seasonal*
  - *Town Based*
- Town
- Road
- River
- Local Government Authority

1,085.48 kilometres

Map Scale 1 : 32,890,000

MGA Zone 49 (GDA2020)

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Aboriginal Cultural Heritage Inquiry System

List of Aboriginal Cultural Heritage (ACH) Lodged

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Search Criteria

55 Aboriginal Cultural Heritage (ACH) Lodged in Shapefile - AU_ENVT_WEL_EP_EMBA_GWF4_Infill_Cwth_2024_v3_Part_2, AU_ENVT_WEL_EP_EMBA_GWF4_Infill_Cwth_2024_v3_Part_1. Warning: Search area complex so results may be inaccurate. Contact DPLH for assistance.

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.

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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.

Coordinates

Map coordinates are based on the GDA 2020 Datum.

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Aboriginal Cultural Heritage Inquiry System

List of Aboriginal Cultural Heritage (ACH) Lodged

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ID	Name	Boundary Restricted	Boundary Reliable	Culturally Sensitive	Culturally Sensitive Nature	Status	Place Type	Knowledge Holders	Legacy ID
883	BARROW ISLAND 01	No	Yes	No	No Gender / Initiation Restrictions	Lodged	Artefacts / Scatter	*Registered Knowledge Holder names available from DPLH	
884	I-24-S0001/S0002	No	Yes	No	No Gender / Initiation Restrictions	Lodged	Historical; Other	*Registered Knowledge Holder names available from DPLH	
885	BARROW ISLAND 03	No	Yes	No	No Gender / Initiation Restrictions	Lodged	Artefacts / Scatter	*Registered Knowledge Holder names available from DPLH	
886	C-21-S0001	No	Yes	No	No Gender / Initiation Restrictions	Lodged	Historical; Other	*Registered Knowledge Holder names available from DPLH	
887	O-02-S0001	No	Yes	No	No Gender / Initiation Restrictions	Lodged	Historical; Other	*Registered Knowledge Holder names available from DPLH	
888	P-05-S0001	No	No	No	No Gender / Initiation Restrictions	Lodged	Historical; Other	*Registered Knowledge Holder names available from DPLH	
889	O-06-S0001	No	Yes	No	No Gender / Initiation Restrictions	Lodged	Historical; Other	*Registered Knowledge Holder names available from DPLH	
890	D-20-S0001	No	Yes	No	No Gender / Initiation Restrictions	Lodged	Historical; Other	*Registered Knowledge Holder names available from DPLH	
891	Bandicoot Bay Settlement	No	Yes	No	No Gender / Initiation Restrictions	Lodged	Historical; Other	*Registered Knowledge Holder names available from DPLH	
892	BARROW ISLAND 10	No	Yes	No	No Gender / Initiation Restrictions	Lodged	Artefacts / Scatter	*Registered Knowledge Holder names available from DPLH	
893	D-20-S0002	No	Yes	No	No Gender / Initiation Restrictions	Lodged	Historical; Other	*Registered Knowledge Holder names available from DPLH	
894	D-16-S0001	No	Yes	No	No Gender / Initiation Restrictions	Lodged	Historical; Other	*Registered Knowledge Holder names available from DPLH	
6115	EXMOUTH NORTH-EAST	No	Yes	No	No Gender / Initiation Restrictions	Lodged	Burial	*Registered Knowledge Holder names available from DPLH	
6312	EXMOUTH NORTH-EAST	No	No	No	No Gender / Initiation Restrictions	Lodged	Artefacts / Scatter	*Registered Knowledge Holder names available from DPLH	
6783	28 MILE CREEK NORTH 2	No	Yes	No	No Gender / Initiation Restrictions	Lodged	Artefacts / Scatter; Midden	*Registered Knowledge Holder names available from DPLH	
6789	TURQUOISE BAY NORTH	No	No	No	No Gender / Initiation Restrictions	Lodged	Artefacts / Scatter; Midden	*Registered Knowledge Holder names available from DPLH	
7204	CHABJUWARDOO BAY.	No	Yes	No	No Gender / Initiation Restrictions	Lodged	Hunting Place	*Registered Knowledge Holder names available from DPLH	

Aboriginal Cultural Heritage Inquiry System

List of Aboriginal Cultural Heritage (ACH) Lodged

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ID	Name	Boundary Restricted	Boundary Reliable	Culturally Sensitive	Culturally Sensitive Nature	Status	Place Type	Knowledge Holders	Legacy ID
7212	GREYLING CLIFFS.	No	No	No	No Gender / Initiation Restrictions	Lodged	Hunting Place	*Registered Knowledge Holder names available from DPLH	
10100	GNARALOO BAY	No	Yes	No	No Gender / Initiation Restrictions	Lodged	Burial	*Registered Knowledge Holder names available from DPLH	
11801	COASTAL MIDDEN, 5 MILE	No	No	No	No Gender / Initiation Restrictions	Lodged	Artefacts / Scatter; Midden	*Registered Knowledge Holder names available from DPLH	
19838	Midden Site at Exmouth River mouth	No	Yes	No	No Gender / Initiation Restrictions	Lodged	Artefacts / Scatter; Midden	*Registered Knowledge Holder names available from DPLH	
19839	Waterhole, Exmouth	No	Yes	No	No Gender / Initiation Restrictions	Lodged	Artefacts / Scatter; Water Source	*Registered Knowledge Holder names available from DPLH	
21468	Sandy Point Rockshelter	No	Yes	No	No Gender / Initiation Restrictions	Lodged	Sub surface cultural material; Traditional Structure; Rock Shelter; Shell	*Registered Knowledge Holder names available from DPLH	
22943	Flacourt Bay 01	No	Yes	No	No Gender / Initiation Restrictions	Lodged	Rock Shelter	*Registered Knowledge Holder names available from DPLH	
26119	Dirk Hartog Island: Preseverant Camp-Fireplace	No	Yes	No	No Gender / Initiation Restrictions	Lodged	Artefacts / Scatter; Shell	*Registered Knowledge Holder names available from DPLH	
26120	Dirk Hartog Island: West Point Midden	No	Yes	No	No Gender / Initiation Restrictions	Lodged	Sub surface cultural material; Midden	*Registered Knowledge Holder names available from DPLH	
29549	Boodie Soak	No	Yes	No	No Gender / Initiation Restrictions	Lodged	Artefacts / Scatter	*Registered Knowledge Holder names available from DPLH	
31762	Site 1	No	Yes	No	No Gender / Initiation Restrictions	Lodged	Artefacts / Scatter	*Registered Knowledge Holder names available from DPLH	
31763	Site 2	No	Yes	No	No Gender / Initiation Restrictions	Lodged	Artefacts / Scatter	*Registered Knowledge Holder names available from DPLH	
36199	Boodie Cave		Yes	No		Lodged	Historical; Other	*Registered Knowledge Holder names available from DPLH	
36200	John Wayne Country Rockshelter	No	Yes	No	No Gender / Initiation Restrictions	Lodged	Historical; Other	*Registered Knowledge Holder names available from DPLH	
36234	South End structures, Barrow Island.	No	No	No		Lodged	Historical; Other	*Registered Knowledge Holder names available from DPLH	
36261	G-13-S0001	No	Yes	No		Lodged	Historical; Other	*Registered Knowledge Holder names available from DPLH	
36262	H-24-S0001	No	Yes	No		Lodged	Historical; Other	*Registered Knowledge Holder names available from DPLH	

Aboriginal Cultural Heritage Inquiry System

List of Aboriginal Cultural Heritage (ACH) Lodged

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ID	Name	Boundary Restricted	Boundary Reliable	Culturally Sensitive	Culturally Sensitive Nature	Status	Place Type	Knowledge Holders	Legacy ID
36263	H-24-S0002	No	Yes	No		Lodged	Historical; Other	*Registered Knowledge Holder names available from DPLH	
36264	I-23-S0001	No	Yes	No		Lodged	Historical; Other	*Registered Knowledge Holder names available from DPLH	
36265	I-23-S0002	No	Yes	No		Lodged	Historical; Other	*Registered Knowledge Holder names available from DPLH	
36266	I-24-S0003	No	Yes	No		Lodged	Historical; Other	*Registered Knowledge Holder names available from DPLH	
36267	J-23-S0001	No	Yes	No		Lodged	Historical; Other	*Registered Knowledge Holder names available from DPLH	
36268	J-23-S0002	No	Yes	No		Lodged	Historical; Other	*Registered Knowledge Holder names available from DPLH	
36269	J-23-S0003	No	Yes	No		Lodged	Historical; Other	*Registered Knowledge Holder names available from DPLH	
36270	M-03-S0001	No	Yes	No		Lodged	Historical; Other	*Registered Knowledge Holder names available from DPLH	
36271	N-02-S0001	No	Yes	No		Lodged	Historical; Other	*Registered Knowledge Holder names available from DPLH	
36272	O-02-S0002	No	Yes	No		Lodged	Historical; Other	*Registered Knowledge Holder names available from DPLH	
36273	O-05-S0003	No	Yes	No		Lodged	Historical; Other	*Registered Knowledge Holder names available from DPLH	
36344	N-05-S0002	No	Yes	No	No Gender / Initiation Restrictions	Lodged	Historical; Other	*Registered Knowledge Holder names available from DPLH	
36345	N-05-S0001	No	Yes	No	No Gender / Initiation Restrictions	Lodged	Historical; Other	*Registered Knowledge Holder names available from DPLH	
36346	O-05-S0001	No	Yes	No	No Gender / Initiation Restrictions	Lodged	Historical; Other	*Registered Knowledge Holder names available from DPLH	
36347	O-05-S0002	No	Yes	No	No Gender / Initiation Restrictions	Lodged	Historical; Other	*Registered Knowledge Holder names available from DPLH	
36348	P-04-S0001	No	Yes	No		Lodged	Historical; Other	*Registered Knowledge Holder names available from DPLH	
36718	Skeleton Bay Burial Sites	Yes	Yes	Yes	No Gender / Initiation Restrictions	Lodged	Burial; Ritual / Ceremonial; Other; Repository / Storage Place	*Registered Knowledge Holder names available from DPLH	

Aboriginal Cultural Heritage Inquiry System

List of Aboriginal Cultural Heritage (ACH) Lodged

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ID	Name	Boundary Restricted	Boundary Reliable	Culturally Sensitive	Culturally Sensitive Nature	Status	Place Type	Knowledge Holders	Legacy ID
38299	Farquhar	No	Yes	No		Lodged	Burial	*Registered Knowledge Holder names available from DPLH	
38662	Farquhar on Gnarloo Station	No	Yes	No		Lodged	Burial; Artefacts / Scatter	*Registered Knowledge Holder names available from DPLH	
40768	Jurabi Point	Yes		Yes	No Gender / Initiation Restrictions	Lodged	Burial	*Registered Knowledge Holder names available from DPLH	
41459	Gnaraloo Road Scatter 7	No	Yes	No		Lodged	Artefacts / Scatter; Shell; Water Source	*Registered Knowledge Holder names available from DPLH	

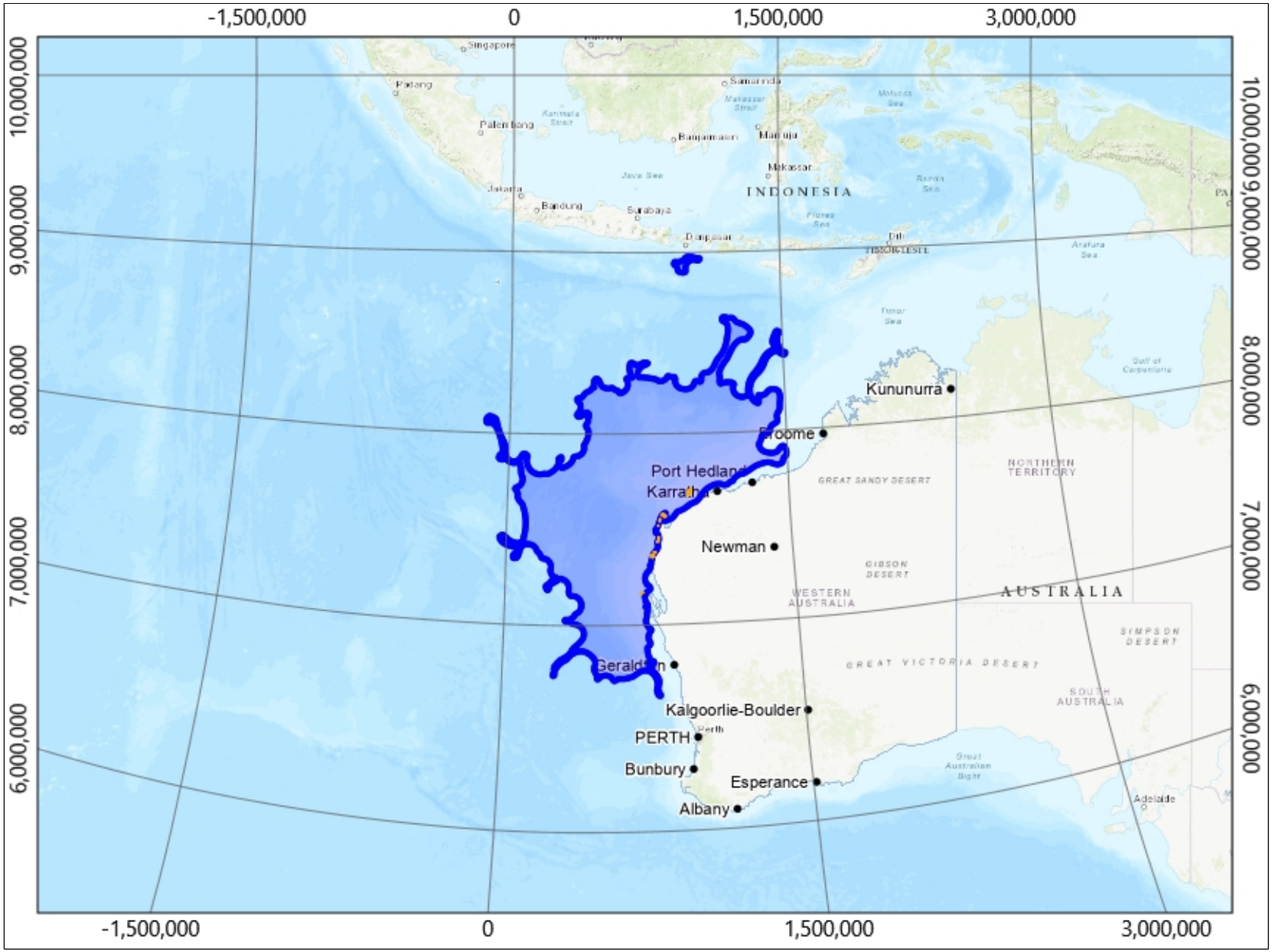
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GOVERNMENT OF WESTERN AUSTRALIA

Aboriginal Cultural Heritage Inquiry System

Map of Aboriginal Cultural Heritage (ACH) Lodged

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Legend

- Aboriginal Cultural Heritage (ACH) Lodged
- Search Area
- Aboriginal Community
  - *Permanent*
  - *Seasonal*
  - *Town Based*
- Town
- Road
- River
- Local Government Authority

1,085.48 kilometres

Map Scale 1 : 32,890,000

MGA Zone 49 (GDA2020)

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APPENDIX D EPBC ACT PROTECTED MATTERS SEARCH TOOL RESULTS

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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: 23-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:	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:	27
Listed Migratory Species:	43

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:	72
Whales and Other Cetaceans:	29
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	1
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:	43
Key Ecological Features (Marine):	2
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)

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
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 may occur within area
Phaethon lepturus fulvus Christmas Island White-tailed Tropicbird, Golden Bosunbird [26021]	Endangered	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
[Phaethon rubricauda westralis](#) Red-tailed Tropicbird (Indian Ocean), Indian Ocean Red-tailed Tropicbird [91824]	Endangered	Species or species habitat likely to occur within area
[Sternula nereis nereis](#) Australian Fairy Tern [82950]	Vulnerable	Foraging, feeding or related behaviour likely to 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	Migration route known to occur within area
[Balaenoptera physalus](#) Fin Whale [37]	Vulnerable	Species or species habitat likely to occur within area
[Orcaella heinsohni](#) Australian Snubfin Dolphin [81322]	Vulnerable	Species or species habitat may occur within area
[Sousa sahulensis](#) Australian Humpback Dolphin [87942]	Vulnerable	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	Species or species habitat known to occur within area
[Chelonia mydas](#) Green Turtle [1765]	Vulnerable	Species or species habitat known to occur within area

Scientific Name	Threatened Category	Presence Text
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 known to occur within area
Natator depressus		
Flatback Turtle [59257]	Vulnerable	Congregation or aggregation known 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
Carcharodon carcharias		
White Shark, Great White Shark [64470]	Vulnerable	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 may 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		

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 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
Fregata minor		
Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat may occur within area
Macronectes giganteus		
Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may 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
Migratory Marine Species		
Anoxypristis cuspidata		
Narrow Sawfish, Knifetooth Sawfish [68448]		Species or species habitat may 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

Scientific Name	Threatened Category	Presence Text
[Balaenoptera musculus](#) Blue Whale [36]	Endangered	Migration route known 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
[Caretta caretta](#) Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area
[Chelonia mydas](#) Green Turtle [1765]	Vulnerable	Species or species habitat 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 likely to occur within area
[Eretmochelys imbricata](#) Hawksbill Turtle [1766]	Vulnerable	Species or species habitat known 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
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	Congregation or aggregation known 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 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 may occur within area
Pristis zijsron Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Species or species habitat known to occur within area

Scientific Name	Threatened Category	Presence Text
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 may 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 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
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
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

Scientific Name	Threatened Category	Presence Text
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 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 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 likely to occur within area
Fish		
Acentronura larsonae		
Helen's Pygmy Pipehorse [66186]		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
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

Scientific Name	Threatened Category	Presence Text
Choeroichthys suillus Pig-snouted Pipefish [66198]		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
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
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

Scientific Name	Threatened Category	Presence Text
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
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
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
Trachyrhamphus longirostris Straightstick Pipefish, Long-nosed Pipefish, Straight Stick Pipefish [66281]		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 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

Scientific Name	Threatened Category	Presence Text
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 known to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Species or species habitat 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 likely to 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	Species or species habitat known 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

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 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	Congregation or aggregation 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 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 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	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
[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
[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
[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 may 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 may 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
Montebello	Multiple Use 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

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

Title of referral	Reference	Referral Outcome	Assessment Status
Controlled action			
Construct and operate LNG & domestic gas plant including onshore and offshore facilities - Wheatston	2008/4469	Controlled Action	Post-Approval
Echo-Yodel Production Wells	2000/11	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
Pluto Gas Project	2005/2258	Controlled Action	Completed
Pluto Gas Project Including Site B	2006/2968	Controlled Action	Post-Approval
Not controlled action			
'Goodwyn A' Low Pressure Train Project	2003/914	Not Controlled Action	Completed
Echo A Development WA-23-L, WA-24-L	2005/2042	Not Controlled Action	Completed
Exploration of appraisal wells	2006/3065	Not Controlled Action	Completed
Maia-Gaea Exploration wells	2000/17	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
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
To construct and operate an offshore submarine fibre optic cable, WA	2014/7373	Not Controlled Action	Completed
Western Flank Gas Development	2005/2464	Not Controlled Action	Completed

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action			
Wheatstone 3D seismic survey, 70km north of Barrow Island	2004/1761	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
"Leanne" offshore 3D seismic exploration, WA-356-P	2005/1938	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
Aperio 3D Marine Seismic Survey, WA	2012/6648	Not Controlled Action (Particular Manner)	Post-Approval
Balnaves Condensate Field Development	2011/6188	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
Cue Seismic Survey within WA-359-P, WA-361-P and WA-360-P	2007/3647	Not Controlled Action (Particular Manner)	Post-Approval
Demeter 3D Seismic Survey, off Dampier, WA	2002/900	Not Controlled Action (Particular Manner)	Post-Approval
Foxhound 3D Non-Exclusive Marine Seismic Survey	2009/4703	Not Controlled Action (Particular Manner)	Post-Approval
Greater Western Flank Phase 1 gas Development	2011/5980	Not Controlled Action (Particular Manner)	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
Harmony 3D Marine Seismic Survey	2012/6699	Not Controlled Action (Particular Manner)	Post-Approval
Julimar Brunello Gas Development Project	2011/5936	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
Santos Winchester three dimensional seismic survey - WA-323-P & WA-330-P	2011/6107	Not Controlled Action (Particular Manner)	Post-Approval
Tidepole Maz 3D Seismic Survey Campaign	2007/3706	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 Manner)	Post-Approval
Wheatstone Iago Appraisal Well Drilling	2008/4134	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

Name	Region
Ancient coastline at 125 m depth contour	North-west
Continental Slope Demersal Fish Communities	North-west

Biologically Important Areas

[Resource Information]

Scientific Name	Behaviour	Presence
Marine Turtles		
Chelonia mydas Green Turtle [1765]	Internesting buffer	Known to occur
Eretmochelys imbricata Hawksbill Turtle [1766]	Internesting buffer	Known to occur
Natator depressus Flatback Turtle [59257]	Internesting buffer	Known to occur
Seabirds		
Ardenna pacifica Wedge-tailed Shearwater [84292]	Breeding	Known to occur
Sharks		
Rhincodon typus Whale Shark [66680]	Foraging	Known to occur
Whales		
Balaenoptera musculus brevicauda Pygmy Blue Whale [81317]	Migration	Known to occur
Megaptera novaeangliae Humpback Whale [38]	Migration (north and south)	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.

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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: 23-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:	2
National Heritage Places:	2
Wetlands of International Importance (Ramsar	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	6
Listed Threatened Ecological Communities:	None
Listed Threatened Species:	58
Listed Migratory Species:	67

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:	16
Commonwealth Heritage Places:	2
Listed Marine Species:	113
Whales and Other Cetaceans:	33
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	14
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:	37
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	224
Key Ecological Features (Marine):	8
Biologically Important Areas:	44
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

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)

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

Scientific Name	Threatened Category	Presence Text
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat known to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
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 known to occur within area
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat known 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
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
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

Scientific Name	Threatened Category	Presence Text
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
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
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area
FISH		
Milyeringa justitia Barrow Cave Gudgeon [86867]	Endangered	Species or species habitat known to occur within area

Scientific Name	Threatened Category	Presence Text
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
Bettongia lesueur Barrow and Boodie Islands subspecies		
Boodie, Burrowing Bettong (Barrow and Boodie Islands) [88021]	Vulnerable	Species or species habitat known to occur within area
Dasyurus hallucatus		
Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu] [331]	Endangered	Species or species habitat known 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	Species or species habitat known to occur within area
Lagorchestes conspicillatus conspicillatus		
Spectacled Hare-wallaby (Barrow Island) [66661]	Vulnerable	Species or species habitat known to occur within area

Scientific Name	Threatened Category	Presence Text
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 may occur within area
Orcaella heinsohni		
Australian Snubfin Dolphin [81322]	Vulnerable	Species or species habitat known 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 known to occur within area
Rhinonicteris aurantia (Pilbara form)		
Pilbara Leaf-nosed Bat [82790]	Vulnerable	Species or species habitat known to occur within area
Sousa sahulensis		
Australian Humpback Dolphin [87942]	Vulnerable	Species or species habitat known to occur within area
PLANT		
Minuria tridens		
Minnie Daisy [13753]	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

Scientific Name	Threatened Category	Presence Text
Chelonia mydas Green Turtle [1765]	Vulnerable	Breeding known to occur within area
Ctenotus zastictus Hamelin Ctenotus [25570]	Vulnerable	Species or species habitat known to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Foraging, feeding or related behaviour known to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Breeding known to occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Species or species habitat likely to occur within area
Liasis olivaceus barroni Pilbara Olive Python [66699]	Vulnerable	Species or species habitat likely to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Breeding known to occur within area
SHARK		
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 known to occur within area

Scientific Name	Threatened Category	Presence Text
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
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 known 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
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 known to occur within area
Sternula albifrons Little Tern [82849]	Vulnerable	Breeding known to occur within area
Sula leucogaster Brown Booby [1022]		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
Migratory Marine Species		
Anoxypristis cuspidata Narrow Sawfish, Knifetooth Sawfish [68448]		Species or species habitat known to occur within area

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
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
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

Scientific Name	Threatened Category	Presence Text
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Foraging, feeding or related behaviour 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
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	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 known to occur within area
Mobula birostris as Manta birostris Giant Manta Ray [90034]		Species or species habitat known to occur within area
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

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	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 known 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
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		

Scientific Name	Threatened Category	Presence Text
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 known to 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 likely to 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
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat known to occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area

Scientific Name	Threatened Category	Presence Text
Pandion haliaetus Osprey [952]		Breeding known to occur within area
Thalasseus bergii Greater Crested Tern [83000]		Breeding known 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
Bureau of Meteorology	
Lot 1102 P217148 [AGPR5866]	WA
Lot 819 P211578 [AGPR5865]	WA
Lot 973 P216414 [AGPR5863]	WA
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 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
Learmonth RAAF base [AGPR4415]	WA
Learmonth RAAF base [AGPR4416]	WA
Learmonth RAAF base [AGPR4467]	WA
Learmonth RAAF base [AGPR4418]	WA
Learmonth RAAF base [AGPR4419]	WA

Commonwealth Land Name	State
Learmonth RAAF base [AGPR4417]	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
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

Scientific Name	Threatened Category	Presence Text
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat known to 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 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 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 known to occur within area
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
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
Larus pacificus Pacific Gull [811]		Breeding known to occur within area
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat known to occur within area overfly marine area
Limosa lapponica Bar-tailed Godwit [844]		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
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 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
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 known to occur within area

Scientific Name	Threatened Category	Presence Text
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
Sula leucogaster Brown Booby [1022]		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
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area overfly marine 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
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 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
Doryrhamphus janssi Cleaner Pipefish, Janss' Pipefish [66212]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
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
Hippichthys penicillus Beady Pipefish, Steep-nosed Pipefish [66231]		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
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

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]		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
[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	Foraging, feeding or related behaviour 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
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Species or species habitat likely to 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

Current Scientific Name	Status	Type of Presence
[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
[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

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
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

Current Scientific Name	Status	Type of Presence
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 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
Dampier	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)
Dampier	Multiple Use Zone (IUCN VI)

Park Name	Zone & IUCN Categories
Eighty Mile Beach	Multiple Use Zone (IUCN VI)
Gascoyne	Multiple Use Zone (IUCN VI)
Montebello	Multiple Use Zone (IUCN VI)
Argo-Rowley Terrace	National Park Zone (IUCN II)
Dampier	National Park Zone (IUCN II)
Gascoyne	National Park Zone (IUCN II)
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	Nature Reserve	WA
Barrow Island	Marine Management Area	WA

Protected Area Name	Reserve Type	State
Barrow Island	Marine Park	WA
Bessieres Island	Nature Reserve	WA
Boodie, Double Middle Islands	Nature Reserve	WA
Bundegi Coastal Park	5(1)(h) Reserve	WA
Cape Range	National Park	WA
Gnandaroo Island	Nature Reserve	WA
Great Sandy Island	Nature Reserve	WA
Great Sandy Island	Nature Reserve	WA
Jurabi Coastal Park	5(1)(h) Reserve	WA
Little Rocky Island	Nature Reserve	WA
Locker Island	Nature Reserve	WA
Lowendal Islands	Nature Reserve	WA
Montebello Islands	Conservation Park	WA
Montebello Islands	Marine Park	WA
Montebello Islands	Conservation Park	WA
Muiron Islands	Nature Reserve	WA
Muiron Islands	Marine Management Area	WA
Ningaloo	Marine Park	WA
North Sandy Island	Nature Reserve	WA
Rocky Island	Nature Reserve	WA
Round Island	Nature Reserve	WA
Rowley Shoals	Marine Park	WA
Serrurier Island	Nature Reserve	WA
Tent Island	Nature Reserve	WA
Thevenard Island	Nature Reserve	WA
Thevenard Island	Nature Reserve	WA

Protected Area Name	Reserve Type	State
Unnamed WA36913	Nature Reserve	WA
Unnamed WA36915	Nature 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
Victor Island	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
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
Marine Route Survey for Subsea Fibre Optic Data Cable System - Australia West	2024/09826		Completed
Ningaloo Lighthouse Development, 17km north west Exmouth, Western Australia	2020/8693		Post-Approval
North West Shelf Project Extension, Carnarvon Basin, WA	2018/8335		Approval

Title of referral	Reference	Referral Outcome	Assessment Status
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
Project Highclere Cable Lay and Operation	2022/09203		Completed
Single Jetty Deep Water Port Renewable Hub, WA	2021/8942		Assessment
Action clearly unacceptable			
Highlands 3D Marine Seismic Survey	2012/6680	Action Clearly Unacceptable	Completed
Controlled action			
'Van Gogh' Petroleum Field Development	2007/3213	Controlled Action	Post-Approval
2-D seismic survey Scott Reef	2000/125	Controlled Action	Post-Approval
Anketell Point Iron Ore Processing & Export Port	2009/5120	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

Title of referral	Reference	Referral Outcome	Assessment Status
Controlled action			
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
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
Pluto Gas Project	2005/2258	Controlled Action	Completed
Pluto Gas Project Including Site B	2006/2968	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
The Scarborough Project - FLNG & assoc subsea infrastructure, Carnarvon Basin	2013/6811	Controlled Action	Post-Approval
Vincent Appraisal Well	2000/22	Controlled Action	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Controlled action			
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
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
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
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
Differential Global Positioning System (DGPS)	2001/445	Not Controlled Action	Completed
Drilling of an exploration well Gats-1 in Permit Area WA-261-P	2004/1701	Not Controlled Action	Completed

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action			
Drilling of exploration wells, Permit areas WA-301-P to WA-305-P	2002/769	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
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
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
Mahimahi Aquaculture Facility	2002/891	Not Controlled Action	Completed
Maia-Gaea Exploration wells	2000/17	Not Controlled Action	Completed

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action			
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
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
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
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
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

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action			
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
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	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
		Manner)	
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
Agrippina 3D Seismic Marine Survey	2009/5212	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

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
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
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
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	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
		Manner)	
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
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 Manner)	Post-Approval
Exmouth West 2D Marine Seismic Survey	2008/4132	Not Controlled Action (Particular Manner)	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
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
Harpy 1 exploration well	2001/183	Not Controlled Action (Particular Manner)	Post-Approval
Honeycombs MC3D Marine Seismic Survey	2012/6368	Not Controlled Action (Particular	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
		Manner)	
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
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
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

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular 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 reconnaissance survey	2008/4466	Not Controlled Action (Particular Manner)	Post-Approval
Mariner Non-Exclusive 2D Seismic Survey	2011/6172	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
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	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
		Manner)	
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
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
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

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
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
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
Tidepole Maz 3D Seismic Survey Campaign	2007/3706	Not Controlled Action (Particular	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
		Manner)	
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	2010/5715	Not Controlled Action (Particular Manner)	Post-Approval
Undertake a three dimensional marine seismic survey	2010/5679	Not Controlled Action (Particular Manner)	Post-Approval
Vampire 2D Non Exclusive Seismic Survey, WA	2010/5543	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

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
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
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
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
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
Ancient coastline at 125 m depth contour	North-west

Name	Region
Canyons linking the Argo Abyssal Plain with the Scott Plateau	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

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]	Foraging	Known to occur
Caretta caretta Loggerhead Turtle [1763]	Internesting buffer	Known to occur
Caretta caretta Loggerhead Turtle [1763]	Nesting	Known to occur
Chelonia mydas Green Turtle [1765]	Aggregation	Known to occur

Scientific Name	Behaviour	Presence
Chelonia mydas Green Turtle [1765]	Basking	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]	Migration corridor	Known to occur
Chelonia mydas Green Turtle [1765]	Nesting	Known to occur
Eretmochelys imbricata Hawksbill Turtle [1766]	Foraging	Known to occur
Eretmochelys imbricata Hawksbill Turtle [1766]	Internesting	Known to occur
Eretmochelys imbricata Hawksbill Turtle [1766]	Internesting buffer	Known to occur
Eretmochelys imbricata Hawksbill Turtle [1766]	Mating	Known to occur
Eretmochelys imbricata Hawksbill Turtle [1766]	Migration corridor	Known to occur
Eretmochelys imbricata Hawksbill Turtle [1766]	Nesting	Known to occur
Natator depressus Flatback Turtle [59257]	Aggregation	Known to occur

Scientific Name	Behaviour	Presence
Natator depressus Flatback Turtle [59257]	Foraging	Known to occur
Natator depressus Flatback Turtle [59257]	Internesting	Known to occur
Natator depressus Flatback Turtle [59257]	Internesting buffer	Known to occur
Natator depressus Flatback Turtle [59257]	Mating	Known to occur
Natator depressus Flatback Turtle [59257]	Migration corridor	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
Sula leucogaster Brown Booby [1022]	Breeding	Known to occur
Thalasseus bengalensis Lesser Crested Tern [66546]	Breeding	Known to occur

Scientific Name	Behaviour	Presence
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
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.

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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: 23-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:	2
National Heritage Places:	2
Wetlands of International Importance (Ramsar	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	6
Listed Threatened Ecological Communities:	None
Listed Threatened Species:	58
Listed Migratory Species:	67

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:	16
Commonwealth Heritage Places:	2
Listed Marine Species:	113
Whales and Other Cetaceans:	33
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	14
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:	37
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	224
Key Ecological Features (Marine):	8
Biologically Important Areas:	44
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

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)

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

Scientific Name	Threatened Category	Presence Text
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat known to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
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 known to occur within area
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat known 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
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
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

Scientific Name	Threatened Category	Presence Text
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
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
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area
FISH		
Milyeringa justitia Barrow Cave Gudgeon [86867]	Endangered	Species or species habitat known to occur within area

Scientific Name	Threatened Category	Presence Text
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
Bettongia lesueur Barrow and Boodie Islands subspecies		
Boodie, Burrowing Bettong (Barrow and Boodie Islands) [88021]	Vulnerable	Species or species habitat known to occur within area
Dasyurus hallucatus		
Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu] [331]	Endangered	Species or species habitat known 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	Species or species habitat known to occur within area
Lagorchestes conspicillatus conspicillatus		
Spectacled Hare-wallaby (Barrow Island) [66661]	Vulnerable	Species or species habitat known to occur within area

Scientific Name	Threatened Category	Presence Text
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 may occur within area
Orcaella heinsohni		
Australian Snubfin Dolphin [81322]	Vulnerable	Species or species habitat known 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 known to occur within area
Rhinonicteris aurantia (Pilbara form)		
Pilbara Leaf-nosed Bat [82790]	Vulnerable	Species or species habitat known to occur within area
Sousa sahulensis		
Australian Humpback Dolphin [87942]	Vulnerable	Species or species habitat known to occur within area
PLANT		
Minuria tridens		
Minnie Daisy [13753]	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

Scientific Name	Threatened Category	Presence Text
Chelonia mydas Green Turtle [1765]	Vulnerable	Breeding known to occur within area
Ctenotus zastictus Hamelin Ctenotus [25570]	Vulnerable	Species or species habitat known to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Foraging, feeding or related behaviour known to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Breeding known to occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Species or species habitat likely to occur within area
Liasis olivaceus barroni Pilbara Olive Python [66699]	Vulnerable	Species or species habitat likely to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Breeding known to occur within area
SHARK		
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 known to occur within area

Scientific Name	Threatened Category	Presence Text
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
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 known 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
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 known to occur within area
Sternula albifrons Little Tern [82849]	Vulnerable	Breeding known to occur within area
Sula leucogaster Brown Booby [1022]		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
Migratory Marine Species		
Anoxypristis cuspidata Narrow Sawfish, Knifetooth Sawfish [68448]		Species or species habitat known to occur within area

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
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
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

Scientific Name	Threatened Category	Presence Text
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Foraging, feeding or related behaviour 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
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	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 known to occur within area
Mobula birostris as Manta birostris Giant Manta Ray [90034]		Species or species habitat known to occur within area
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

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	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 known 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
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		

Scientific Name	Threatened Category	Presence Text
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 known to 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 likely to 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
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat known to occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area

Scientific Name	Threatened Category	Presence Text
Pandion haliaetus Osprey [952]		Breeding known to occur within area
Thalasseus bergii Greater Crested Tern [83000]		Breeding known 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
Bureau of Meteorology	
Lot 1102 P217148 [AGPR5866]	WA
Lot 819 P211578 [AGPR5865]	WA
Lot 973 P216414 [AGPR5863]	WA
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 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
Learmonth RAAF base [AGPR4415]	WA
Learmonth RAAF base [AGPR4416]	WA
Learmonth RAAF base [AGPR4467]	WA
Learmonth RAAF base [AGPR4418]	WA
Learmonth RAAF base [AGPR4419]	WA

Commonwealth Land Name	State
Learmonth RAAF base [AGPR4417]	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
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

Scientific Name	Threatened Category	Presence Text
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat known to 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 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 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 known to occur within area
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
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
Larus pacificus Pacific Gull [811]		Breeding known to occur within area
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat known to occur within area overfly marine area
Limosa lapponica Bar-tailed Godwit [844]		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
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 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
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 known to occur within area

Scientific Name	Threatened Category	Presence Text
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
Sula leucogaster Brown Booby [1022]		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
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area overfly marine 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
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 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
Doryrhamphus janssi Cleaner Pipefish, Janss' Pipefish [66212]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
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
Hippichthys penicillus Beady Pipefish, Steep-nosed Pipefish [66231]		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
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

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]		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
[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	Foraging, feeding or related behaviour 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
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Species or species habitat likely to 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

Current Scientific Name	Status	Type of Presence
[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
[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

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
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

Current Scientific Name	Status	Type of Presence
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 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
Dampier	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)
Dampier	Multiple Use Zone (IUCN VI)

Park Name	Zone & IUCN Categories
Eighty Mile Beach	Multiple Use Zone (IUCN VI)
Gascoyne	Multiple Use Zone (IUCN VI)
Montebello	Multiple Use Zone (IUCN VI)
Argo-Rowley Terrace	National Park Zone (IUCN II)
Dampier	National Park Zone (IUCN II)
Gascoyne	National Park Zone (IUCN II)
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	Nature Reserve	WA
Barrow Island	Marine Management Area	WA

Protected Area Name	Reserve Type	State
Barrow Island	Marine Park	WA
Bessieres Island	Nature Reserve	WA
Boodie, Double Middle Islands	Nature Reserve	WA
Bundegi Coastal Park	5(1)(h) Reserve	WA
Cape Range	National Park	WA
Gnandaroo Island	Nature Reserve	WA
Great Sandy Island	Nature Reserve	WA
Great Sandy Island	Nature Reserve	WA
Jurabi Coastal Park	5(1)(h) Reserve	WA
Little Rocky Island	Nature Reserve	WA
Locker Island	Nature Reserve	WA
Lowendal Islands	Nature Reserve	WA
Montebello Islands	Conservation Park	WA
Montebello Islands	Marine Park	WA
Montebello Islands	Conservation Park	WA
Muiron Islands	Nature Reserve	WA
Muiron Islands	Marine Management Area	WA
Ningaloo	Marine Park	WA
North Sandy Island	Nature Reserve	WA
Rocky Island	Nature Reserve	WA
Round Island	Nature Reserve	WA
Rowley Shoals	Marine Park	WA
Serrurier Island	Nature Reserve	WA
Tent Island	Nature Reserve	WA
Thevenard Island	Nature Reserve	WA
Thevenard Island	Nature Reserve	WA

Protected Area Name	Reserve Type	State
Unnamed WA36913	Nature Reserve	WA
Unnamed WA36915	Nature 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
Victor Island	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
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
Marine Route Survey for Subsea Fibre Optic Data Cable System - Australia West	2024/09826		Completed
Ningaloo Lighthouse Development, 17km north west Exmouth, Western Australia	2020/8693		Post-Approval
North West Shelf Project Extension, Carnarvon Basin, WA	2018/8335		Approval

Title of referral	Reference	Referral Outcome	Assessment Status
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
Project Highclere Cable Lay and Operation	2022/09203		Completed
Single Jetty Deep Water Port Renewable Hub, WA	2021/8942		Assessment
Action clearly unacceptable			
Highlands 3D Marine Seismic Survey	2012/6680	Action Clearly Unacceptable	Completed
Controlled action			
'Van Gogh' Petroleum Field Development	2007/3213	Controlled Action	Post-Approval
2-D seismic survey Scott Reef	2000/125	Controlled Action	Post-Approval
Anketell Point Iron Ore Processing & Export Port	2009/5120	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

Title of referral	Reference	Referral Outcome	Assessment Status
Controlled action			
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
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
Pluto Gas Project	2005/2258	Controlled Action	Completed
Pluto Gas Project Including Site B	2006/2968	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
The Scarborough Project - FLNG & assoc subsea infrastructure, Carnarvon Basin	2013/6811	Controlled Action	Post-Approval
Vincent Appraisal Well	2000/22	Controlled Action	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Controlled action			
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
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
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
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
Differential Global Positioning System (DGPS)	2001/445	Not Controlled Action	Completed
Drilling of an exploration well Gats-1 in Permit Area WA-261-P	2004/1701	Not Controlled Action	Completed

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action			
Drilling of exploration wells, Permit areas WA-301-P to WA-305-P	2002/769	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
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
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
Mahimahi Aquaculture Facility	2002/891	Not Controlled Action	Completed
Maia-Gaea Exploration wells	2000/17	Not Controlled Action	Completed

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action			
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
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
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
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
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

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action			
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
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	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
		Manner)	
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
Agrippina 3D Seismic Marine Survey	2009/5212	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

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
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
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
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	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
		Manner)	
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
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 Manner)	Post-Approval
Exmouth West 2D Marine Seismic Survey	2008/4132	Not Controlled Action (Particular Manner)	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
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
Harpy 1 exploration well	2001/183	Not Controlled Action (Particular Manner)	Post-Approval
Honeycombs MC3D Marine Seismic Survey	2012/6368	Not Controlled Action (Particular	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
		Manner)	
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
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
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

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular 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 reconnaissance survey	2008/4466	Not Controlled Action (Particular Manner)	Post-Approval
Mariner Non-Exclusive 2D Seismic Survey	2011/6172	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
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	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
		Manner)	
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
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
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

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
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
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
Tidepole Maz 3D Seismic Survey Campaign	2007/3706	Not Controlled Action (Particular	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
		Manner)	
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	2010/5715	Not Controlled Action (Particular Manner)	Post-Approval
Undertake a three dimensional marine seismic survey	2010/5679	Not Controlled Action (Particular Manner)	Post-Approval
Vampire 2D Non Exclusive Seismic Survey, WA	2010/5543	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

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
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
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
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
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
Ancient coastline at 125 m depth contour	North-west

Name	Region
Canyons linking the Argo Abyssal Plain with the Scott Plateau	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

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]	Foraging	Known to occur
Caretta caretta Loggerhead Turtle [1763]	Internesting buffer	Known to occur
Caretta caretta Loggerhead Turtle [1763]	Nesting	Known to occur
Chelonia mydas Green Turtle [1765]	Aggregation	Known to occur

Scientific Name	Behaviour	Presence
Chelonia mydas Green Turtle [1765]	Basking	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]	Migration corridor	Known to occur
Chelonia mydas Green Turtle [1765]	Nesting	Known to occur
Eretmochelys imbricata Hawksbill Turtle [1766]	Foraging	Known to occur
Eretmochelys imbricata Hawksbill Turtle [1766]	Internesting	Known to occur
Eretmochelys imbricata Hawksbill Turtle [1766]	Internesting buffer	Known to occur
Eretmochelys imbricata Hawksbill Turtle [1766]	Mating	Known to occur
Eretmochelys imbricata Hawksbill Turtle [1766]	Migration corridor	Known to occur
Eretmochelys imbricata Hawksbill Turtle [1766]	Nesting	Known to occur
Natator depressus Flatback Turtle [59257]	Aggregation	Known to occur

Scientific Name	Behaviour	Presence
Natator depressus Flatback Turtle [59257]	Foraging	Known to occur
Natator depressus Flatback Turtle [59257]	Internesting	Known to occur
Natator depressus Flatback Turtle [59257]	Internesting buffer	Known to occur
Natator depressus Flatback Turtle [59257]	Mating	Known to occur
Natator depressus Flatback Turtle [59257]	Migration corridor	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
Sula leucogaster Brown Booby [1022]	Breeding	Known to occur
Thalasseus bengalensis Lesser Crested Tern [66546]	Breeding	Known to occur

Scientific Name	Behaviour	Presence
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
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.

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APPENDIX E NOPSEMA REPORT FORMS

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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

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: 31/03/2026

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 or diversion system	☐
	Damage or failure of well-related equipment that has led or could lead to a loss of integrity of the well	☐
	Damage or failure to well-related equipment that is used to monitor the well	☐
	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 b. Fractures c. Wounds, lacerations, amputations, internal organ damage d. Burn e. Injury to nerves and spinal cord f. Traumatic joint/ligament and muscle/tendon injury	☐ ☐ ☐ ☐ ☐ ☐	g. Other injuries h. Mental disease i. Skin and subcutaneous tissue diseases j. Respiratory system diseases k. Circulatory system diseases l. Other diseases Not provided	☐ ☐ ☐ ☐ ☐ ☐ ☐
Location (On body)	G1 - 11 Cranium G1 - 12 Eye G1 - 13 Ear G1 - 14 Mouth G1 - 15 Nose G1 - 16 Face - not elsewhere classified G1 - 18 Head - multiple locations G2 - 21 Neck G3 - 31 Back - upper and lower G3 - 33 Chest (thorax) G3 - 34/ 35 Abdomen and pelvic region G3 - 38 Trunk - multiple locations G3 - 39 Trunk - unspecified locations G4 - 41 Shoulder G4 - 42 Upper arm G4 - 43 Elbow G4 - 44 Forearm G4 - 45 Wrist G4 - 46 Hand fingers and thumb G4- 48 Upper limb - multiple locations G5 - 51 Hip G5 - 52 Upper leg	☐ ☐	G5 - 53 Knee G5 - 54 Lower leg G5 - 55 Ankle G5 - 56 Foot and toes G5 - 58 Lower limb - multiple locations G6 - 61 Neck and trunk G6 - 62 Head and neck G6 - 63 Head and other G6 - 64 Trunk and limbs G6 - 65 Upper and lower limbs G6 - 66 Neck and shoulder G6 - 68 Other specified multiple locations G7 - 71 Circulatory system G7 - 72 Respiratory system G7 - 74 Genitourinary system G7 - 75 Nervous system G7 - 78 Other and multiple systemic conditions G7 - 79 Unspecified systemic conditions G8 - 80 Psychological system G9 - 90 Unspecified locations Not provided	☐ ☐
Mechanism of injury	G0 - 01 Falls from a height G0 - 02 Falls on the same level G0 - 03 Stepping kneeling or sitting on objects G1 - 11 Hitting stationary objects G1 - 12 Hitting moving object G2 - 21 Being hit by falling objects G2 - 25 Being trapped by moving machinery or equipment G2 - 26 Being trapped between stationary and moving objects G2 - 27 Exposure to mechanical vibration G2 - 28 Being hit by moving objects G3 - 31 Exposure to single, sudden sound G3 - 32 Long-term exposure to sound G3 - 38 Explosion G4 - 41 Muscular stress while lifting, carrying or putting down objects G4 - 42 Muscular stress while handling objects other than lifting, carrying or putting down G4 - 43 Muscular stress with no objects being handled G4 - 44 Repetitive movement, low muscle loading G5 - 51 Contact with hot objects G5 - 52 Contact with cold objects	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	G5 - 53 Exposure to environmental heat G5 - 54 Exposure to environmental cold G5 - 57 Contact with electricity G5 - 59 Exposure to other and unspecified environmental factors G6 - 61 Single contact with chemical or substance G6 - 62 Long term contact with chemicals or substances G6 - 69 Other and unspecified contact with chemical or substance G8 - 81 Exposure to a traumatic event G8 - 82 Exposure to workplace or occupational violence G8 - 84 Work pressure G8 - 85 Suicide or attempted suicide G8 - 86 Other mental stress factors G8 - 87 Work related harassment and/or workplace bullying G8 - 88 Other harassment G9 - 98 Other and multiple mechanisms of incident G9 - 99 Unspecified mechanisms of incident Not provided'	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
Agency of injury	1. Machinery and (mainly) fixed plant 2. Mobile plant or transport 3. Powered equipment, tools and appliances 4. Non-power hand tools, appliances and equipment 5. Chemicals and chemical products	☐ ☐ ☐ ☐ ☐	6. Chemicals and chemical products 7. Material and substances 8. Environmental agencies 9. Animal, human and biological agencies 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.

24. Requirement for ongoing reporting This section is required if the reportable incident has not been resolved at the time of submitting the initial 3-day report. A further written report is required every 30 days from the date of the issue of the initial report, until the incident has been resolved. This report should provide information including details of any temporary control measures put in place to minimise risks to well integrity to as low as practicable, and an estimate of when control measures set out in the WOMP for the well will be reinstated.

Part 1D – Complete for environmental incidents

25. What is the accepted environment plan for this incident?		
Environment plan name Document number Version		
26. 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	

27. 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	
28. 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?	
29. Was an environmental monitoring program initiated? *Provide details below.* Yes ☐ No ☐	
If yes, what actions have been implemented and/or planned?	
30. 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

31. 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		
32. 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		
33. 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

34. 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.

35. Is there any change to the LTI information provided at section 15 *Provide details below.* Yes ☐ No ☐	
Details	
36. Has the investigation been completed? *Provide details below.* Yes ☐ No ☐	
Root cause 1	
Root cause 2	
Root cause 3	
Other root causes	
37. 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*	

38. 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		

39. 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.

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APPENDIX F STAKEHOLDER CONSULTATION

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Appendix F: Greater Western Flank Phase 4 Drilling and Subsea Installation Environment Plan

April 2026

Revision 0

Document No. A1806AH1500002423

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Table of Contents

1. Consultation Approach 11
1.1 Tiered consultation approach 11
1.2 Building on the existing consultation approach 11
1.3 Goodwyn Area Infill Development Offshore Project Proposal (OPP) 12
1.4 Traditional Custodian consultation approach 12
1.5 NGO consultation approach 12
1.6 NGO response 13
2. Relevancy assessment 14
2.1 Assessment of relevant persons for the proposed activity 14
2.2 Table 1: Assessment of relevance 15
3. Consultation Activities 53
3.1 GWF-4 Drilling and Subsea Installation EP consultation activities 53
3.2 Discharging Regulation 25 of the Environment Regulations 53
3.3 Proactive consultation 54
3.3.1 Community engagement 54
3.3.2 Community Liaison Group engagement 54
3.3.3 Newsletters 55
3.4 Traditional Custodian specific consultation 55
3.5 Consultation Update (February 2026) 56
4. Table 2: Consultation report with relevant persons or organisations 57
4.1 Commonwealth and WA State Government departments or agencies – marine 57
4.1.1 Australian Border Force (ABF) 57
4.1.2 Australian Communications and Media Authority (ACMA) 59
4.1.3 Australian Fisheries Management Authority (AFMA) 62
4.1.4 Australian Hydrographic Office (AHO) 65
4.1.5 Australian Maritime Safety Authority (AMSA) – Marine Pollution 68
4.1.6 Australian Maritime Safety Authority (AMSA) – Marine Safety 69
4.1.7 Department of Agriculture, Fisheries and Forestry (DAFF) – Fisheries 74
4.1.8 Department of Defence (DoD) 76
4.1.9 Department of Foreign Affairs and Trade (DFAT) 78
4.1.10 Department of Planning, Lands and Heritage (DPLH) 80
4.1.11 Department of Primary Industries and Regional Development (DPIRD) 82
4.1.12 Department of Transport and Major Infrastructure (DTMI) 84
4.1.13 Pilbara Ports 86
4.1.14 Western Australian Museum (WAM) 88
4.2 Commonwealth and WA State Government departments or agencies – environment 91
4.2.1 Department of Agriculture, Fisheries and Forestry (DAFF) – Biosecurity (marine pests, vessels, aircraft and personnel) 91
4.2.2 Department of Biodiversity, Conservation and Attractions (DBCA) 93
4.2.3 Department of Climate Change, Energy, the Environment and Water (DCCEEW) 99
4.2.4 Director of National Parks (DNP) 101
4.2.5 Ningaloo Coast World Heritage Advisory Committee (NCWHAC) 106
4.3 Commonwealth and WA State Government departments or agencies – industry 108
4.3.1 Department of Mines, Petroleum and Exploration (DMPE) 108
4.3.2 Department of Industry, Science and Resources (DISR) 110
4.4 Commonwealth commercial fisheries and peak representative bodies 112
4.4.1 Commonwealth Fisheries Association (CFA) 112

4.4.2 North West Slope Trawl Fishery 113
4.4.3 Tuna Australia 115
4.4.4 Western Deepwater Trawl Fishery 123
4.4.5 Western Tuna and Billfish Fishery 125
4.4.6 Australian Southern Bluefin Tuna Industry Association (ASBTIA) 127
4.5 State commercial fisheries and peak representative bodies 129
4.5.1 Aquaculture Council of Western Australia (ACWA) 129
4.5.2 Western Australian Fishing Industry Council (WAFIC) 131
4.5.3 Mackerel Managed Fishery (Area 2), Marine Aquarium Managed Fishery, Onslow Prawn Managed Fishery, Pilbara Line Fishery, Pilbara Trap Fishery 135
4.5.4 Pearl Producers Association (PPA) 137
4.5.5 Specimen Shell Managed Fishery 139
4.5.6 West Coast Rock Lobster Fishery 141
4.5.7 Western Rock Lobster Council 142
4.6 Recreational marine users and peak representative bodies 144
4.6.1 Gascoyne Recreational Marine Users 144
4.6.2 Marine Tourism WA 146
4.6.3 Pilbara/Kimberley Recreational Marine Users 148
4.6.4 Recfishwest 150
4.6.5 WA Game Fishing Association 152
4.7 Titleholders and operators 154
4.7.1 3D Energi, Allasso Energy, Beagle No 1, Bounty Oil and Gas, BP Developments Australia, Carbon CQ, Carnarvon Energy, Coastal Oil and Gas, Energy Resources, Exxon Mobil Australia Resources Company, Finder No 9 /10/16/17, INPEX Alpha, Jadestone, JX Nippon O&G Exploration (Australia), Longreach Capital Investment, KATO Energy / KATO Corowa/ KATO NWS / KATO Amulet, KUFPEC, Kyushu Electric Wheatstone, OMV Australia / Sapura OMV Upstream, Pelsart Resources, PE Wheatstone, SK Earthon, Shell Australia, Skye Napoleon/Skye Resources, Tanami Energy, Vermilion Energy, Western Gas 154
4.7.2 Melbana Exploration, and Pathfinder Energy 156
4.7.3 Chevron Australia / JERA Gorgon / MidOcean Gorgon / Osaka Gas Gorgon 158
4.7.4 InCapture 160
4.7.5 OPIC Australia 162
4.7.6 Santos NA Energy Holdings / Santos Ltd / Santos WA Northwest / Santos Offshore / Santos WA Southwest / Santos (BOL) / Santos WA PVG 164
4.8 Peak industry representative bodies 166
4.8.1 Australian Energy Producers (AEP) 166
4.9 Local government and elected parliamentary representatives, community groups or organisations 168
4.9.1 Broome Chamber of Commerce and Industry (Broome CCI) 168
4.9.2 Carnarvon Chamber of Commerce and Industry (Carnarvon CCI) 169
4.9.3 Exmouth Chamber of Commerce and Industry (Exmouth CCI) 171
4.9.4 Karratha and Districts Chamber of Commerce and Industry (KDCCI) 173
4.9.5 Onslow Chamber of Commerce and Industry (Onslow CCI) 174
4.9.6 Exmouth Community Liaison Group (Exmouth CLG) 176
4.9.7 Karratha Community Liaison Group (Karratha CLG) 178
4.9.8 City of Karratha 181
4.9.9 Shire of Ashburton 183
4.9.10 Shire of Broome 184
4.9.11 Shire of Carnarvon 186
4.9.12 Shire of Exmouth 188
4.9.13 Shire of Shark Bay 189

4.10 Other non-government groups or organisations (NGOs) or individuals 192
4.10.1 Conservation Council of Western Australia (CCWA) 192
4.10.2 Telstra 193
4.10.3 The Wilderness Society (TWS) 197
4.11 Research institutes and local conservation groups or organisations 200
4.11.1 Cape Conservation Group (CCG) 200
4.11.2 Protect Ningaloo 202
4.12 Traditional custodians and nominated representative corporations 204
4.12.1 Bardi and Jawi Niimidiman Aboriginal Corporation (BJNAC) 204
4.12.2 Bundi Yamatji Aboriginal Corporation (BYAC) 206
4.12.3 Buurabalayji Thalanyji Aboriginal Corporation (BTAC) 210
4.12.4 Gogolanyngor Aboriginal Corporation (GAC) 213
4.12.5 Karajarri Traditional Lands Association (KTLA) (Aboriginal Corporation) 216
4.12.6 Kariyarra Aboriginal Corporation (KAC) 218
4.12.7 Malgana Aboriginal Corporation (Malgana) 226
4.12.8 Murujuga Aboriginal Corporation (MAC) 230
4.12.9 Nanda Aboriginal Corporation (Nanda) 237
4.12.10 Nganhurra Thanardi Garrbu Aboriginal Corporation (NTGAC) 242
4.12.11 Ngarluma Aboriginal Corporation (NAC) 245
4.12.12 Nhuwala Claim Group (Nhuwala) 249
4.12.13 Nimanburr Aboriginal Corporation (Nimanburr) 255
4.12.14 Nyangumarta Karajarri Aboriginal Corporation (NKAC) 257
4.12.15 Nyangumarta Warrarn Aboriginal Corporation (NWAC) 260
4.12.16 Nyul Nyul PBC Aboriginal Corporation (Nyul Nyul) 263
4.12.17 Robe River Kuruma Aboriginal Corporation (RRKAC) 265
4.12.18 Thalanyji / Nhuwala People 268
4.12.19 Wanparta Aboriginal Corporation (Wanparta) 271
4.12.20 Wirrawandi Aboriginal Corporation (WAC) 275
4.12.21 Yamatji Marlpa Barna Baba Maaja Aboriginal Corporation (Yamatji Land and Sea Council) (YMBBMAC) 279
4.12.22 Yawuru Native Title Holders Aboriginal Corporation (Yawuru) 281
4.12.23 Yindjibarndi Aboriginal Corporation (Yindjibarndi) 284
4.12.24 Yinggarda Aboriginal Corporation (YAC) 286
4.12.25 Yued Aboriginal Corporation (Yued) 290
4.13 Native Title representative bodies 293
4.13.1 Kimberley Land Council (KLC) 293
4.13.2 Yamatji Marlpa Aboriginal Corporation (YMAC) 295
4.13.3 Yamatji Southern Regional Corporation (YSRC) 297
4.14 Self-identified First Nations groups 301
4.14.1 Ngarluma Yindjibarndi Foundation Ltd (NYFL) 301
4.15 Other First Nations groups 304
4.15.1 Save Our Songlines (SOS) 304
5. Table 3: Engagement Report with Persons or Organisations Assessed as Not Relevant 311
5.1 Commonwealth commercial fisheries and peak representative bodies 311
5.1.1 Southern Bluefin Tuna Fishery 311
5.2 Local government and elected parliamentary representatives, community groups or organisations 312
5.2.1 RAC Monkey Mia Dolphin Resort 312
5.2.2 Dirk Hartog Island 312

5.2.3 Shark Bay Community Resource Centre 313
5.2.4 Shark Bay Coastal Tours 314
5.2.5 Shark Bay Recreational Marine Users 314
5.2.6 Naturetime Tours 315
5.2.7 Wula Gura Nyinda Eco Cultural Tours 316
5.3 Other non-government groups or organisations (NGOs) or individuals 316
5.3.1 Australian Conservation Foundation (ACF) 316
5.3.2 Australian Marine Conservation Society (AMCS) 317
5.3.3 Greenpeace Australia Pacific (GAP) 318
5.3.4 Vocus 318
5.4 Research institutes and local conservation groups or organisations 319
5.4.1 Australian Institute of Marine Science (AIMS) 319
5.4.2 Commonwealth Scientific and Industrial Research Organisation (CSIRO) 320
5.4.3 University of Western Australia (UWA) 321
5.4.4 Western Australian Marine Science Institution (WAMSI) 322
5.4.5 Curtin University 323
5.4.6 Edith Cowan University (ECU) 324
5.4.7 Murdoch University 325
5.5 Traditional custodians and nominated representative corporations 325
5.5.1 Wunambal Gaambera Aboriginal Corporation (WGAC) 325
6. Record of Consultation 327
6.1 Initial consultation 327
6.1.1 Consultation information sheet. 327
6.1.2 Summary information sheet 335
6.1.3 Defence zones maps 338
6.1.4 Vessel density map 339
6.1.5 WA shipwrecks 339
6.1.6 Commonwealth shipwrecks 342
6.1.7 Submarine communication cables map 345
6.1.8 Email sent to Australian Border Force (ABF); Australian Maritime Safety Authority (AMSA) – Marine Pollution; Pilbara Ports Authority (PPA); Ningaloo Coast World Heritage Advisory Committee (NCWHAC); Department of Mines, Petroleum and Exploration (DMPE); Department of Industry, Science and Resources (DISR); Australian Energy Producers (AEP); Australian Conservation Foundation (ACF); Australian Marine Conservation Society (AMCS); Conservation Council of Western Australia (CCWA); Greenpeace Asia Pacific (GAP); The Wilderness Society (TWS); RAC Monkey Mia Dolphin Resort; Dirk Hartog Island; Shark Bay Community Resource Centre; Shark Bay Coastal Tours; Naturetime Tours; Wula Gura Eco Cultural Tours; Protect Ningaloo; Cape Conservation Group (CCG); Shire of Exmouth; Exmouth Community Liaison Group (CLG); Exmouth Chamber of Commerce and Industry; City of Karratha; Karratha Community Liaison Group (CLG); Karratha and Districts Chamber of Commerce and Industry; Shire of Broome; Broome Chamber of Commerce and Industry; Shire of Shark Bay; Shire of Carnarvon; Carnarvon Chamber of Commerce and Industry; Onslow Chamber of Commerce and Industry; 3D Energi; Allasso Energy; Beagle No 1; Bounty Oil and Gas; BP Developments Australia; Carbon CQ; Carnarvon Energy; Coastal Oil and Gas; Energy Resources; Exxon Mobil Australia Resources; Finder Energy; InCapture; INPEX Alpha; Jadestone; JX Nippon O&G Exploration; Longreach Capital; KATO Energy; KUFPEC; Kyushu Electric Wheatstone; OMV Australia; OPIC Australia; Pelstart Resources; PE Wheatstone; Santos; SK Earthon; Shell Australia; Skye Napoleon/Resources; Tanami Energy; Vermilion Energy; Western Gas – 30 July 2025 346
6.1.9 Email sent to Australian Communication Management Authority (ACMA); Telstra; Vocus – 29 July 2025 348
6.1.10 Email sent to Australian Hydrographic Authority (AHO) – 29 July 2025 351
6.1.11 Email sent to Western Australian Fishing Industry Council – 29 July 2025 353
6.1.12 Email sent to Shire of Ashburton – 29 July 2025 356

6.1.13 Email sent to Australian Maritime Safety Authority (AMSA) – Marine Safety – 29 July 2025 359
6.1.13.1 Email sent to Australian Maritime Safety Authority (AMSA) – Maritime Safety – 30 July 2025 361
6.1.14 Email sent to Recfishwest – 29 July 2025 361
6.1.14.1 Email sent to Recfishwest – 30 July 2025 364
6.1.15 Email sent to Aquaculture Council of Western Australia – 29 July 2025 364
6.1.15.1 Email to Aquaculture Council of Western Australia – 30 July 2025 367
6.1.16 Email sent to Department of Agriculture, Fisheries and Forestry (DAFF) – Fisheries; Department of Agriculture, Fisheries and Forestry (DAFF) - Biosecurity – 29 July 2025 367
6.1.16.1 Email sent to Department of Agriculture, Fisheries and Forestry (DAFF) – Fisheries; Department of Agriculture, Fisheries and Forestry (DAFF) - Biosecurity – 30 July 2025..... 370
6.1.17 Email sent to Director of National Parks (DNP) – 29 July 2025 370
6.1.17.1 Email to Director of National Parks (DNP) – 30 July 373
6.1.18 Email sent to Western Rock Lobster Council – 29 July 2025 373
6.1.18.1 Email sent to Western Rock Lobster Council – 30 July 2025..... 376
6.1.19 Email sent to Department of Planning, Lands and Heritage – 29 July 2025 376
6.1.19.1 Email sent to Department of Planning, Lands and Heritage – 30 July 2025..... 379
6.1.20 Email sent to Department of Transport and Major Infrastructure (DTMI)– 29 July 2025 379
6.1.20.1 Email sent to Department of Transport and Major Infrastructure – 29 July 2025..... 381
6.1.21 Email sent to Department of Biodiversity, Conservation and Attraction (DBCA) – 30 July 2025 382
6.1.21.1 Email sent to Department of Biodiversity, Conservation and Attraction – 30 July 2025 385
6.1.22 Email sent to Western Australian Museum – 29 July 2025 385
6.1.22.1 Email sent to Western Australian Museum – 30 July 2025 388
6.1.23 Email sent to Chevron – 29 July 2025 388
6.1.23.1 Email sent to Chevron – 30 July 2025 391
6.1.24 Email sent to Department of Defence – 29 July 2025 391
6.1.24.1 Email sent to Department of Defence – 30 July 2025 394
6.1.25 Email sent to Department of Primary Industries and Regional Development – 29 July 2025 394
6.1.25.1 Email sent to Department of Primary Industries and Regional Development – 30 July 2025 398
6.1.26 Email sent to Australian Southern Bluefin Tuna Industry Association (ASBTIA); Southern Bluefin Tuna Fishery license holders – 11 August 2025 398
6.1.27 Email sent to Bardi and Jawi Niimidiman Aboriginal Corporation – 28 July 2025 401
6.1.28 Email sent to Bundi Yamatji Aboriginal Corporation – 28 July 2025 403
6.1.29 Email sent to Buurabalayji Thalanyji Aboriginal Corporation (via legal representative) – 29 July 2025 405
6.1.30 Email sent to Gogolanyngor Aboriginal Corporation – 28 July 2025 408
6.1.31 Email sent to Karajarri Traditional Lands Association (Aboriginal Corporation) – 28 July 2025 410
6.1.32 Email sent to Kariyarra Aboriginal Corporation – 28 July 2025 412
6.1.33 Email sent to Malgana Aboriginal Corporation (via YMAC) – 28 July 2025 415
6.1.34 Email sent to Murujuga Aboriginal Corporation – 28 July 2025 418
6.1.35 Email sent to Nanda Aboriginal Corporation (via YMAC) – 28 July 2025 421
6.1.36 Email sent to Nganhurra Thanardi Garrbu Aboriginal Corporation – 28 July 2025 424
6.1.37 Email sent to Ngarluma Aboriginal Corporation – 28 July 2025 426
6.1.38 Email sent to Nhuwala Claim Group (via YMAC) – 26 August 2025 429
6.1.39 Email sent to Nimanburr Aboriginal Corporation (La-Djardarr Bay) – 28 July 2025 431
6.1.40 Email sent to Nyangumarta Karajarri Aboriginal Corporation (via KLC) – 28 July 2025 433

6.1.41 Email sent to Nyangumarta Warrarn Aboriginal Corporation – 28 July 2025 435
6.1.42 Email sent to Nyul Nyul PBC Aboriginal Corporation – 28 July 2025 437
6.1.43 Email sent to Robe River Kuruma Aboriginal Corporation – 28 July 2025 439
6.1.44 Email sent to Thalanyji / Nhuwala People (via BTAC) – 26 August 2028 441
6.1.45 Email sent to Wanparta Aboriginal Corporation – 28 July 2025 443
6.1.46 Email sent to Wirrawandi Aboriginal Corporation – 28 July 2025 446
6.1.47 Email sent to Wunambal Gaambera Aboriginal Corporation – 28 July 2025 449
6.1.48 Email sent to Yamatji Marlpa Aboriginal Corporation and Yamatji Marlpa Barna Baba Maaja Aboriginal Corporation (via YMAC) – 28 July 2025 451
6.1.49 Email sent to Yamatji Southern Regional Corporation – 28 July 2025 453
6.1.50 Email sent to Yawuru Native Title Holders Aboriginal Corporation – 28 July 2025 455
6.1.51 Email sent to Yinggarda Aboriginal Corporation (via legal representative) – 29 July 2025 457
6.1.52 Email sent to Yued Aboriginal Corporation – 28 July 2025 459
6.1.53 Email sent to Kimberley Land Council – 28 July 2025 461
6.1.54 Email sent to Yamatji Southern Regional Corporation (YSRC) – 28 July 2025 463
6.1.55 Email sent to Ngarluma Yindjibarndi Foundation Ltd and Yindjibarndi Aboriginal Corporation (via NYFL) – 29 July 2025 465
6.1.56 Email sent to Save Our Songlines (via legal representative) – 29 July 2025 467
6.1.57 Email sent to Australian Fisheries Management Authority (AFMA), Commonwealth Fisheries Association (CFA), North-West Slope Trawl Fishery licence holders, Tuna Australia, Western Deepwater Trawl Fishery licence holders, Western Tuna and Billfish Fishery licence holders – 29 July 2025 469
6.1.57.1 Email sent to AFMA, Commonwealth Fisheries Association (CFA), North-West Slope Trawl Fishery licence holders, Tuna Australia, Western Deepwater Trawl Fishery licence holders, Western Tuna and Billfish Fishery licence holders – 30 July 2025 472
6.1.58 Email sent to Australian Institute of Marine Science (AIMS), Commonwealth Scientific and Industrial Research Organisation (CSIRO), Western Australian Marine Science Institution (WAMSI), Curtin University, Edith Cowan University (ECU), Murdoch University, University of Western Australia (UWA) – 29 July 2025 472
6.1.58.1 Email sent to Australian Institute of Marine Science (AIMS, Commonwealth Scientific and Industrial Research Organisation (CSIRO), Western Australian Marine Science Institution (WAMSI), Curtin University, Edith Cowan University (ECU), Murdoch University, University of Western Australia (UWA) – 30 July 2025 475
6.1.59 Email sent to Department of Climate Change, Energy, the Environment and Water (DCCEEW) – 29 July 2025 475
6.1.59.1 Email sent to Department of Climate Change, Energy, the Environment and Water (DCCEEW) – 30 July 2025 478
6.1.60 Email sent to Pilbara/Kimberley recreational marine users; Gascoyne recreational marine users; Shark Bay recreational marine users; Marine Tourism WA; WA Game Fishing Association – 29 July 2025 478
6.1.60.1 Email sent to Pilbara/Kimberley recreational marine users, Gascoyne recreational marine users – 30 July 2025 481
6.1.61 Letter sent to Pilbara/Kimberley recreational marine users, Gascoyne recreational marine users, Western Rock Lobster Fishery licence holders – 29 July 2025 482
6.1.62 Email sent to Mackerel Managed Fishery (Area 2), Marine Aquarium Managed Fishery, Onslow Prawn Managed Fishery, Pilbara Line Fishery, Pilbara Trap Fishery licence holders – 30 July 2025 485
6.1.63 Email sent to Specimen Shell Managed Fishery licence holders – 11 February 2026 487
6.1.64 Email sent to Shire of Ashburton – 29 July 2025 490
6.2 Follow-up consultation 493
6.2.1 Email sent to Australian Border Force (ABF); Australian Maritime Safety Authority (AMSA) – Marine Pollution; Pilbara Ports Authority (PPA); Ningaloo Coast World Heritage Advisory Committee (NCWHAC); Department of Mines, Petroleum and Exploration (DMPE); Department of Industry, Science and Resources (DISR); Australian Energy Producers (AEP); Australian Conservation

Foundation (ACF); Australian Marine Conservation Society (AMCS); Conservation Council of Western Australia (CCWA); Greenpeace Asia Pacific (GAP); The Wilderness Society (TWS); RAC Monkey Mia Dolphin Resort; Dirk Hartog Island; Shark Bay Community Resource Centre; Shark Bay Coastal Tours; Naturetime Tours; Wula Gura Eco Cultural Tours; Protect Ningaloo; Cape Conservation Group (CCG); Shire of Exmouth; Exmouth Community Liaison Group (CLG); Exmouth Chamber of Commerce and Industry; City of Karratha; Karratha Community Liaison Group (CLG); Karratha and Districts Chamber of Commerce and Industry; Shire of Broome; Broome Chamber of Commerce and Industry; Shire of Shark Bay; Shire of Carnarvon; Carnarvon Chamber of Commerce and Industry; Onslow Chamber of Commerce and Industry; 3D Energi; Allasso Energy; Beagle No 1; Bounty Oil and Gas; BP Developments Australia; Carbon CQ; Carnarvon Energy; Coastal Oil and Gas; Energy Resources; Exxon Mobil Australia Resources; Finder Energy; INPEX Alpha; Jadestone; JX Nippon O&G Exploration; Longreach Capital; KATO Energy; KUFPEC; Kyushu Electric Wheatstone; OMV Australia; OPIC Australia; Pelstart Resources; PE Wheatstone; Santos; SK Earthon; Shell Australia; Skye Napoleon/Resources; Tanami Energy; Vermilion Energy; Western Gas; Australian Institute of Marine Science (AIMS); Commonwealth Scientific and Industrial Research Organisation (CSIRO); Western Australian Marine Science Institution (WAMSI); Curtin University; Edith Cowan University (ECU); Murdoch University; University of Western Australia (UWA); Pilbara/Kimberley recreational marine users; Gascoyne recreational marine users; Commonwealth Fisheries Association (CFA); North-West Slope Trawl Fishery licence holders; Tuna Australia; Western Deepwater Trawl Fishery licence holders; Western Tuna and Billfish Fishery licence holders; Aquaculture Council of Western Australia (ACWA); Western Rock Lobster Council; Department of Transport and Major Infrastructure (DTMI); Western Australian Museum; Chevron Australia; Department of Defence (DoD); Department of Primary Industries and Regional Development (DPIRD); Department of Climate Change, Energy, the Environment and Water (DCCEEW); Department of Biodiversity, Conservation and Attractions (DBCA); Director of National Parks (DNP); Department of Agriculture, Fisheries and Forestry (DAFF) – Fisheries; Department of Agriculture, Fisheries and Forestry (DAFF) – Biosecurity; Australian Maritime Safety Authority (AMSA) – Marine Safety; Australian Southern Bluefin Tuna Industry Association (ASBTIA); North-West Slope Trawl Fishery; Western Deepwater Trawl Fishery; Western Tuna and Billfish Fishery license holders; Marine Tourism WA; WA Game Fishing Association; Shark Bay Marine Users; – 18 August 2025 493

6.2.2 Email sent to Shire of Ashburton – 21 August 2025 494

6.2.3 Letter sent to Pilbara/Kimberley recreational marine users; Gascoyne recreational marine users; Western Rock Lobster Fishery licence holders – 18 August 2025 496

6.3 Consultation Update 497

6.3.1 Consultation Information Sheet – January 2026 497

6.3.2 Defence zones map 505

6.3.3 Vessel density map 506

6.3.4 Commonwealth shipwrecks 507

6.3.5 WA shipwrecks 509

6.3.6 Submarine communication cables map 511

6.3.7 Email sent to Department of Foreign Affairs and Trade (DFAT) – 6 February 2026 511

6.3.8 Email sent to Melbana Exploration; Pathfinder Energy – 6 February 2026 514

6.3.9 Email sent to Department of Industry, Science and Resources (DISR); Australian Maritime Safety Authority (AMSA – Marine Pollution; Department of Mines, Petroleum and Exploration (DMPE); Pilbara Ports; Ningaloo Coast World Heritage Advisory Committee (NCWHAC); Department of Transport and Major Infrastructure (DTMI); Department of Agriculture, Fisheries and Forestry (DAFF) – Fisheries; Department of Agriculture, Fisheries and Forestry (DAFF) – Biosecurity; Department of Biodiversity, Conservation and Attractions (DBCA) – 10 February 2026 516

6.3.10 Email sent to Australian Border Force (ABF); Australian Fisheries Management Authority (AFMA) – 10 February 2026 517

6.3.11 Email to Department of Planning, Lands and Heritage (DPLH) – 10 February 2026 518

6.3.12 Email sent to Department of Climate Change, Energy, the Environment and Water (DCCEEW) – 10 February 2026 519

6.3.13 Email sent to Department of Primary Industries and Regional Development – 10 February 2026 521

6.3.14 Email sent to Australian Communications Management Authority (ACMA) – 10 February 2026 522

6.3.15 Email sent to Department of Defence (DoD) – 10 February 2026 523

6.3.16 Email sent to Australian Hydrographic Office (AHO) – 10 February 2026 524
6.3.17 Email sent to Australian Maritime Safety Authority (AMSA) – Marine Safety – 10 February 2026 525
6.3.18 Email sent to Aquaculture Council of Western Australia – 10 February 2026 526
6.3.19 Email sent to Pearl Producers Association – 25 February 2026 527
6.3.20 Email sent to Western Australian Museum (WAM) – 10 February 2026 530
6.3.21 Email sent to Department of Agriculture, Fisheries and Forestry (DAFF) – Fisheries; Department of Agriculture, Fisheries and Forestry (DAFF) - Biosecurity – 10 February 2026 531
6.4 Consultation Update – Follow-up 532
6.4.1 Email sent to Department of Foreign Affairs and Trade (DFAT); Melbana Exploration; Pathfinder Energy – 25 February 2026 532
6.4.2 Email sent to Pearl Producers Association (PPA) – 16 March 2026 533
6.5 Newspaper advertisements 534
6.5.1 Summary table 534
6.5.1.1 The Australian – 28 July 2025 535
6.5.1.2 The West Australian – 28 July 2025 536
6.5.1.3 Pilbara News – 30 July 2025 537
6.5.1.4 North West Telegraph – 30 July 2025 538
6.5.1.5 Midwest Times – 30 July 2025 539
6.5.1.6 Koori Mail – 30 July 2025 540
6.5.1.7 National Indigenous Times – 29 July 2025 541
6.6 Social media 542
6.6.1 Social media EP targeted campaign 542
6.7 Community information sessions 543
6.7.1 Pilbara Region 543
6.7.1.1 FeNaCING Festival – 2 to 3 August, 2025 543
6.7.1.2 Dampier Beachside Markets − 18 October 2025 549
6.7.2 Gascoyne Region 552
6.7.2.1 Exmouth Community Markets – 5 October 2025 552
6.8 Community newsletters 555
6.8.1 Let’s Talk – Our Plans, Your Say 555
6.8.1.1 Edition 6, October 2025 555
6.8.2 Karratha Community Update 559
6.8.2.1 Edition Q2 – July 2025 559
6.8.2.2 Edition Q3 – October 2025 563
6.8.2.3 Edition Q4 – December 2025 567
6.8.2.4 Edition Q1 – March 2026 571

1. CONSULTATION APPROACH

Consultation under regulation 25 of the OPGGS(E) Regulations provides that 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 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)).

For the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan (EP), Woodside has taken a broad and proactive tiered consultation approach over a period of 8 months.

This approach was aimed at raising public awareness of the consultation opportunity and to enable self-identification. It included a social media campaign and advertising in national, state, regional and Indigenous newspapers.

The tiered consultation approach discharges regulation 25 of the Environment Regulations' requirements. The approach is proactive, extended, has enabled self-identification, and has raised broad awareness of Woodside's activities related to this EP.

1.1 Tiered consultation approach

Regulation 25	Woodside's consultation approach assessed and identified relevant persons, enabled two-way dialogue and engagement, and included email and phone call follow-up. The approach taken comfortably satisfies the requirements of regulation 25: to give relevant persons sufficient information and allow a reasonable period of time for consultation (see Section 5 of the EP).
Proactive	To raise awareness of the consultation process, and to enable grass-roots consultation, Woodside undertook advertised regional consultation roadshows and facilitated consultation at regional community events.
Self-Identification	Broad communication activities were undertaken to build awareness of consultation and enable self-identification, supported by targeted education materials.
Broad Understanding	Broad proactive communication activities were undertaken with the public to raise awareness of Woodside's activities.

1.2 Building on the existing consultation approach

For this EP, Woodside has built on its consultation methodology and undertaken additional consultation activities throughout the consultation period to ensure a reasonable period of time and sufficient information has been provided to relevant persons so that they can make an informed assessment of the possible consequences of the activity on their functions, interests or activities.

The approach for this included:

- a consultation period of up to 8 months.
- undertaking proactive consultation activities to provide sufficient information to relevant persons.
- raising awareness of the consultation process and opportunity to provide feedback.

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- driving participation in the consultation process.

An overview of this approach is shown below:

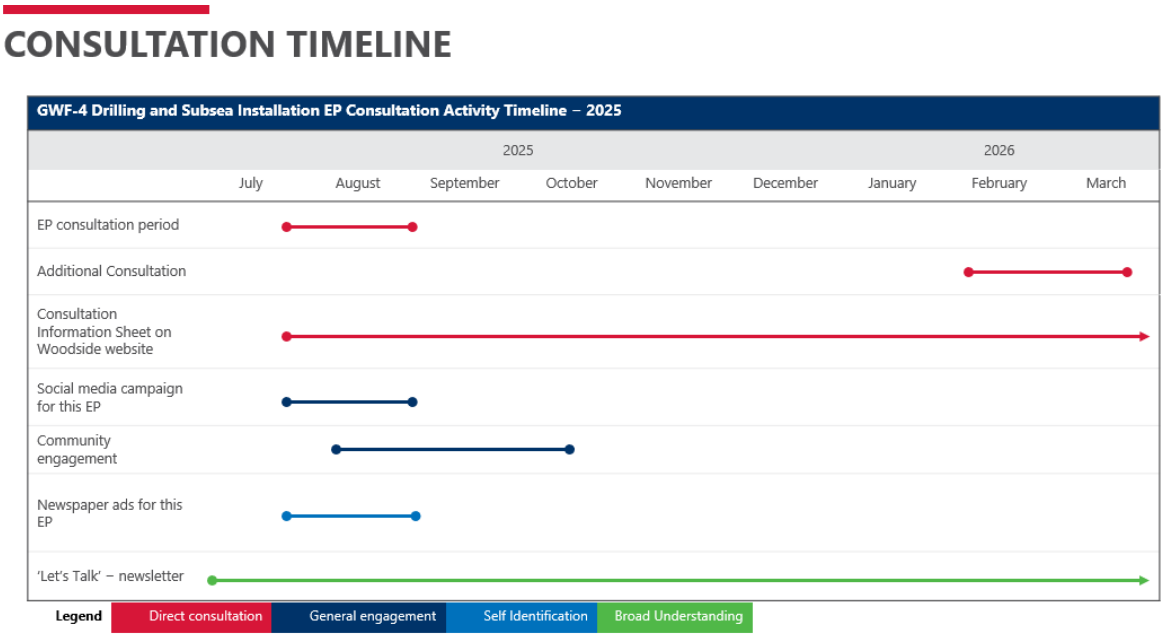


Figure 1-1: GWF-4 Drilling and Subsea Installation EP consultation activity

1.3 Goodwyn Area Infill Development Offshore Project Proposal (OPP)

The Petroleum Activity as defined in this EP is a part of the Goodwyn Area Infill Development Offshore Project Proposal (OPP) accepted by NOPSEMA on 27 August 2025.

1.4 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 GWF-4 Drilling and Subsea Installation 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.

1.5 NGO consultation approach

Woodside has an established history of consulting with environmental non-government organisations (NGOs) as part of its EP consultation. In its methodology (Section 5.3.4, Table 5-4), 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)

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- directly consulted NGOs
- participated in regional community events (which were advertised) in the Pilbara and Gascoyne which could be attended by any NGOs including local groups (if NGOs attended these sessions, they did not identify themselves).

1.6 NGO response

During consultation for the GWF-4 Drilling and Subsea Installation EP, Woodside contacted seven NGO's with one response being received from The Wilderness Society.

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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 5.3.4 in 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 in the EP), assessment of relevant persons is informed by the EMBA, shown in Figure 2-1.

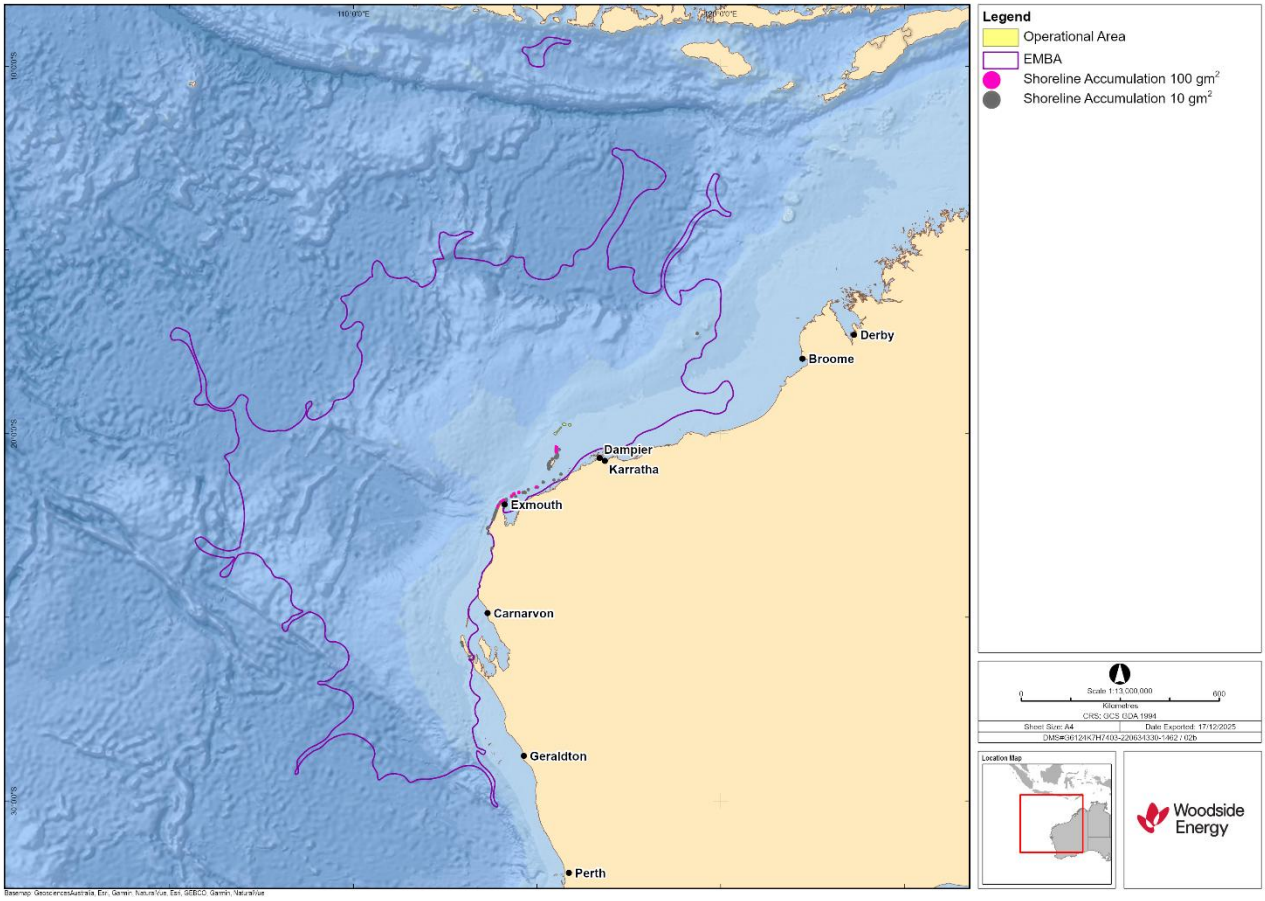


Figure 2-1: Operational Area and EMBA for the GWF-4 Drilling and Subsea Installation EP.

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2.2 Table 1: Assessment of relevance

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 maybe telecommunications lines that intersect the Operational Area.	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. No Commonwealth fisheries are active in the Operational Area. The North-West 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 as the North-West Slope Trawl Fishery, Western Deepwater Trawl Fishery and Western Tuna and Billfish Fishery are active in 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
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

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Person or Organisation	Summary of responsibilities and/or functions, interests or activities	Assessment of relevance	Relevant person
Australian Maritime Safety Authority (AMSA) – Marine 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 – Marine 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, Western Deepwater Trawl Fishery and Western Tuna and Billfish Fishery are active in the EMBA. DAFF – Fisheries responsibilities may be relevant to the activity as the North-West Slope Trawl Fishery, Western Deepwater Trawl Fishery and Western Tuna and Billfish Fishery are 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 Foreign Affairs and Trade (DFAT)	Responsible for promoting and protecting Australia's interests internationally and contributes to global stability and economic growth. DFAT manages Australia's relationships and interaction with the governments of our neighbouring countries.	Woodside has applied its methodology for 'Government departments / agencies – marine' under regulation 25(1)(a) of the Environment Regulations. DFAT has no direct role in the management of the Commonwealth marine area but has an interest in ensuring that consultation with foreign entities, both private and government, is effective and is aligned with Australia's interests. DFAT manages Australia's relationships and interaction with the governments of our neighbouring countries. The proposed activity has the potential to impact DFAT's functions, interests or activities as the EMBA overlaps Indonesian waters.	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. There is known Maritime Cultural Heritage overlapping the EMBA.	Yes

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Person or Organisation	Summary of responsibilities and/or functions, interests or activities	Assessment of relevance	Relevant person
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 Mackerel Managed Fishery (Area 2), Marine Aquarium Fish Managed Fishery, Onslow Prawn Managed Fishery, Pilbara Trap Managed Fishery, Pilbara Line Fishery, and Specimen Shell Managed Fishery have been active in the Operational Area within the past 5 years. The West Coast Demersal Scalefish (Interim) Managed Fishery, West Australian Sea Cucumber Fishery, 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, Northern Demersal Scalefish Managed Fishery, Octopus Interim Managed Fishery, Onslow Prawn Managed Fishery, West Coast Rock Lobster Managed Fishery, Pilbara Crab Managed Fishery, Pilbara Fish Trawl (Interim) Managed Fishery, Pilbara Trap Managed Fishery, Pilbara Line Fishery (Condition), Shark Bay Beach Seine and Mesh Net Managed Fishery, Shark Bay Crab Managed Fishery, Shark Bay Prawn Managed Fishery, Shark Bay Scallop Managed Fishery, Pearl Oyster Managed Fishery, West Coast Deep Sea Crustacean Managed Fishery, Exmouth Gulf Beach Seine and Mesh Net Managed Fishery, Open Access in the North Coast and Gascoyne Coast 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.	Yes
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	Pilbara Ports encompasses the Ports of Ashburton, Dampier, Port Hedland and Varanus Island. Pilbara Ports oversees the operation of the greenfield ports of Anketell, Balla Balla,	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.	Yes

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Person or Organisation	Summary of responsibilities and/or functions, interests or activities	Assessment of relevance	Relevant person
	Cape Preston East, Cape Preston West and Urala. Pilbara Ports oversees the Shipping and Pilotage Act 1967 (SPA) ports of Barrow Island, Cape Preston, Onslow and Port Walcott.		
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 is known shipwrecks overlapping the EMBA which the Western Australian Museum may be responsible for.	Yes
Commonwealth and WA State Government Departments or Agencies – Environment			
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	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

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Person or Organisation	Summary of responsibilities and/or functions, interests or activities	Assessment of relevance	Relevant person
	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.		
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
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

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Person or Organisation	Summary of responsibilities and/or functions, interests or activities	Assessment of relevance	Relevant person
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 and greenhouse gas exploration activities 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
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 it has not been active in the Operational Area or EMBA within the past 5 years. As the peak representative body for the Southern Bluefin Tuna Fishery, ASBTIA's functions may be relevant to the activity as the Southern Bluefin Tuna Fishery overlaps the EMBA.	Yes

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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. No fisheries are active in the Operational Area. The North-West Slope Trawl Fishery, Western Deepwater Trawl Fishery and Western Tuna and Billfish Fishery are active in the EMBA. CFA's functions may be relevant to the activity as the North-West Slope Trawl Fishery, Western Deepwater Trawl Fishery and Western Tuna and Billfish Fishery are active in the EMBA.	Yes
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. The fishery does not overlap the Operational Area. 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 Fishery 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. The Western Tuna and Billfish Fishery overlap the EMBA and has been active in the EMBA within the past 5 years. As the peak representative body for the Western Tuna and Billfish Fishery Tuna Australia's	Yes

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		functions may be relevant to the activity as the Western Tuna and Billfish Fishery is active in the EMBA.	
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. The fishery does not overlap the Operational Area. The fishery overlaps EMBA and has been active in the EMBA within the past 5 years.	Yes
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. 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 activity will present a risk to licence holders, given 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 et al., 2022). In addition, interactions are not expected given the species' pelagic distribution fishing methods for species fished by licence holders.	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. 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
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. ACWA's members are active within the EMBA. As the peak body for WA's aquaculture industry, ACWA's functions may be relevant to the activity as ACWA members are active in the EMBA.	Yes

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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. The Mackerel Managed Fishery (Area 2), Marine Aquarium Fish Managed Fishery, Onslow Prawn Managed Fishery, Specimen Shell Managed Fishery, Pilbara Trap Managed Fishery and Pilbara Line Fishery have been active in the Operational Area within the past 5 years. The West Coast Demersal Scalefish (Interim) Managed Fishery, West Australian Sea Cucumber Fishery, 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, Northern Demersal Scalefish Managed Fishery, Octopus Interim Managed Fishery, Onslow Prawn Managed Fishery, West Coast Rock Lobster Managed Fishery, Pilbara Crab Managed Fishery, Pilbara Fish Trawl (Interim) Managed Fishery, Pilbara Trap Managed Fishery, Pilbara Line Fishery (Condition), Shark Bay Beach Seine and Mesh Net Managed Fishery, Shark Bay Crab Managed Fishery, Shark Bay Prawn Managed Fishery, Shark Bay Scallop Managed Fishery, Pearl Oyster Managed Fishery, West Coast Deep Sea Crustacean Managed Fishery, Exmouth Gulf Beach Seine and Mesh Net Managed Fishery, Open Access in the North Coast and Gascoyne Coast 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.	Yes
Pearl Producers Association	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 fishery overlaps the Operational Area but 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

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		As the peak representative body for the Pearl Oyster Managed Fishery, the PPA's functions may be relevant as the Pearl Oyster Managed Fishery has been active in the EMBA.	
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. The fishery overlaps the Operational Area but 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. 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
Exmouth Gulf Beach Seine and Mesh Net 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 in the EMBA within the past 5 years. 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
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 does not overlap the Operational Area. The fishery overlaps the EMBA and has been active in the EMBA within the past 5 years. 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
Gascoyne Demersal Scalefish 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

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		The fishery does not overlap the Operational Area. The fishery overlaps the EMBA and has been active in the EMBA within the past 5 years. 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.	
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 in 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
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. The fishery overlaps the Operational Area and EMBA and has been active in the Operational Area and EMBA in 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
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 in the EMBA within the past 5 years. 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
Northern Demersal Scalefish 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

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		The fishery does not overlap the Operational Area. The fishery overlaps the EMBA and has been active in the EMBA within the past 5 years. 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.	
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. The fishery overlaps the Operational Area and EMBA and has been active in the Operational Area and EMBA in 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
Open Access in the North Coast, Gascoyne Coast and West Coast Bioregions	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 in the EMBA within the past 5 years. 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
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, the fishery has not been active in the Operational Area in the past 5 years. The fishery overlaps the EMBA and has been active in the EMBA in the past five years. 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

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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. While the fishery overlaps the Operational Area, the fishery has not been active in the Operational Area in the past 5 years. The fishery overlaps the EMBA and has been active in the EMBA in the past five years. 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 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 in 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
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 in 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
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. The fishery overlaps the Operational Area and EMBA and has been active in the EMBA in the past 5 years. 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	No

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		relevant to the EMBA of the proposed activity would however be undertaken only in the event of an unplanned emergency scenario.	
Shark Bay 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. The fishery does not overlap the Operational Area. The fishery overlaps the EMBA and has been active in the EMBA within the past 5 years. 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
Shark 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 in the EMBA within the past 5 years. 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
Shark Bay Scallop 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 in the EMBA within the past 5 years. 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
South West Coast Salmon 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, the fishery has not been active in the Operational Area or EMBA within the past 5 years.	No

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		Woodside does not consider that the activity will present a risk to licence holders, given fishers are active south of Perth and from the beach (previous WAFIC advice). Further, no fishing occurs north of the Perth Metropolitan Area and therefore, no effort occurs within the Operational Area or EMBA.	
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. The fishery overlaps the Operational Area and EMBA and has been active in the Operational Area and EMBA in 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
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. Although the fishery overlaps the Operational Area, the fishery has not been active within the Operational Area in the past five years. The fishery overlaps the EMBA and has been active in the EMBA within the past 5 years. 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 Demersal Scalefish 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 in the EMBA within the past 5 years. 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 Rock Lobster 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.	Yes

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		The fishery does not overlap the Operational Area. The fishery overlaps the EMBA and has been active in the EMBA within the past 5 years.	
Western Australian Sea Cucumber 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 in the EMBA within the past 5 years. 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
Western Rock Lobster Council	Represents the interests of the Western Rock Lobster Managed 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 West Coast Rock Lobster Managed Fishery is active within the EMBA. The Western Rock Lobster Council's functions may be relevant to the activity as the West Coast Rock Lobster Managed Fishery is active in the EMBA.	Yes
Recreational marine users and peak representative bodies			
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. 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, Cruise Ningaloo, Dampier Island Tourism, Dive Ningaloo, Evolution Fishing Charters, Exmouth adventure co., Exmouth Dive Centre, Indian Chief Charters, Innkeeper Sport Fishing, Innkeeper Sport Fishing Charter, Kings Ningaloo Reef Tours, Live Ningaloo, Mahi Mahi Fishing Charters, Montebello Island Safaris, Ningaloo Aviation, Ningaloo Blue, Ningaloo Coral Bay Boats, Ningaloo Discovery, Ningaloo Ecology Cruises, Ningaloo Fly Fishing, Ningaloo Marine Interaction, Ningaloo Reef Dive, Ningaloo Reef To Range Tours, Ningaloo Safari Tours, Ningaloo Sportfishing Charters, Ningaloo Whaleshark N Dive, Ningaloo Whaleshark Swim, Ocean Eco Adventures, Peak Sportfishing Charters, Pelican Charters, Sail Ningaloo, Sea Force Charters, Set The Hook, Three Islands, Top Gun Charters, Ultimate Watersports, Venture Ningaloo, View Ningaloo, Warrior Princess Charters, Yardi Creek Boat Tours, Aoa International Pty Ltd, Aspa Pastrikos, Austanley Pty Ltd, Blue Juice Tours Pty Ltd, Bondall Pty Ltd, C Emery Fishing Pty Ltd, Chapel Nominees Pty Ltd, D & N Nominees Pty Ltd, Eco-Abrolhos Pty Ltd,	Yes

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		Fawesome Expeditions Pty Ltd, Fire Tiger Pty Ltd, G. C. Bass nominees pty ltd, Jostan Holdings Pty Ltd, Km Charters Pty Ltd, Kw Marine Pty Ltd, L & S Family Holdings Pty Ltd, Lulamanzi Investments Pty Ltd, Lyons Family Super 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, On Strike Charters (Wa) Pty Ltd, Reel Force Charters Pty Ltd, Regalchoice Holdings Pty Ltd, Seafresh Holdings Pty Ltd, Sharkbay Charters Pty Ltd, Surefire Marine Services Pty Ltd, The Great Escape Charter Company Pty Ltd, W.A Maritime Investments Pty Ltd 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.	
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. Marine Rescue Dampier, Port Walcott Volunteer Marine Rescue , West Pilbara Volunteer Sea Search and Rescue Group, Archipelago Adventures, Hampton Harbour Boat & Sailing Club, Port Walcott Yacht Club , Reef Seeker Charters, King Bay Game Fishing Club, Nickol Bay Sport Fishing Club, Bardina Pty Ltd, Down the Line Charters Pty Ltd, Mackerel Islands Pty Ltd, Ocean Charters Pty Ltd, Serenity Isles Trading Company Pty Ltd, Wyndham Fishing Tours Pty Ltd, Charter Travel Company Pty Ltd, Kw Marine Pty Ltd, Norbrick Pty Ltd, Sail Ningaloo Pty Ltd, Tiffom Pty Ltd, Aoa International Pty Ltd, Australian Port And Marine Services Pty Ltd, Bloor Street Investments Pty Ltd, Blue Juice Tours Pty Ltd, Bondall Pty Ltd, Brefjen Nominees Pty Ltd, Broome Chiropractic Pty Ltd, Broome Tours Pty Ltd, C Emery Fishing Pty Ltd, Chapel Nominees Pty Ltd, Charter Express Pty Ltd, CM Ventures Pty Ltd, Coastway Investments Pty Ltd, Coral Princess Cruises (Nq) Pty Ltd, Discovery Holiday Parks Pty Limited, Diversity Charter Company Wa Pty Ltd, Eco-Abrolhos Pty Ltd, Fawesome Expeditions Pty Ltd, G. C. Bass nominees 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, Kimberley Marine Pty Ltd, Kimberley Quest Adventures Pty Ltd, King Sound Resort Hotel Pty Ltd, Kw Marine Pty Ltd, L & S Family Holdings Pty Ltd, Lake Argyle Cruises Pty Ltd, Lombadina Aboriginal Corporation, Lugger Enterprises Pty Ltd, Lulamanzi Investments Pty Ltd, Mackerel Islands Pty Ltd, Mal	Yes

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		Miles Adventures 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, RSTG Pty Limited, Sea 2 Pty Ltd, Sealife Charters Pty Ltd, Split Tide Pty Ltd, Steven Douglas Chambers, Super Yachts Perth Pty Ltd, The Great Escape Charter Company Pty Ltd, W.A Maritime Investments Pty Ltd, Willie Creek Pearl Farm Pty Ltd 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.	
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
Shark Bay Recreational Marine Users	Shark Bay-based dive and charter operators	Woodside has applied its methodology for 'Recreational marine users and representative bodies' under regulation 25(1)(d) of the Environment Regulations. Mac Attack Fishing Charters, Perfect Nature Cruises, Tidal Moon, Ocean Park. The Shire of Shark Bay identified these Shark Bay marine operators as potentially relevant persons. Woodside chose to contact the Shark Bay marine operators at its discretion in line with Section 5.3.7.	No
Titleholders and Operators			
3D Energi	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
Allasso 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

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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
BHP Petroleum	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
Bounty Oil and 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
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
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
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
Chevron 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
Coastal Oil and 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
Energy 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
Exxon Mobil Australia Resources Company	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

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Finder Energy (Finder No 9/10/16/17))	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
Jadestone	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
Longreach Capital	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
Melbana Exploration	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 Energy / KATO Corowa / KATO NWS / KATO Amulet	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

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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
MidOcean Gorgon (part of Chevron, replaces Tokyo 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
OMV Australia / Sapura OMV Upstream	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 (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
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
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
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
Santos NA Energy Holdings / Santos Ltd / Santos WA Northwest / Santos Offshore / Santos WA Southwest / Santos (BOL) / Santos WA PVG	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

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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
SK Earthon	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 Napoleon	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
Vermilion 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	Woodside has applied its methodology for 'Local government and community representative groups or organisations' under regulation 25(1)(d) of the Environment Regulations.	Yes

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	members in the business community in the town of Broome and surrounding areas.	The Broome Chamber of Commerce and Industry's interests have the potential to be impacted by the proposed activities.	
Carnarvon 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 Carnarvon and surrounding areas.	Woodside has applied its methodology for 'Local government and community representative groups or organisations' under regulation 25(1)(d) of the Environment Regulations. The Carnarvon 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 community representative 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
Karratha & Districts Chamber of Commerce and Industry	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 elected Parliamentary representatives, community representative groups or organisations' under regulation 25(1)(d) of the Environment Regulations. The Karratha and Districts Chamber of Commerce and Industry's interests have the potential to be impacted by the proposed activities.	Yes
Onslow 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 Onslow and surrounding areas.	Woodside has applied its methodology for 'Local government and community representative groups or organisations' under regulation 25(1)(d) of the Environment Regulations. The Onslow Chamber of Commerce and Industry's interests have the potential to be impacted by the proposed activities.	Yes
Exmouth Community Liaison Group (CLG)	The Exmouth CLG represents the interests of a range of local government, industry and community organisations	Woodside has applied its methodology for 'Local government and community representative groups or organisations' under regulation 25(1)(d) of the Environment Regulations.	Yes

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	in relation to oil and gas matters in the Exmouth region.	Base Marine, Bhagwan Marine, Cape Conservation Group Inc, Cape Range Riders, DBCA, Department of Defence, Department of Transport, 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.	
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 community representative 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 Authority, 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 above. Under regulation 25(1)(e), Woodside, at its discretion, chose to assess the CLG as a relevant person.	Yes
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 community representative groups or organisations' under regulation 25(1)(d) of the Environment Regulations. The City of Karratha's area of responsibility overlaps the EMBA.	Yes

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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 community representative 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 community representative 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 Carnarvon	Local government governed by the Local Government Act 1995 representing the suburbs and localities of Babbage Island, Brockman, Browns Range, Carnarvon, Coral Bay, East Carnarvon, Greys Plain, Ingaarda, Kingsford, Morgantown, North Plantations, South Carnarvon, South Plantations.	Woodside has applied its methodology for 'Local government and community representative groups or organisations' under regulation 25(1)(d) of the Environment Regulations. The Shire of Carnarvon'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 community representative groups or organisations' under regulation 25(1)(d) of the Environment Regulations. The Shire of Exmouth's area of responsibility overlaps the EMBA.	Yes
Shire of Shark Bay	Local government governed by the Local Government Act 1995 representing the suburbs and localities of	Woodside has applied its methodology for 'Local government and community representative groups or organisations' under regulation 25(1)(d) of the Environment Regulations. The Shire of Shark Bay's area of responsibility overlaps the EMBA.	Yes

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	Billabong, Denham, Monkey Mia, Nanga, Overlander, Useless Loop		
RAC Monkey Mia Dolphin Resort	Accommodation provider within the Shark Bay World Heritage Area.	Woodside has applied its methodology for 'Local government and community representative groups or organisations' under regulation 25(1)(d) of the Environment Regulations. The Shire of Shark Bay identified RAC Monkey Mia Dolphin Resort as a potentially relevant person. Woodside chose to contact RAC Monkey Mia Dolphin Resort at its discretion in line with Section 5.3.7.	No
Dirk Hartog Island	Tourism business operating accommodation and guided tours and providing four-wheel drive access to Dirk Hartog Island.	Woodside has applied its methodology for 'Local government and community representative groups or organisations' under regulation 25(1)(d) of the Environment Regulations. The Shire of Shark Bay identified Dirk Hartog Island as a potentially relevant person. Woodside chose to contact Dirk Hartog Island at its discretion in line with Section 5.3.7.	No
Shark Bay Community Resource Centre	Not-for-profit, community owned and managed organisation which produces a monthly community newspaper.	Woodside has applied its methodology for 'Local government and community representative groups or organisations' under regulation 25(1)(d) of the Environment Regulations. The Shire of Shark Bay identified Shark Bay Community Resource Centre as a potentially relevant person. Woodside chose to contact Shark Bay Community Resource Centre at its discretion in line with Section 5.3.7.	No
Shark Bay Coastal Tours	Shark Bay-based tour company specialising in four-wheel drive tours.	Woodside has applied its methodology for 'Local government and community representative groups or organisations' under regulation 25(1)(d) of the Environment Regulations. The Shire of Shark Bay identified Shark Bay Coastal Tours as a potentially relevant person. Woodside chose to contact Shark Bay Coastal Tours at its discretion in line with Section 5.3.7.	No
Naturetime Tours	Shark Bay-based tour company offering four-wheel drive tours.	Woodside has applied its methodology for 'Local government and community representative groups or organisations' under regulation 25(1)(d) of the Environment Regulations. The Shire of Shark Bay identified Naturetime Tours as a potentially relevant person.	No

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		Woodside chose to contact Naturetime Tours at its discretion in line with Section 5.3.7.	
Wula Gura Nyinda Eco Cultural Tours	Shark Bay-based tour company offering tours and Indigenous experiences.	Woodside has applied its methodology for 'Local government and community representative groups or organisations' under regulation 25(1)(d) of the Environment Regulations. The Shire of Shark Bay identified Wula Gura Nyinda Eco Cultural Tours as a potentially relevant person. Woodside chose to contact Wula Gura Nyinda Eco Cultural Tours at its discretion in line with Section 5.3.7.	No
Other non-government groups or organisations (NGOs) or individuals			
Australian Conservation Foundation (ACF)	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 ACF's relevance for the proposed activity. Woodside has assessed that ACF does not have a publicly available statement (or purpose), website or social media material that demonstrates its functions, interests or activities are relevant to the potential risks and impacts associated with planned activities in accordance with the intended outcome of consultation (as set out in Section 5.3.4). Woodside chose to contact ACF at its discretion in line with Section 5.3.7.	No
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's relevance for the proposed activity. Woodside has assessed that AMCS does not have a publicly available statement (or purpose), website or social media material that demonstrates its functions, interests or activities are relevant to the potential risks and impacts associated with planned activities in accordance with the intended outcome of consultation (as set out in Section 5.3.4). Woodside chose to contact AMCS at its discretion in line with Section 5.3.7.	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 provided previous feedback and/or has a publicly available statement (or purpose), website or social media material that demonstrates that its functions, interests or activities may be relevant to the potential risks and impacts associated with planned activities in accordance with the intended outcome of consultation (as set out in Section 5.3.4).	Yes

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Greenpeace Australia Pacific (GAP)	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 GAP's relevance for the proposed activity. Woodside has assessed that GAP does not have a publicly available statement (or purpose), website or social media material that demonstrates its functions, interests or activities are relevant to the potential risks and impacts associated with planned activities in accordance with the intended outcome of consultation (as set out in Section 5.3.4). Woodside chose to contact GAP at its discretion in line with Section 5.3.7.	No
The Wilderness Society	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 The Wilderness Society's relevance for the proposed activity. Woodside has assessed that The Wilderness Society has provided recent feedback or has a publicly available statement (or purpose), website or social media material that demonstrates its functions, interests or activities are relevant to the potential risks and impacts associated with planned activities in accordance with the intended outcome of consultation (as set out in Section 5.3.4).	Yes
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 known Telstra communication cables that intersect within 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 no known communication cables that intersect within the Operational Area. Woodside chose to contact Vocus at its discretion in line with Section 5.3.7 of the EP.	No
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 is no known 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.	No

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		There is no known research being undertaken by the insert name CSIRO that intersects within the EMBA. Woodside chose to contact CSIRO at its discretion in line with Section 5.3.7 of the EP.	
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 is no known research being undertaken by the 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 is no known research being undertaken by the 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. Woodside chose to contact ECU at its discretion in line with Section 5.3.7 of the EP.	No
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 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 is no known research being undertaken by the UWA that intersects within the EMBA. Woodside chose to contact UWA at its discretion 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	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	Yes

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	environment of the North West Cape.	overlaps North West Cape.	
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
Traditional Custodians and nominated representative corporations			
Bardi and Jawi Niimidiman Aboriginal Corporation (BJNAC)	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 EMBA does not overlap the Native Title claim and is coastally adjacent to the Bardi and Jawi Native Title Determination held by BJNAC. BJNAC is also party to the Bardi Jawi Conservation Estate Indigenous Land Use Agreement, which is coastally adjacent to the EMBA.	Yes
Bundi Yamatji Aboriginal Corporation (BYAC)	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 Yamatji Nation Native Title claim does not overlap the EMBA. The claim is coastally adjacent to the EMBA, for which BYAC is the Registered Native Title Body Corporate. BYAC is also a party to the Yamatji Nation Agreement, which is coastally adjacent to the EMBA.	Yes
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 overlaps the EMBA, for which BTAC is the Registered Native Title Body Corporate. BTAC is also party to the Macedon ILUA, which overlaps the EMBA.	Yes
Gogolanyngor Aboriginal Corporation (GAC)	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 Jabirr Jabirr/Ngumbarl and Jabirr Jabirr/Ngumbarl Part B Native Title claims do not overlap the EMBA. The claims are coastally adjacent to the EMBA, for which GAC is the Registered Native Title Body Corporate. The Bindunbur and Bindunbur #2 Native Title claims do not overlap the EMBA. The claims are coastally adjacent to the EMBA, for which the GAC, Nimanburr Aboriginal Corporation and Nyul Nyul Aboriginal Corporation are the Registered Native Title Body Corporates. The Bindunbur Part B Native Title claim does not overlap the EMBA. The claim is coastally	Yes

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		adjacent to the EMBA, for which the GAC and Nimanburr Aboriginal Corporation are the Registered Native Title Body Corporates.	
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 KTLA is the Registered Native Title Body Corporate. KTLA is also party to the Great Sandy Desert Project ILUA - Infrastructure and Karajarri Traditional Lands Association KSCS Eighty Mile Beach ILUA, which are 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, for which KAC is the Registered Native Title Body Corporate, overlaps the EMBA. KAC is also party to the Kariyarra and State ILUA, which is coastally adjacent to the EMBA.	Yes
Malgana 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 Malgana Part A Native Title claim for which the Malgana Aboriginal Corporation is the Registered Native Title Body Corporate, overlaps the EMBA. The Nanda People Part B, Malgana 2 and Malgana 3 Native Title claim does not overlap the EMBA. The claim is coastally adjacent to the EMBA, for which the Malgana Aboriginal Corporation and Nanda Aboriginal Corporation are the Registered Native Title Body Corporates. The Malgana Aboriginal Corporation is also party to the Malgana Aboriginal Corporation Conservation Estate ILUA, which overlaps the EMBA; and Malgana Tamala Pastoral Lease Agreement, Malgana Woodleigh Carbla Pastoral Lease Agreement and Malgana Wooramel Pastoral Lease Agreement, which are 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. 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	Yes

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		to the Burrup and Maitland Industrial Estates Agreement (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 is progressing the World Heritage nomination of the Murujuga Cultural Landscape.	
Nanda 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 Nanda People and Nanda #2 Native Title claim does not overlap the EMBA. The claim is coastally adjacent to the EMBA, for which the Nanda Aboriginal Corporation is the Registered Native Title Body Corporate. The Nanda People Part B, Malgana 2 and Malgana 3 Native Title claim does not overlap the EMBA. The claim is coastally adjacent to the EMBA, for which the Nanda Aboriginal Corporation and Malgana Aboriginal Corporation are the Registered Native Title Body Corporates.	Yes
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. NTGAC and Yinggarda Aboriginal Corporations are the Registered Native Title Body Corporates holding Native Title on behalf of the Baiyungu, Thalanyji and Yinggarda people. NTGAC is party to the Nganhurra Thanardi Garrbu Aboriginal Corporation Conservation Estate ILUA and Gnaraloo Indigenous Land Use Agreement, which overlaps the EMBA. NTGAC is also party, with the WA State Government, to the Ningaloo Conservation Estate Indigenous Land Use Agreement, which overlaps the EMBA. 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. 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 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. The Ngarluma / Yindjibarndi People Native Title claim, for which NAC and the Yindjibarndi	Yes

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		Aboriginal Corporation are the Registered Native Title Body Corporates, overlaps the EMBA. 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. NAC is also party to the Anketell Port, Infrastructure Corridor and Industrial Estates Agreement, which overlaps the EMBA; and RTIO Ngarluma Indigenous Land Use Agreement (Body Corporate Agreement), which are coastally adjacent to the EMBA. NAC is also party to the Damper Marine Park, which overlaps the EMBA.	
Nhuwala Claim Group	Native Title Claim 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 Native Title claim overlaps the EMBA. All communications with Nhuwala Claim Group are via YMAC.	Yes
Nimanburr 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 Bindunbur and Bindunbur #2 Native Title claims do not overlap the EMBA. The claims are coastally adjacent to the EMBA, for which Nimanburr Aboriginal Corporation, GAC and Nyul Nyul PBC Aboriginal Corporation are the Registered Native Title Body Corporates. The Bindunbur Part B Native Title claim does not overlap the EMBA. The claim is coastally adjacent to the EMBA, for which Nimanburr Aboriginal Corporation and GAC are the Registered Native Title Body Corporates.	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 NKAC is the Registered Native Title Body Corporate. NKAC is party to the NKAC KSCS Eighty Mile Beach ILUA, Nyangumarta Karajarri and Anna Plains Station ILUA, and Nyangumarta Karajarri and Mandora Station ILUA, which are 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. The Nyangumarta People (Part A) Native Title claim does not overlap the EMBA. The claim is coastally adjacent to the EMBA, for which NWAC is the Registered Native Title Body Corporate.	Yes

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		NWAC is party to the Nyangumarta PBC KSCS ILUA, Nyangumarta Warrarn Aboriginal Corporation & Mandora Pastoral Lease ILUA, and Nyangumarta Warrarn Aboriginal Corporation & Wallal Downs Pastoral Lease ILUA, which are coastally adjacent to the EMBA.	
Nyul Nyul PBC 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 Bindunbur and Bindunbur #2 Native Title claims do not overlap the EMBA. The claims are coastally adjacent to the EMBA, for which Nyul Nyul PBC Aboriginal Corporation, GAC and Nimanburr Aboriginal Corporation are the Registered Native Title Body Corporates.	Yes
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 KM & YM Indigenous Land Use Agreement 2018 and RTIO Kuruma Marthudunera People ILUA, which overlap the EMBA.	Yes
Thalanyji/Nhuwala People	Native Title Claim Group	Woodside has applied its methodology for 'Traditional Custodians and Nominated Representative Corporations' under regulation 25(1)(d) of the Environment Regulations. The Thalanyji/Nhuwala Peoples Native Title claim overlaps the EMBA. All notices to Thalanyji/Nhuwala Peoples, other than in relation to the claim application, are via BTAC.	Yes
Wanparta 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 Ngarla and Ngarla #2 (Determination Area A), Ngarla Overlap Proceeding and Ngarla People (Mount Goldsworthy Lease Proceeding) Native Title claims are 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 Ngarla PBC KSCS ILUA, which are 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, for which WAC is the Registered Native Title Body Corporate, overlaps the EMBA. WAC is also party to the Cape Preston Project Deed (YM Mardie ILUA) and KM & YM Indigenous Land Use Agreement 2018, which overlap the EMBA; and Cape Preston West Export Facility, which is coastally adjacent to the EMBA.	Yes

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Wunambal Gaambera Aboriginal Corporation (WGAC)	Representative Aboriginal Corporation	Woodside has applied its methodology for 'Traditional Custodians and Nominated Representative Corporations' under regulation 25(1)(d) of the Environment Regulations. When consultation first commenced, WGAC was a relevant person due to its interests with the Kimberley State Marine Park. However, a revision of the EMBA resulted in the marine park no longer overlapping the EMBA resulting in WGAC not being a relevant person, as determined by Woodside's methodology. For this reason, WGAC is not relevant but chosen to consult.	No – but chosen to consult
Yamatji Marlpa Barna Baba Maaja Aboriginal Corporation (Yamatji Land and Sea Council)	Representative Aboriginal Corporation	Woodside has applied its methodology for 'Traditional Custodians and Nominated Representative Corporations' under regulation 25(1)(d) of the Environment Regulations. Yamatji Marlpa Barna Baba Maaja Aboriginal Corporation is party to the Cape Range National Park, which overlaps the EMBA.	Yes
Yawuru Native Title Holders 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 Rubibi Community Native Title claim does not overlap the EMBA. The claim is coastally adjacent to the EMBA, for which the Yawuru Native Title Holders Aboriginal Corporation is the Registered Native Title Body Corporate. The Yawuru Native Title Holders Aboriginal Corporation is party to the Eco Beach ILUA, Yawuru Area Agreement ILUA, Yawuru Nagulagun / Roebuck Bay Marine Park ILUA and Yawuru Prescribed Body Corporate ILUA – Broome, which are coastally adjacent to the EMBA.	Yes
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, for which Yindjibarndi Aboriginal Corporation and NAC are the Registered Native Title Body Corporates, overlaps the EMBA. Yindjibarndi Aboriginal Corporation is also party to the Damper Marine Park, which overlaps the EMBA.	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. YAC and NTGAC are the Registered Native Title Body Corporates holding Native Title on behalf of the Baiyungu, Thalanyji and Yinggarda people. YAC is party to the Brickhouse and Yinggarda Aboriginal Corporation ILUA and Quobba –	Yes

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		Yinggarda Pastoral ILUA, which are coastally adjacent to the EMBA. All communications to YAC is via Gumala Aboriginal Corporation.	
Yued Aboriginal Corporation	Representative Aboriginal Corporation	Woodside has applied its methodology for 'Traditional Custodians and Nominated Representative Corporations' under regulation 25(1)(d). The Yued Indigenous Land Use Agreement is coastally adjacent to the EMBA, for which the Yued Aboriginal Corporation is the Registered Native Title Body Corporate.	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 party to the Yawuru Area Agreement ILUA, which is coastally adjacent to the EMBA. 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. The Thalanyji/Nhuwala People Native Title claim does not overlap the EMBA. The claim is coastally adjacent to the EMBA, for which YMAC is the Registered Native Title Body Corporate. YMAC is party to the KM & YM Indigenous Land Use Agreement 2018, which overlaps the EMBA; and Kariyarra and State ILUA, which is coastally 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. 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. NTGAC, Thalanyji/Nhuwala People and Nanda Aboriginal Corporation nominated representative is YMAC. Woodside has therefore consulted NTGAC, Thalanyji/Nhuwala People and Nanda Aboriginal Corporation 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	Yes

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		clear. YMAC'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.	
Yamatji Southern Regional 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. Yamatji Southern Regional Corporation is party to the Yamatji Nation Agreement, which is coastally adjacent to the EMBA.	Yes
Self-identified First Nations 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, NAC, and the Yindjibarndi people settled their Native Title claim and established their nominated representative corporation, the Yindjibarndi Aboriginal Corporation. NAC 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

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Other First Nations Groups			
Save Our Songlines (SOS) and/or [Individual 1]	Representatives of Non-Government Organisation SOS and/or [Individual 1]	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 SOS (SOS) and/or [Individual 1] relevance for the proposed activity. SOS and/or [Individual 1] 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. As SOS and/or [Individual 1] have raised concerns relating to the processing of greenhouse gases on Murujuga, Woodside considers that SOS and/or [Individual 1] are relevant for this activity.	Yes

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3. CONSULTATION ACTIVITIES

3.1 GWF-4 Drilling and Subsea Installation EP consultation activities

Woodside has been conducting extensive consultation with relevant persons and other parties for this EP since July 2025 when consultation commenced with interested and affected stakeholders as part of a planned, integrated and consistent approach to stakeholder engagement for Woodside's proposed opportunities.

A broad consultation process has been undertaken with relevant persons for the GWF-4 Drilling and Subsea Installation 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

Woodside advertised the planned activities proposed for this EP in national, state and relevant local newspapers including (see Record of Consultation, reference 6.5).

No direct comments or feedback were received from the advertisements.

Newspaper	Coverage	Readership	Publication dates
The Australian	National	Weekly – 453,000	28 July 2025
The West Australian	Regional (WA)	Daily – 364,000	28 July 2025
Pilbara News	Local (WA)	Weekly – 17,611	30 July 2025
Midwest Times	Local (WA)	Weekly – 50,534	30 July 2025
North West Telegraph	Local (WA)	Weekly – 8,154	31 July 2025
Koori Mail	Indigenous	Monthly – 80,000	30 July 2025
National Indigenous Times	Indigenous	Monthly – 1,484,340	29 July 2025

A Consultation Information Sheet was provided to relevant persons and persons Woodside chose to contact (see Section 5.3.4 in the EP), which included details such as an activity overview, maps, a summary of key risks and/or impacts and management measures (Record of Consultation, reference 6.1 and 6.3).

Since the commencement of the initial consultation period (July 2025), the stakeholder Consultation Information Sheet has been available on Woodside's website, and the consultation update Consultation Information Sheet has been available since January 2026 ahead of the February 2026 activity update consultation period. Consultation Information Sheets include a toll-free 1800 phone number and Woodside's feedback email address consultation@feedback.woodside.com

The Woodside Consultation Activities webpage (accessible on the Consultation Information Sheet via a QR code, banners at community events and via social media content and advertisements) includes Consultation Information Sheets for the EPs on which Woodside is currently consulting, including this EP. The website page also features a subscribe field for EP-focussed communications from Woodside.

Additional targeted information was provided to select relevant persons based on their roles and responsibilities such as a vessel density map (Record of Consultation, reference 6.1.4 and 6.3.3), GIS shape files, shipwreck information (Record of Consultation, reference 6.1.5, 6.1.6, 6.3.5, 6.3.6), a submarine communication cable map (Record of Consultation, reference 6.1.7 and 6.3.6) and a defence zone map (Record of Consultation, reference 6.1.3 and 6.3.2).

Where appropriate, Woodside conducted phone calls and meetings with relevant persons.

Where appropriate, targeted follow-up emails were sent to relevant persons who had not provided a response prior to the close of the target feedback period.

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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 in the EP).

Consultation activities undertaken with relevant persons are summarised at Appendix F, Table 2.

Engagement undertaken with persons or organisations Woodside assessed as not relevant but chose to contact (see Section 5.3.4 in the EP) or self-identified and Woodside assessed as not relevant are summarised at Appendix F, Table 3.

From August 2025, Woodside commenced a geotargeted sponsored social media campaign (Record of Consultation, reference 6.6) covering various local government authorities within, or coastally adjacent to, the EMBA for the proposed activities. The campaign brought the proposed activity to the attention of persons who may be interested and advised persons or organisations on how they can find out about Woodside's proposed activities by visiting Woodside's website.

Platforms	Geotargeted reach	Post dates	Impact
Meta – Facebook and Instagram	Denham, Carnarvon, Coral Bay, Exmouth, Onslow, Karratha, Roebourne, Port Hedland	31/07/2025 13/08/2025 26/08/2025	Reach: 117,529 Impressions: 222,343 Link Clicks: 701 Click Through Rate: 0.32%

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	66 👍 23 ❤️ 7 😡 2 😳 7 shares	31	0

3.3 Proactive consultation

3.3.1 Community engagement

The Community Information Sessions or community events that Woodside has conducted or attended are outlined below (and captured in more detail in Record of Consultation, reference 6.7). To support attendance, Woodside published advertisements ahead of these sessions and events in relevant local newspapers and on social media.

Date	Location	Event (if applicable)
2-3 August 2025	Karratha	FeNaCING Festival
5 October 2025	Exmouth	Exmouth Community Markets
18 October 2025	Dampier	Dampier Beachside Markets

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 region. Woodside regularly meets with these two CLGs to discuss a range of issues including consultation of specific EPs. For this EP, see 4.9.6 for consultation with Exmouth CLG and 4.9.7 for Karratha CLG.

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3.3.3 Newsletters

Woodside's EP focussed newsletter *Let's Talk* is designed to reach existing and potential stakeholders and encourage self-identification about Woodside's EP-related activities. The newsletter provides quarterly updates about EP consultation activities, case studies on effective consultation with relevant persons and other EP related information such as forthcoming events where Woodside personnel will be consulting with the local community. *Let's Talk* is distributed in a variety of locations as well as across digital platforms including Woodside's website and social media channels. People can also subscribe to receive it on Woodside's website. (Record of Consultation, reference 6.8.1).

Woodside also publishes the *Karratha Community Update* newsletter quarterly which includes a QR code and encourages people to go to the Consultation Activities page on Woodside's website to subscribe and find information on EPs. (Record of Consultation, reference 6.8.2).

3.4 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 provide for effective engagement with Traditional Custodians and so that information was provided in a form that was readily accessible and appropriate (Record of Consultation, reference 6.1.2).

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 Consultation 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 ensure 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

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- distribution of hard-copy Consultation Information Sheets (Record of Consultation, reference 6.1.1) and Summary Consultation Information Sheets (Record of Consultation, reference 6.1.2) are available at in-person consultation
- meeting costs such as sitting fees, travel, legal support and executive support and other support required
- advertising in Indigenous publications such as the National Indigenous Times (29 July 2025) and Koori Mail (30 July 2025) (Record of Consultation, reference 6.5.1).

Newspaper	Coverage	Publication dates
Koori Mail	Indigenous	30 July 2025
National Indigenous Times	Indigenous	29 July 2025

Woodside also ran a geotargeted sponsored social media campaign (Record of Consultation, reference 6.6) to various communities that are coastally adjacent to the EMBA for the proposed activities.

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.

3.5 Consultation Update (February 2026)

As a result of revised modelling, the EMBA for this activity was revised.

Woodside identified a number of relevant persons who were potentially impacted by the change to the EMBA and provided a consultation update to these relevant persons which included:

- Government departments, where the changes to the EMBA were potentially relevant to their functions, interests or activities, including record keeping and emergency response preparedness.
- Stakeholders whose reason for relevancy changed as a result of the revised EMBA.

Stakeholders who were provided a consultation update were invited to provide any additional feedback during 2 week consultation period.

Based on the revised EMBA, Woodside also identified a number of persons and organisations who had not previously been consulted for this EP. Woodside has 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**. These stakeholders were provided 30 days for consultation.

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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 30 July 2025, Woodside emailed ABF advising of the proposed activity (Record of Consultation, reference 6.1.8), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 10 February 2026, Woodside emailed ABF a consultation update on this EP (Record of Consultation, reference 6.3.10). Woodside advised that additional modelling during the EP development process had resulted in changes to the EMBA and based on those changes, Woodside was undertaking additional consultation with ABF. Woodside attached an updated Consultation Information Sheet which included a map of the revised EMBA.

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
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).	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 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:

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:

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- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since July 2025 and updated Consultation Information Sheets since January 2026. Woodside gave this information to ABF on 30 July 2025, marking the commencement of consultation on this EP and provided a consultation update on 10 February 2026. 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 PAP, 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).

Reasonable Period

Woodside allowed ABF a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence and in the consultation 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 and Woodside allowed ABF 30 days for the initial consultation and an additional 17 days for the consultation update in February 2026.
- Consultation for this EP commenced 8 months ago.
- In this context, 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 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- In the absence of feedback following the initial consultation, Woodside sent a follow-up consultation email on 18 August 2025, reminding ABF 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 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.

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4.1.2 Australian Communications and Media Authority (ACMA)

Summary of information provided and record of consultation for this EP:

- On 29 July 2025, Woodside emailed ACMA advising of the proposed activity (Record of Consultation, reference 6.1.9), provided a Consultation Information Sheet, a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*', and a map of the submarine communication cables in the vicinity of the Operational Area.
- On 31 July 2025, ACMA responded to Woodside (SI Report A, reference 1.1) thanking them for the opportunity to comment and:
  - **(1)** Stated that the operational area described in Woodside's materials was not located near any existing submarine cable protection zones declared under Schedule 3A to the *Telecommunications Act 1997*.
  - **(2)** Recommended that Woodside engage with carriers responsible for submarine cables situated within the vicinity of the operational area, including those shown on the map provided by Woodside.
  - **(3)** Advised that for complete details on submarine cable locations potentially affected by the proposed activities, Woodside should contact the Australian Hydrographic Office (AHO), which develops and maintains charts showing active and out-of-service submarine cables.
  - **(4)** Indicated that, due to the general nature of ACMA's comments, no additional consultation would be required on environment plans associated with the GWF-4 Project.
- On 11 August 2025, Woodside replied to ACMA (SI Report A, reference 1.2) thanking them for their feedback and:
  - (1) Noted AMCA's confirmation that the Operational Area is not in the vicinity of any existing protection zones.
  - (2) Confirmed that Woodside was aware of cable infrastructure in the area owned by Telstra and Vocus and had contacted both parties regarding this EP.
  - (3) Noted that the AHO maintained records of geospatial coordinates for all active and out-of-service submarine cables and stated that AHO had also been contacted regarding this EP.
  - (4) Acknowledged ACMA's indication that no additional consultation was required for EPs associated with the GWF-4 Project but requested confirmation that ACMA would not require any consultation on any future EPs related to the GWF-4 Project.
- On 10 February 2026, Woodside emailed ACMA a consultation update on this EP (Record of Consultation, reference 6.3.14). Woodside advised that additional modelling during the EP development process had resulted in changes to the EMBA and based on those changes, Woodside was undertaking additional consultation with ACMA. Woodside attached an updated Consultation Information Sheet which included a map of the revised EMBA.

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
(1) Stated that the Operational Area was not located near any existing submarine cable protection zones.	**(1)** Woodside notes ACMA's advice that the Operational Area was not located near any declared submarine cable protection zones.	**(1)** Woodside noted ACMA's advice that the Operational Area was not located near any declared submarine cable protection zones.	**(1)** No additional controls or measures are required.
(2)	**(2)**	**(2)**	**(2)**

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Recommended that Woodside engage with carriers responsible for submarine cables near the Operational Area.	Woodside has identified that submarine cables are located in the proximity of the Operational Area and has provided consultation information to Telstra and Vocus.	Woodside confirmed it had provided consultation information to operators of submarine cables in the vicinity of the Operational Area.	No additional controls or measures are required, as Woodside had already provided consultation information to operators of submarine cables in the vicinity of the Operational Area as part of its consultation methodology, described in Section 5 and Appendix F of this EP.
(3) Advised that Woodside should contact AHO for details on submarine cable locations.	**(3)** Woodside provided consultation information to AHO.	**(3)** Woodside confirmed it had provided consultation information to the AHO.	**(3)** No additional controls or measures are required, as Woodside had provided consultation information to AHO as part of its standard consultation methodology, described in Section 5 and Appendix F of this EP.
(4) Confirmed that no further consultation would be required on EPs associated with the GWF-4 Project.	**(4)** Woodside notes ACMA's request regarding additional consultation on the GWF-4 Project but would like confirmation regarding any future consultation on EPs related to the GWF-4 Project.	**(4)** Woodside acknowledged ACMA's request regarding additional consultation for EPs associated with the GWF-4 Project but sought confirmation from ACMA regarding any future consultation on EPs related to the GWF-4 Project.	**(4)** 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).	No additional controls or 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 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:			

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- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since July 2025 and updated Consultation Information Sheets since January 2026. Woodside gave this information to ACMA on 29 July 2025, marking the commencement of consultation on this EP and provided an activity update on 10 February 2026. 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 PAP, 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*'.
  - Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).
- Woodside provided additional tailored information to AMCA including a map of submarine telecommunications cables relevant to the activity.
- On 31 July 2025, 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 this EP because:

- A consultation period was stated in the initial correspondence and the consultation 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 and Woodside allowed ACMA 30 days for the initial consultation and an additional 17 days for the update in February 2026.
- Consultation for this EP commenced 8 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 31 July 2025.

Reasonable Opportunity

Woodside allowed ACMA a reasonable opportunity for consultation in the preparation of this EP because:

- Woodside published advertisements in 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside considers a reasonable opportunity was provided to ACMA as evidenced by its response on 31 July 2025.

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 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.

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- 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 29 July 2025, Woodside emailed AFMA advising of the proposed activity (Record of Consultation, reference 6.1.57), provided a Consultation Information Sheet, information on potential impacts to fisheries, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 30 July 2025, Woodside emailed AFMA to clarify that technical issues may have affected the display of the previous consultation email, Woodside re-issued the full consultation email, outlined that the Consultation Information Sheet is available on Woodside's website, and advised that the consultation period had been extended (Record of Consultation, reference 6.1.57.1)
- On 11 August 2025, AFMA responded to Woodside (SI Report A, reference 2.1) thanking them for the email and:
  - **(1)** Confirmed it had no direct comments to the EP.
  - **(2)** Requested that AFMA be included in future consultation on this matter.
  - **(3)** Confirmed that the fisheries listed by Woodside for the area of interest were correct and advised that Southern Bluefin Tuna Fishery should be included in the consultation, as fishery activity could occur within the EMBA.
- On 21 August 2025, Woodside replied to AFMA (SI Report A, reference 2.2) thanking them for their response and:
  - **(1)** Noted that AFMA had no comments on the EP.
  - **(2)** Confirmed it would include AFMA in future consultation related to the Greater Western Flank Phase 4 Project.
  - **(3)** Woodside confirmed that, as per AFMA's advice, Woodside had provided consultation materials to Southern Bluefin Tuna Fishery licence holders and the Australian Southern Bluefin Tuna Industry Association (ASBTIA) on 11 August 2025.
- On 10 February 2026, Woodside emailed AFMA a consultation update on this EP (Record of Consultation, reference 6.3.10). Woodside advised that additional modelling during the EP development process had resulted in changes to the EMBA and based on those changes, Woodside was undertaking additional consultation with AFMA. Woodside attached an updated Consultation Information Sheet which included a map of the revised EMBA.
- On 16 February 2026, AFMA responded to Woodside (SI Report A, reference 2.3) thanking them for their response and:
  - **(1)** Confirmed that it did not have any direct feedback on the Environment Plan.
  - **(2)** Requested to remain involved in any subsequent consultation relating to this matter.
  - **(4)** Confirmed that the fisheries list previously supplied by Woodside for the updated EMBA continued to be accurate.
- On 4 March 2026, Woodside replied to AFMA (SI Report A, reference 2.4) thanking them for their response and:
  - **(1)** Noted that AFMA had no comments on the EP.
  - **(2)** Confirmed it would include AFMA in future consultation related to the Greater Western Flank Phase 4 Project.
  - **(4)** Noted that the fisheries list previously supplied continued to be accurate.

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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
(1) AFMA confirmed it had no direct comments to the EP	**(1)** Woodside notes AFMA had no direct comments for this EP.	**(1)** Woodside thanked AFMA for its reply and for confirming it had no direct comments on the EP.	**(1)** No additional controls or measures are required.
(2) AFMA requested to be included in future consultation on this matter.	**(2)** Woodside understands that AFMA would like to be informed of future consultation opportunities and has committed to notifying AFMA prior to the commencement of activities.	**(2)** Woodside confirmed it would include AFMA in future consultation for the EP.	**(2)** No additional controls or measures are required. As per Woodside's standard notifications, AFMA will be notified 10 days prior to the commencement of activities and following completion of activities, as referenced as PS 1.6 and set out in Table 7-5, Section 7.10 of the EP.
(3) AFMA recommended that Woodside consult with specific Commonwealth fishery stakeholders.	**(3)** Woodside notes AFMA's advice that Southern Bluefin Tuna Fishery should be included in consultation for this EP and confirmed that in line with this advice Woodside provided consultation materials to Southern Bluefin Tuna Fishery licence holders and the Australian Southern Bluefin Tuna Industry Association (ASBTIA).	**(3)** Woodside confirmed that in line with the advice provided by AFMA, consultation materials were provided to Southern Bluefin Tuna Fishery licence holders and the Australian Southern Bluefin Tuna Industry Association (ASBTIA).	**(3)** No additional controls or measures are required, however based on advice from AFMA Woodside provided consultation information to Southern Bluefin Tuna Fishery licence holders and the Australian Southern Bluefin Tuna Industry Association (ASBTIA), as evidenced in Table 2 of Appendix F in this EP.
(4) AFMA confirmed that the fisheries list Woodside had previously provided continued to be accurate for the updated EMBA.	**(4)** Woodside notes that the fisheries list provided is still accurate following the EMBA revision.	**(4)** Woodside noted AFMA's confirmation that the list of fisheries previously provided remains accurate.	**(4)** 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	No additional controls or measures are required.

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		received, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8).	

Summary Report – Consultation Complete

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 July 2025. Woodside gave this information to AFMA on 29 July 2025, 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 PAP, 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*'.
  - 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 11 August 2025 and 16 February 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.
- In addition to the information in the Consultation Information Sheet, Woodside provided additional information to AFMA in response to AFMA's feedback (Woodside's email of 21 August 2025 and 4 March 2026).

Reasonable Period

Woodside allowed AFMA a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence 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 and Woodside allowed AFMA 30 days for consultation.
- Consultation for this EP commenced 8 months ago.
- In this context, Woodside allowed AFMA a reasonable period for consultation in preparation of the EP as evidenced by AFMA's responses on 11 August 2025 and 16 February 2026.

Reasonable Opportunity

Woodside allowed AFMA a reasonable opportunity for consultation in the preparation of this EP because:

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- Woodside published advertisements in 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside considers a reasonable opportunity was provided to AFMA as evidenced by its responses on 11 August 2025 and 16 February 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:

- 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 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 29 July 2025, Woodside emailed AHO advising of the proposed activity (Record of Consultation, reference 6.1.10), provided a Consultation Information Sheet, a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community',* a vessel density map and GIS Shape Files.
- On 29 July 2025, AHO responded to Woodside (SI Report A, reference 3.1) thanking them for the invitation to comment and:
  - **(1)** Confirmed that AHO had no concerns regarding any of the proposed activities.
  - **(2)** Outlined that AHO only required further updates when activity was due to commence.
- On 24 September 2025, Woodside replied to AHO (SI Report A, reference 3.2) thanking them for their response and:
  - **(1)** Noted that AHO had no concerns with the proposed activity.
  - **(2)** Confirmed that Woodside would notify AHO prior to the commencement of activities.
- On 10 February 2026, Woodside emailed AHO a consultation update on this EP (Record of Consultation, reference 6.3.16). Woodside advised that additional modelling during the EP development process had resulted in changes to the EMBA and based on those changes, Woodside was undertaking additional consultation with AHO. Woodside attached an updated Consultation Information Sheet which included a map of the revised EMBA.
- On 16 February 2026, AHO responded to Woodside (SI Report A, reference 3.3) thanking them for the invitation to comment and:
  - **(1)** Confirmed that AHO had no concerns regarding any of the proposed activities.
  - **(2)** Outlined that AHO only required further updates when activity was due to commence.
- On 4 March 2026, Woodside replied to AHO (SI Report A, reference 3.4) thanking them for their response and:
  - **(1)** Noted that AHO had no concerns with the proposed activity.

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– **(2)** Confirmed that Woodside would notify AHO prior to the commencement of activities.

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
(1) No concerns with the activities.	**(1)** Woodside accepts AHO has no concerns regarding the activities.	**(1)** Woodside noted that AHO had no concerns and thanked AHO for its feedback.	**(1)** Not required
(2) No further updates required until activity beginning.	**(2)** Woodside will notify AHO prior to activity commencement	**(2)** Woodside confirmed it would notify AHO prior to the commencement of the activities.	**(2)** No additional controls or measures are required. As per Woodside's standard notifications, AHO will be notified no less than four working weeks prior to activity commencement, as referenced as PS 1.5 and set out in Table 7-5, Section 7.10 of the EP.
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).	No additional controls or 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

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 July 2025 and updated Consultation Information Sheet since January 2026. Woodside gave this information to AHO on 29 July 2025, marking the commencement of consultation on this EP and provided a consultation update on 10 February 2026. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.

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  - A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the PAP, 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*'.
  - 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 29 July 2025 and 16 February 2026, AHO shared its feedback, claims or objections regarding this activity, indicating the information provided was sufficient to enable AHO to make an informed assessment of the possible consequences of the activity on its functions, interests or activities.
- In addition to the information in the Consultation Information Sheet, Woodside provided additional information to AHO in response to AHO's feedback (Woodside's email of 24 September 2025 and 4 March 2026).

Reasonable Period

Woodside allowed AHO a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence and in the consultation 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 and Woodside allowed AHO 30 days for consultation.
- Consultation for this EP commenced 8 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 29 July 2025 and 16 February 2026.

Reasonable Opportunity

Woodside allowed AHO a reasonable opportunity for consultation in the preparation of this EP because:

- Woodside published advertisements in 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside considers a reasonable opportunity was provided to AHO as evidenced by its response on 29 July 2025 and 16 February 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:

- 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 and 34(g), Woodside has:
  - Responded to feedback from AHO.
  - Made no changes or inclusions to the EP as a result of consultation with AHO 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.

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4.1.5 Australian Maritime Safety Authority (AMSA) – Marine Pollution

Summary of information provided and record of consultation for this EP:

- On 30 July 2025, Woodside emailed AMSA – Marine Pollution advising of the proposed activity (Record of Consultation, reference 6.1.8), provided a Consultation Information Sheet and a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community'*.
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 10 February 2026, Woodside emailed AMSA – Marine Pollution a consultation update on this EP (Record of Consultation, reference 6.3.9). Woodside advised that additional modelling during the EP development process had resulted in changes to the EMBA and based on those changes, Woodside was undertaking additional consultation with AHO. Woodside attached an updated Consultation Information Sheet which included a map of the revised EMBA.

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
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).	Woodside has addressed oil pollution planning and response at Appendix G. 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 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:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since July 2025 and updated Consultation Information Sheet since January 2026. Woodside gave this information to AMSA – Marine Pollution on 30 July 2025, marking the commencement of consultation on this EP and provided a consultation update on 10 February 2026. 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 PAP, and proposed mitigation and management measures.
  - A timeframe for consultation and the provision of feedback.

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- 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).

Reasonable Period

Woodside allowed AMSA – Marine Pollution a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence and in the consultation 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 30 days for the initial consultation and an additional 17 days for the consultation update in February 2026.
- Consultation for this EP commenced 8 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 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- In the absence of feedback following the initial consultation, Woodside sent a follow-up consultation email on 18 August 2025, reminding AMSA – Marine Pollution 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 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.

4.1.6 Australian Maritime Safety Authority (AMSA) – Marine Safety

Summary of information provided and record of consultation for this EP:

- On 29 July 2025, Woodside emailed AMSA – Marine Safety advising of the proposed activity (Record of Consultation, reference 6.1.13), provided a Consultation Information Sheet, a link to NOPSEMA's brochure 'Consultation on offshore petroleum environment plans: Information for the community', a vessel density map and GIS Shape Files.

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- On 30 July 2025, Woodside emailed AMSA – Marine Safety to clarify that technical issues may have affected the display of the previous consultation email, Woodside re-issued the full consultation email, outlined that the Consultation Information Sheet is available on Woodside's website, and advised that the consultation period had been extended (Record of Consultation, reference 6.1.13.1).
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 22 August 2025, AMSA – Marine Safety responded to Woodside (SI Report A, reference 4.1) thanking them for proving this information and:
  - **(1)** Attached a vessel traffic plot showing that heavy vessel traffic and support craft could be encountered in the area of interest (AOI) for the GWF-4 activities and noted that two AOIs were located on either side of a charted shipping fairway where additional traffic might occur during operations.
  - **(2)** Requested that project and support vessels notify AMSA's Joint Rescue Coordination Centre (JRCC) 24–48 hours before operations commence for promulgation of radio-navigation warnings and provided an email address and phone contact for JRCC.
  - **(3)** Requested that AMSA's ARC be provided vessel details (including name, callsign, MMSI), satellite communication details (including INMARSAT-C and satellite telephone), area of operation, requested clearance from other vessels, and notification when operations start and end.
  - **(4)** Requested that Woodside also notify AHO no less than four working weeks before operations commence for promulgation of related notices to mariners.
  - **(5)** Outlined that vessels should display appropriate lights and shapes to indicate the nature of operations and comply with the International Rules for Preventing Collisions at Sea (COLREGs), including correct AIS navigation status settings.
  - **(6)** Recommended that Woodside evaluate and implement adequate anti-collision measures, which could include additional warnings or lights, installation of AIS units, and deployment of offshore guard vessels to monitor traffic and alert approaching vessels.
- On 24 September 2025, Woodside replied to AMSA – Marine Safety (SI Report A, reference 4.2) thanking them for their response and:
  - **(1)** Acknowledged AMSA – Marine Safety's comments regarding heavy vessel and support craft traffic near the charted shipping fairway and confirmed receipt of the vessel traffic plot.
  - **(2)** Confirmed that Woodside would notify AMSA's Response Centre (ARC) at least 24–48 hours before commencement of operations. Woodside also noted that AMSA – Marine Safety's recent correspondence referenced both ARC and JRCC and requested clarification on whether notifications should reference JRCC for consistency across EPs.
  - **(3)** Noted the required details for notification, including vessel information, satellite communication details, area of operation, requested clearance, and start/end times.
  - **(4)** Confirmed that Woodside would notify AHO with operational details no less than four weeks before commencement to enable generation of temporary Maritime Safety Information Notifications (MSIN) and Notices to Mariners (NTM).
  - **(5)** Noted AMSA – Marine Safety's advice regarding compliance with the International Rules for Preventing Collisions at Sea (COLREGs) and confirmed that compliance with COLREGs and the Navigation Act 2012 was mandated aboard Woodside-chartered vessels, including correct AIS navigation status settings.
  - **(6)** Confirmed that Woodside did not propose additional anti-collision measures for GWF-4 activities at this time but confirmed that a support vessel would remain on standby for the MODU to assist with third-party vessel interactions. Woodside also noted that collision risk mitigation measures were continuously evaluated and implemented across activities as required.
- On 10 February 2026, Woodside emailed AMSA – Marine Safety a consultation update on this EP (Record of Consultation, reference 6.3.17). Woodside advised that additional modelling during the EP development process had resulted in changes to the EMBA and based on those changes, Woodside was undertaking additional consultation with AMSA – Marine Safety. Woodside attached an updated Consultation Information Sheet which included a map of the revised EMBA.
- On 13 February 2026, AMSA – Marine Safety responded to Woodside (SI Report A, reference 4.3) thanking them for proving this information and:

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- **(1)** Attached a vessel traffic plot showing that heavy vessel traffic and support craft could be encountered in the area of interest (AOI) for the GWF-4 activities and noted that two AOIs were located on either side of a charted shipping fairway where additional traffic might occur during operations, as well as that given the size of the EMBA it covers many heavy vessel traffic, support craft and local vessels.
- **(2)** Requested that project and support vessels notify AMSA's Joint Rescue Coordination Centre (JRCC) 24–48 hours before operations commence for promulgation of radio-navigation warnings and provided an email address and phone contact for JRCC.
- **(3)** Requested that AMSA's JRCC be provided vessel details (including name, callsign, MMSI), satellite communication details (including INMARSAT-C and satellite telephone), area of operation, requested clearance from other vessels, and notification when operations start and end.
- **(4)** Requested that Woodside also notify AHO no less than three working weeks before operations commence for promulgation of related notices to mariners.
- **(5)** Outlined that vessels should display appropriate lights and shapes to indicate the nature of operations and comply with the International Rules for Preventing Collisions at Sea (COLREGs), including correct AIS navigation status settings.
- **(6)** Recommended that Woodside evaluate and implement adequate anti-collision measures, which could include additional warnings or lights, installation of AIS units, and deployment of offshore guard vessels to monitor traffic and alert approaching vessels.

- On 4 March 2026, Woodside replied to AMSA – Marine Safety (SI Report A, reference 4.4) thanking them for their response and:
  - (1) Acknowledged AMSA – Marine Safety's comments regarding heavy vessel and support craft traffic near the charted shipping fairway and confirmed receipt of the vessel traffic plot, as well as AMSA's advice that heavy vessels, support craft and local traffic will be present in the EMBA.
  - (2) Confirmed that Woodside would notify AMSA's Response Centre (ARC) at least 24–48 hours before commencement of operations. Woodside also noted that AMSA – Marine Safety's recent correspondence referenced both ARC and JRCC and requested clarification on whether notifications should reference JRCC for consistency across EPs.
  - (3) Noted the required details for notification, including vessel information, satellite communication details, area of operation, requested clearance, and start/end times.
  - (4) Confirmed that Woodside would notify AHO no less than four weeks before commencement to enable generation of temporary Maritime Safety Information Notifications (MSIN) and Notices to Mariners (NTM).
  - (5) Noted AMSA – Marine Safety's advice regarding compliance with the International Rules for Preventing Collisions at Sea (COLREGs) and confirmed that compliance with COLREGs and the Navigation Act 2012 was mandated aboard Woodside-chartered vessels, including correct AIS navigation status settings.
  - (6) Confirmed that Woodside did not propose additional anti-collision measures for GWF-4 activities at this time but confirmed that a support vessel would remain on standby for the MODU to assist with third-party vessel interactions. Woodside also noted that collision risk mitigation measures were continuously evaluated and implemented across activities as required.

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
(1) Provided a chart of shipping fairways and outlined that heavy vessels, support craft and local traffic will be present in the EMBA, and that heavy vessel and support craft traffic near the charted shipping fairway.	**(1)** Woodside notes the chart provided by AMSA and notes AMSA's advice regarding the range of vessels present in the EMBA and near the charted shipping fairway.	**(1)** Woodside noted the chart provided and acknowledged AMSA's advice regarding the range of vessels present in the EMBA and near the charted shipping fairway.	**(1)** No additional controls or measures are required. As referenced as C 1.1 of the EP, vessels will comply with Marine Orders for safe vessel operations.

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(2) Notify JRCC 24-48 hours before activities commence.	**(2)** Woodside commits to notifying the ARC 24-48 hours before activities commence.	**(2)** Woodside confirmed it would notify the ARC 24-48 hours before activities commence.	**(2)** No additional controls or measures are required as a notification to the ARC 24-48 hours before activities commence has been included in the EP as standard, as referenced as PS 1.7 and set out in Table 7-5, Section 7.10.
(3) Requested start of activity notifications.	**(3)** Woodside commits to provide start of activity notification and provide the requested information.	**(3)** Woodside noted the need to provide start of activity notification and provide the requested information.	**(3)** No additional controls or measures are required as a notification to the ARC 24-48 hours before activities commence has been included in the EP as standard, as referenced as PS 1.7 and set out in Table 7-5, Section 7.10.
(4) Requested AHO receive notifications at least three weeks before activities commence.	**(4)** Woodside commits to notifying AHO at least four weeks before activities commence.	**(4)** Woodside confirmed it would notify AHO at least four weeks before activities commence.	**(4)** No additional controls or measures are required as a notification to AHO has been included in the EP as standard, as referenced as PS 1.5 and set out in Table 7-5, Section 7.10.
(5) Ensure vessels exhibit appropriate lights and shapes and comply with the COLREGS.	**(5)** Woodside commits that vessels will exhibit appropriate lights and comply with the COLREGS.	**(5)** Woodside confirmed vessels would exhibit appropriate lights and comply with the COLREGS.	**(5)** No additional controls or measures are required. As referenced as C 1.1 of the EP, vessels will comply with Marine Orders for safe vessel operations
(6) Evaluate and implement adequate anti-collision measures.	**(6)** Woodside has evaluated and will implement adequate anti-collision measures.	**(6)** Woodside confirmed it would implement adequate anti-collision measures and clarified that a support vessel would remain on standby for the MODU to assist with third-party vessel interactions.	**(6)** No additional controls or measures are required. Controls relating to anti-collision measures are set out in Section 6.7.1 of the EP
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 additional controls or measures are required.

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	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).	

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with AMSA – Marine 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 – Marine Safety sufficient information to allow AMSA – Marine Safety to make an informed assessment of the possible consequences of the activity on its functions, interests or activities because:

- Consultation Information Sheet for this EP has been publicly available on the Woodside website since July 2025 and updated Consultation Information Sheet since January 2026. Woodside gave this information to AMSA – Marine Safety on 29 July 2025, marking the commencement of consultation on this EP and provided a consultation update on 10 February 2026. 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 PAP, 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*'.
  - 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 22 August 2025 and 12 February 2026, AMSA – Marine Safety shared its feedback, claims or objections regarding this activity, indicating the information provided was sufficient to enable AMSA – Marine Safety to make an informed assessment of the possible consequences of the activity on its functions, interests or activities.
- In addition to the information in the Consultation Information Sheet, Woodside provided additional information to AMSA – Marine Safety in response to AMSA – Marine Safety's feedback (Woodside's email of 24 September 2025 and 4 March 2026).

Reasonable Period

Woodside allowed AMSA – Marine Safety a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence and in the consultation update to AMSA – Marine 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 – Marine Safety 30 days for the initial consultation and an additional 17 days for the consultation update in February 2026.
- Consultation for this EP commenced 8 months ago.

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- In this context, Woodside allowed AMSA – Marine Safety a reasonable period for consultation in preparation of the EP as evidenced by AMSA – Marine Safety's response on 22 August 2025 and 12 February 2026.

Reasonable Opportunity

Woodside allowed AMSA – Marine Safety a reasonable opportunity for consultation in the preparation of this EP because:

- Woodside published advertisements in 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside considers a reasonable opportunity was provided to AMSA – Marine Safety as evidenced by its response on 22 August 2025 and 12 February 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:

- AMSA – Marine 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 and 34(g), Woodside has:
  - Responded to feedback from AMSA – Marine Safety.
  - Made no changes or inclusions to the EP as a result of consultation with AMSA – Marine 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.

4.1.7 Department of Agriculture, Fisheries and Forestry (DAFF) – Fisheries

Summary of information provided and record of consultation for this EP:

- On 29 July 2025, Woodside emailed DAFF – Fisheries advising of the proposed activity (Record of Consultation, reference 6.1.16), provided a Consultation Information Sheet, information on potential impacts to fisheries, and a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community'*.
- On 30 July 2025, Woodside emailed DAFF – Fisheries to clarify that technical issues may have affected the display of the previous consultation email, Woodside re-issued the full consultation email, outlined that the Consultation Information Sheet is available on Woodside's website, and advised that the consultation period had been extended (Record of Consultation, reference 6.1.16.1).
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 10 February 2026, Woodside emailed DAFF – Fisheries a consultation update on this EP (Record of Consultation, reference 6.3.21). Woodside advised that additional modelling during the EP development process had resulted in changes to the EMBA and based on those changes, Woodside was undertaking additional consultation with DAFF – Fisheries. Woodside attached an updated Consultation Information Sheet which included a map of the revised EMBA.

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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
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).	No additional measures or controls are required. DAFF – Fisheries will receive start and end of activity notifications per standard procedure at PS 1.6 and set out in Table 7-5, Section 7.10

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 July 2025 and updated Consultation Information Sheet since January 2026. Woodside gave this information to DAFF – Fisheries on 29 July 2025, marking the commencement of consultation on this EP and provided a consultation update on 10 February 2026. 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 PAP, 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).

Reasonable Period

Woodside allowed DAFF – Fisheries a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence 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 and Woodside allowed DAFF – Fisheries 30 days for the initial consultation and an additional 17 days for the consultation update in February 2026.
- Consultation for this EP commenced 8 months ago.

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- 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 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- In the absence of feedback following the initial consultation, Woodside sent a follow-up consultation email on 18 August 2025, reminding ABF 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 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.

4.1.8 Department of Defence (DoD)

Summary of information provided and record of consultation for this EP:

- On 29 July 2025, Woodside emailed DoD advising of the proposed activity (Record of Consultation, reference 6.1.24), provided a Consultation Information Sheet, a link to NOPSEMA's brochure 'Consultation on offshore petroleum environment plans: Information for the community', and defence zones maps.
- On 30 July 2025, Woodside emailed DoD to clarify that technical issues may have affected the display of the previous consultation email, Woodside re-issued the full consultation email, outlined that the Consultation Information Sheet is available on Woodside's website, and advised that the consultation period had been extended (Record of Consultation, reference 6.1.24.1).
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 10 February 2026, Woodside emailed DoD a consultation update on this EP (Record of Consultation, reference 6.3.15). Woodside advised that additional modelling during the EP development process had resulted in changes to the EMBA and based on those changes, Woodside was undertaking additional consultation with DoD. Woodside attached an updated Consultation Information Sheet which included a map of the revised EMBA.

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
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	Woodside will notify DoD no less than 5 weeks before activities commence, as

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		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).	referenced as PS 1.10 and set out in Table 7-5, Section 7.10. 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 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 July 2025 and updated Consultation Information Sheet since January 2026. Woodside gave this information to DoD on 29 July 2025, marking the commencement of consultation on this EP and provided a consultation update on 10 February 2026. 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 PAP, 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).

Reasonable Period

Woodside allowed DoD a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence and in the consultation 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 and Woodside allowed DoD 30 days for the initial consultation and an additional 17 days for the consultation update in February 2026.
- Consultation for this EP commenced 8 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:

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- Woodside published advertisements in 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- the absence of feedback following the initial consultation, Woodside sent a follow-up consultation email on 18 August 2025, reminding DoD 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 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.

4.1.9 Department of Foreign Affairs and Trade (DFAT)

Summary of information provided and record of consultation for this EP:

- On 6 February 2026, as a result of additional modelling during the EP development process changes were made to the EMBA and based on those changes, Woodside was now undertaking consultation with DFAT. Woodside emailed DFAT advising of the proposed activity (Record of Consultation, reference 6.3.7), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 25 February 2026, as no response had been received, Woodside proactively sent a follow-up email as the full 30 day was provided (Record of Consultation, reference 6.4.1).

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
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).	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 DFAT 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:

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Sufficient Information

Woodside has given DFAT sufficient information to allow DFAT 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's consultation update has been publicly available on the Woodside website since January 2026. Woodside gave this information to DFAT on 10 February 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 PAP, 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).

Reasonable Period

Woodside allowed DFAT a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence to DFAT 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 DFAT 30 days for consultation.
- Consultation for this EP with DFAT commenced approximately 2 months ago.
- In this context, Woodside allowed DFAT 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 DFAT is appropriate and adapted to the nature of interests of DFAT:

- Woodside published advertisements in 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). 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 25 February 2026, reminding DFAT 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 DFAT 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 DFAT's functions, interests or activities.

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4.1.10 Department of Planning, Lands and Heritage (DPLH)

Summary of information provided and record of consultation for this EP:

- On 29 July 2025, Woodside emailed DPLH advising of the proposed activity (Record of Consultation, reference 6.1.19), provided a Consultation Information Sheet, a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community'* and a list of relevant state historical shipwrecks.
- On 30 July 2025, Woodside emailed DPLH to clarify that technical issues may have affected the display of the previous consultation email, Woodside re-issued the full consultation email, outlined that the Consultation Information Sheet is available on Woodside's website, and advised that the consultation period had been extended (Record of Consultation, reference 6.1.19.1).
- On 12 August 2025, DPLH responded to Woodside (SI Report A, reference 5.1) thanking them for the invitation to comment and:
  - **(1)** Confirmed that DPLH had no comments on the proposed activities.
- On 21 August 2025, Woodside replied to DPLH (SI Report A, reference 5.2) thanking them for their response and:
  - **(1)** Noted that DPLH had no comments on the proposed activities.
- On 10 February 2026, Woodside emailed DPLH a consultation update on this EP (Record of Consultation, reference 6.3.11). Woodside advised that additional modelling during the EP development process had resulted in changes to the EMBA and based on those changes, Woodside was undertaking additional consultation with DPLH. Woodside attached an updated Consultation Information Sheet which included a map of the revised EMBA.

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
(1) No comments on the activities.	**(1)** Woodside accepts DPLH has no concerns regarding the activities.	**(1)** Woodside noted that DPLH had no concerns and thanked DPLH for its feedback.	**(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).	No additional controls or measures are required.
Summary Report – Consultation Complete			

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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:

- Consultation Information Sheet for this EP has been publicly available on the Woodside website since July 2025 and updated Consultation Information Sheet since January 2026. Woodside gave this information to DPLH on 29 July 2025, marking the commencement of consultation on this EP and provided a consultation update on 10 February 2026. 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 PAP, 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*'.
  - 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 12 August 2025, DPLH shared its feedback, claims or objections regarding this activity, indicating the information provided was sufficient to enable DPLH to make an informed assessment of the possible consequences of the activity on its functions, interests or activities.
- In addition to the information in the Consultation Information Sheet, Woodside provided additional information to DPLH in response to DPLH's feedback (Woodside's email of 21 August 2025).

Reasonable Period

Woodside allowed DPLH a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence and in the consultation 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.
- Woodside's methodology allows a 30-day consultation period and Woodside allowed DPLH 30 days for the initial consultation and an additional 17 days for the consultation update in February 2026.
- Consultation for this EP commenced 8 months ago.
- In this context, Woodside allowed DPLH a reasonable period for consultation in preparation of the EP as evidenced by DPLH's response on 12 August 2025.

Reasonable Opportunity

Woodside allowed DPLH a reasonable opportunity for consultation in the preparation of this EP because:

- Woodside published advertisements in 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside considers a reasonable opportunity was provided to DPLH as evidenced by its response on 12 August 2025.

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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:

- DPLH 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 and 34(g), Woodside has:
  - Responded to feedback from DPLH.
  - Made no changes or inclusions to the EP as a result of consultation with DPLH 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.

4.1.11 Department of Primary Industries and Regional Development (DPIRD)

Summary of information provided and record of consultation for this EP:

- On 29 July 2025, Woodside emailed DPIRD advising of the proposed activity (Record of Consultation, reference 6.1.25), provided a Consultation Information Sheet, a link to NOPSEMA's brochure 'Consultation on offshore petroleum environment plans: Information for the community', and information on potential impacts to fisheries.
- On 30 July 2025, Woodside emailed DPIRD to clarify that technical issues may have affected the display of the previous consultation email, Woodside re-issued the full consultation email, outlined that the Consultation Information Sheet is available on Woodside's website, and advised that the consultation period had been extended (Record of Consultation, reference 6.1.25.1).
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 10 February 2026, Woodside emailed DPIRD a consultation update on this EP (Record of Consultation, reference 6.3.13). Woodside advised that additional modelling during the EP development process had resulted in changes to the EMBA and based on those changes, Woodside was undertaking additional consultation with DPIRD. Woodside attached an updated Consultation Information Sheet which included a map of the revised EMBA.
- On 10 February 2026 DPIRD responded to Woodside (SI Report A, reference 9.1) advising that an individual had moved to another team and that the contact for EIA matters was copied into the forwarded consultation email.

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
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).	No additional measures or controls are required. DPIRD will receive start and end of activity notifications per standard procedure at PS 1.6 and set out in Table 7-5, Section 7.10.

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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:

- Consultation Information Sheet for this EP has been publicly available on the Woodside website since July 2025 and updated Consultation Information Sheet since January 2026. Woodside gave this information to DPIRD on 29 July 2025, marking the commencement of consultation on this EP and provided a consultation update on 10 February 2026. 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 PAP, 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).

Reasonable Period

Woodside allowed DPIRD a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence and in the consultation 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 and Woodside allowed DPIRD 30 days for the initial consultation and an additional 17 days for the consultation update in February 2026.
- Consultation for this EP commenced 8 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 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- In the absence of feedback following the initial consultation, Woodside sent a follow-up consultation email on 18 August 2025, reminding DPIRD of the opportunity to provide feedback.

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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.

4.1.12 Department of Transport and Major Infrastructure (DTMI)

Summary of information provided and record of consultation for this EP:

- On 29 July 2025, Woodside emailed DTMI advising of the proposed activity (Record of Consultation, reference 6.1.20), provided a Consultation Information Sheet, a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community'* and a list of relevant state historical shipwrecks.
- On 30 July 2025, Woodside emailed DTMI to clarify that technical issues may have affected the display of the previous consultation email, Woodside re-issued the full consultation email, outlined that the Consultation Information Sheet is available on Woodside's website, and advised that the consultation period had been extended (Record of Consultation, reference 6.1.20.1).
- On 10 February 2026, Woodside emailed DTMI a consultation update on this EP (Record of Consultation, reference 6.2.1). Woodside advised that additional modelling during the EP development process had resulted in changes to the EMBA and based on those changes, Woodside was undertaking additional consultation with DTMI. Woodside attached an updated Consultation Information Sheet which included a map of the revised EMBA.
- **(1)** On 23 February 2026, DTMI responded confirming that they had no feedback and noted Woodside's reference to DTMI's role in relation to maritime incident (SI Report A, reference 6.1).
- On 6 March 2026, Woodside sent DTMI the Oil Pollution First Strike Plan for this EP for DTMI's review and comment (SI Report A, reference 6.2).
- **(1)** On 12 March 2026, Woodside replied to DTMI thanking them for their response and noted that they had no feedback (SI Report A, reference 6.3).

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
(1) No feedback.	**(1)** Woodside accepts DTMI has no feedback regarding the changes.	**(1)** Woodside noted that DTMI had no feedback and thanked DTMI for its feedback.	**(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	No additional controls or measures are required.

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		received, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8).	

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 July 2025 and updated Consultation Information Sheet since January 2026. Woodside gave this information to DTMI on 29 July 2025, marking the commencement of consultation on this EP and provided a consultation update on 10 February 2026. 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 PAP, 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*'.
  - 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 23 February 2026, DTMI shared its feedback, claims or objections regarding this activity, indicating the information provided was sufficient to enable DTMI to make an informed assessment of the possible consequences of the activity on its functions, interests or activities.
- In addition to the information in the Consultation Information Sheet, Woodside provided additional information to DTMI in response to DTMI's feedback (Woodside's email of 12 March 2026).

Reasonable Period

Woodside allowed DTMI a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence and in the consultation 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 and Woodside allowed DTMI 30 days for the initial consultation and an additional 17 days for the consultation update in February 2026.
- Consultation for this EP commenced 8 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 23 February 2026.

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Reasonable Opportunity

Woodside allowed DTMI a reasonable opportunity for consultation in the preparation of this EP because:

- Woodside published advertisements in 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside considers a reasonable opportunity was provided to DTMI as evidenced by its response on 23 February 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 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.

4.1.13 Pilbara Ports

Summary of information provided and record of consultation for this EP:

- On 30 July 2025, Woodside emailed Pilbara Ports advising of the proposed activity (Record of Consultation, reference 6.1.8), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).

On 10 February 2026, Woodside emailed Pilbara Ports a consultation update on this EP (Record of Consultation, reference 6.3.9). Woodside advised that additional modelling during the EP development process had resulted in changes to the EMBA and based on those changes, Woodside was undertaking additional consultation with Pilbara Ports. Woodside attached an updated Consultation Information Sheet which included a map of the revised EMBA.

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
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 additional measures or controls are required.

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		Change and Revision process (see Section 7.8).	

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:

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:

- Consultation Information Sheet for this EP has been publicly available on the Woodside website since July 2025 and updated Consultation Information Sheet since January 2026. Woodside gave this information to Pilbara Ports on 30 July 2025, marking the commencement of consultation on this EP and provided a consultation update on 10 February 2026. 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 PAP, 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).

Reasonable Period

Woodside allowed Pilbara Ports a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence and in the consultation 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.
- methodology allows a 30-day consultation period and Woodside allowed Pilbara Ports 30 days for the initial consultation and an additional 17 days for the consultation update in February 2026.
- Consultation for this EP commenced 8 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 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.

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- From 2 August 2025 to 18 October 2025, Woodside held, or hosted information stalls at, a number of community events and roadshows in regional areas including the Pilbara and Gascoyne to raise awareness of the EP and provide another opportunity for feedback. These events were promoted in local newspapers and on social media.
- In the absence of feedback following the initial consultation, Woodside sent a follow-up consultation email on 18 August 2025, reminding Pilbara Ports 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 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 functions, interests or activities.

4.1.14 Western Australian Museum (WAM)

Summary of information provided and record of consultation for this EP:

- On 29 July 2025, Woodside emailed WAM advising of the proposed activity (Record of Consultation, reference 6.1.22), provided a Consultation Information Sheet, a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community',* and a list of relevant state historical shipwrecks.
- On 30 July 2025, Woodside emailed the WAM to clarify that technical issues may have affected the display of the previous consultation email, Woodside re-issued the full consultation email, outlined that the Consultation Information Sheet is available on Woodside's website, and advised that the consultation period had been extended (Record of Consultation, reference 6.1.22.1).
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 10 February 2026, Woodside emailed WAM a consultation update on this EP (Record of Consultation, reference 6.3.20). Woodside advised that additional modelling during the EP development process had resulted in changes to the EMBA and based on those changes, Woodside was undertaking additional consultation with WAM. Woodside attached an updated Consultation Information Sheet which included a map of the revised EMBA and a revised list of relevant state historical shipwrecks.
- On 19 February 2026, WAM responded to Woodside with a letter thanking them for the information regarding this EP (SI Report A, reference 19.1) and:
  - **(1)** Noted Commonwealth Government's Guidelines for Assessing and Managing Impacts to Underwater Cultural Heritage (UCH) in Australian Waters and outlined that proponents planning activities in Australian waters have obligations under the *Underwater Cultural Heritage Act 2018.*
  - **(2)** Recommended that DCCEEW be notified directly.
  - **(3)** Recommended that a maritime archaeologist be engaged to undertake an underwater cultural heritage desktop assessment.
  - **(4)** Recommended consultation with Traditional Owners where appropriate.
- On 12 March 2026, Woodside replied to WAM thanking them for providing feedback (SI Report A, reference 19.2) and:

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– **(1)** Confirmed that Woodside referred to Commonwealth Government's Underwater Cultural Heritage (UCH) Guidance document regarding assessments and the Guidelines for Assessing and Managing Impacts to Underwater Cultural Heritage in Australian Waters.
– **(2)** Confirmed that Woodside has contacted DCCEEW for this EP.
– **(3)** Confirmed it was committed to engaging a qualified maritime archaeologists to complete desktop assessments.
– **(4)** Confirmed that consultation has been undertaken with Traditional Owners for this EP.

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
(1) Noted Commonwealth Government's Guidelines for Assessing and Managing Impacts to Underwater Cultural Heritage (UCH) in Australian Waters.	**(1)** Woodside is aware of the Commonwealth Government's Guidelines for Assessing and Managing Impacts to Underwater Cultural Heritage (UCH) in Australian Waters and refers to it in the development of EPs.	**(1)** Woodside confirmed that it refers to Commonwealth Government's Guidelines for Assessing and Managing Impacts to Underwater Cultural Heritage (UCH) in Australian Waters	**(1)** No additional measures or controls are required. Underwater Cultural Heritage is detailed in section 4.9.1.5.3 and Section 6.7.2 of the EP.
(2) Recommended contacting DCCEEW.	**(2)** Woodside notes the recommendation and has contacted DCCEEW for this EP.	**(2)** Woodside confirmed that DCCEEW had been contacted for this EP.	**(2)** No additional measures or controls are required. Consultation with DCCEEW is included in Appendix F, Table 2.
(3) Recommended engaging a maritime archaeologist.	**(3)** Woodside notes the recommendation and has already committed to engaging a qualified maritime archaeologist for desktop assessments.	**(3)** Woodside confirmed that it has already committed to engaging a qualified maritime archaeologist to complete desktop assessments.	**(3)** C 2.5 requires a qualified maritime archaeologist therefore no additional measures or controls are required.
(4) Recommended contacting Traditional Owners.	**(4)** Woodside notes the recommendation and has contacted Traditional Owners, where appropriate, for this EP.	**(4)** Woodside confirmed that Traditional Owners had been consulted for this EP.	**(4)** No additional measures or controls are required. Consultation with Traditional Owners is included in Appendix F, Table 2 and 3.
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	No additional controls or measures are required.

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		received, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8).	

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 July 2025 and updated Consultation Information Sheet since January 2026. Woodside gave this information to WAM on 29 July 2025, marking the commencement of consultation on this EP and provided a consultation update on 10 February 2026. 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 PAP, 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*'.
  - 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 19 February 2026, WAM shared its feedback, claims or objections regarding this activity, indicating the information provided was sufficient to enable WAM to make an informed assessment of the possible consequences of the activity on its functions, interests or activities.
- In addition to the information in the Consultation Information Sheet, Woodside provided additional information to WAM in response to WAM's feedback (Woodside's email of 12 March 2026).

Reasonable Period

Woodside allowed WAM a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence and in the consultation 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 and Woodside allowed WAM 30 days for the initial consultation and an additional 17 days for the consultation update in February 2026.
- Consultation for this EP commenced 8 months ago.
- In this context, Woodside allowed WAM a reasonable period for consultation in preparation of the EP as evidenced by WAM's response on 19 February 2026.

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Reasonable Opportunity

Woodside allowed WAM a reasonable opportunity for consultation in the preparation of this EP because:

- Woodside published advertisements in 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside considers a reasonable opportunity was provided to WAM as evidenced by its response on 19 February 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:

- WAM 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 and 34(g), Woodside has:
  - Responded to feedback from WAM.
  - Made no changes or inclusions to the EP as a result of consultation with WAM 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 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 29 July 2025, Woodside emailed DAFF – Biosecurity advising of the proposed activity (Record of Consultation, reference 6.1.16), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community'*.
- On 30 July 2025, Woodside emailed DAFF – Biosecurity to clarify that technical issues may have affected the display of the previous consultation email, Woodside re-issued the full consultation email, outlined that the Consultation Information Sheet is available on Woodside's website, and advised that the consultation period had been extended (Record of Consultation, reference 6.1.16.1).
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 10 February 2026, Woodside emailed DAFF – Biosecurity a consultation update on this EP (Record of Consultation, reference 6.3.21). Woodside advised that additional modelling during the EP development process had resulted in changes to the EMBA and based on those changes, Woodside was undertaking additional consultation with DAFF – Biosecurity. Woodside attached an updated Consultation Information Sheet which included a map of the revised EMBA.

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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
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).	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 6.8.6 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 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 July 2025 and updated Consultation Information Sheet since January 2026. Woodside gave this information to DAFF – Biosecurity on 29 July 2025, marking the commencement of consultation on this EP and provided a consultation update on 10 February 2026. 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 PAP, 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).

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Reasonable Period

Woodside allowed DAFF – Biosecurity a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence and in the consultation 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 and Woodside allowed DAFF – Biosecurity 30 days for the initial consultation and an additional 17 days for the consultation update in February 2026.
- Consultation for this EP commenced 8 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 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- In the absence of feedback following the initial consultation, Woodside sent a follow-up consultation email on 18 August 2025, reminding DAFF – Biosecurity 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 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 29 July 2025, Woodside emailed DBCA 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 30 July 2025, Woodside emailed DBCA to clarify that technical issues may have affected the display of the previous consultation email, Woodside re-issued the full consultation email, outlined that the Consultation Information Sheet is available on Woodside's website, and advised that the consultation period had been extended (Record of Consultation, reference 6.1.21.1).
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).

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- On 28 August 2025, DBCA responded to Woodside (SI Report A, reference 8.1) thanking them for proving relating to proposed activities and:
  - **(1)** Noted that numerous significant ecological areas, including Ningaloo Marine Park, Barrow Island Nature Reserve, Montebello Islands Marine Park and BIAs for several conservation-listed species, were located within the EMBA.
  - **(2)** Stated that areas of high ecological value, including Ningaloo Marine Park, Barrow Island Nature Reserve, Montebello Islands Marine Park, and biologically important areas for several listed marine fauna, were situated within the EMBA and could be affected in the event of a major hydrocarbon release. DBCA therefore considered it essential that the environmental baseline conditions were understood before any operations commenced that might result in hydrocarbon releases.
  - **(3)** Noted that following a desktop review and risk assessment, Woodside should also collect appropriate baseline abundance and distribution data for benthic habitat and marine fauna species in the EMBA. DBCA also noted that where baseline information was lacking, Woodside should evaluate what information was required based on the risk of the proposed activities and determine suitable methods or sources to obtain this information.
  - **(4)** Acknowledged that DBCA conducted monitoring within marine parks and reserves and noted that these datasets were available upon request, but also encouraged Woodside to acquire the necessary information to support a BACI-style monitoring framework, including undertaking independent data collection if required.
  - **(5)** Provided a link to DCCEEW's *National Light Pollution Guidelines for Wildlife* and recommended that Woodside refer to this for managing potential impacts of light pollution on marine fauna.
  - **(6)** Requested Woodside notified DBCA's Pilbara regional office in the event of a hydrocarbon release.
  - **(7)** Noted that it would not implement an oiled wildlife management response on behalf of a petroleum operator unless mandated to do so by regulatory decisionmakers, that any advice or assistance from the department would occur on a full cost recovery basis, and that Woodside should commit to monitoring and cleaning up any of DBCA's interests in case they were affected by an oil spill.
  - **(8)** Informed that Woodside should refer to Department of Transport's (DoT's) (now Department of Transport and Major Infrastructure's (DTMI's)) *Offshore Petroleum Industry Guidance Note: Marine Oil Pollution – Response and Consultation Arrangements* (July 2020) and web content on marine pollution.
  - **(9)** Requested that future notifications be sent to a specified DBCA email address.
- On 24 September 2025, Woodside replied to DBCA (SI Report A, reference 8.2) thanking them for their response and:
  - (1) Acknowledged the closeness of the planned activities to several BIAs for conservation-significant marine fauna, as well as to marine parks and coastal reserves identified by DBCA.
  - (2) Noted that Woodside's Oil Spill Scientific Monitoring Program (SMP) operated under the Joint Industry OSM Framework, which will enable quantitative assessment of environmental effects in the event of an unplanned hydrocarbon release, including scenarios where sensitive areas such as Ningaloo Marine Park, Barrow Island Nature Reserve or Montebello Islands Marine Park could be contacted.
  - (3) Described that Woodside had prepared an Operational and Scientific Monitoring Bridging Implementation Plan (OSM-BIP) aligned with the Joint Industry Framework, which outlines:
    - A process for reviewing baseline information and identifying information gaps
    - A commitment to engage with key organisations, including DBCA, early during a spill response to prioritise ecological receptors and shape monitoring design
    - The potential use of a BACI-type monitoring approach, if appropriate baseline information or feasible data collection conditions were present.
  - (3) Noted that the OSM-BIP contained an appendix listing the current environmental baseline studies available to Woodside and stated that these datasets were regularly reassessed and supplemented using a risk-based method to maintain preparedness.

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  - **(4)** Confirmed Woodside's commitment to ensuring the availability or acquisition of environmental baseline information that was suitable for environmental management needs, including collecting independent datasets where required, and emphasised alignment with recommended monitoring practices and the expectations of relevant stakeholders.
  - **(5)** Confirmed it had considered DCCEEW's *National Light Pollution Guidelines for Wildlife* in line with DBCA's recommendation.
  - **(6)** Confirmed that its Oil Pollution First Strike Plan (FSP) for the proposed activity included a commitment to notify the DBCA Pilbara regional office via the provided phone number soon as practicable if there was potential for oiled wildlife or if the spill was expected to contact land or waters managed by the department.
  - **(7)** Acknowledged that DBCA would not implement an oiled wildlife management response on behalf of a petroleum operator unless mandated by a jurisdictional decision-maker, and that any advice from the DBCA would occur on a full cost recovery basis. Woodside confirmed it would engage with DBCA on monitoring and cleanup of any DBCA-managed lands or waters as required.
  - **(8)** Confirmed it had reviewed and referenced DTMI's maritime environmental emergencies information and provided details hereof.
  - **(9)** Confirmed it would continue to use the provided email address for any future notifications.
- On 10 February 2026, Woodside emailed DBCA a consultation update on this EP (Record of Consultation, reference 6.3.9). Woodside advised that additional modelling during the EP development process had resulted in changes to the EMBA and based on those changes, Woodside was undertaking additional consultation with DBCA. Woodside attached an updated Consultation Information Sheet which included a map of the revised EMBA.
- On 16 February 2026, DBCA responded to Woodside (SI Report A, reference 8.3) thanking them for proving this information and:
  - **(10)** Advised that feedback provided on 28 August 2025 remains current.
  - **(6)** Requested Woodside notified DBCA's Pilbara regional office in the event of a hydrocarbon release.
  - **(7)** Noted that it would not implement an oiled wildlife management response on behalf of a petroleum operator unless mandated to do so by regulatory decisionmakers, that any advice or assistance from the department would occur on a full cost recovery basis, and that Woodside should commit to monitoring and cleaning up any of DBCA's interests in case they were affected by an oil spill.
  - **(8)** Informed that Woodside should refer to Department of Transport's (DoT's) (now Department of Transport and Major Infrastructure's (DTMI's)) *Offshore Petroleum Industry Guidance Note: Marine Oil Pollution – Response and Consultation Arrangements* (July 2020) and web content on marine pollution.
  - **(9)** Requested that future notifications be sent to a specified DBCA email address.
- On 12 March 2025, Woodside replied to DBCA (SI Report A, reference 8.4) thanking them for their response and:
  - Outlined that Woodside has assumed that references to Chevron in DBCA's response are made in error and should reference Woodside, requesting that DBCA advise if this is not the case.
  - **(10)** Woodside noted that DBCA's feedback provided on 28 August 2025 remained current.
  - **(6)** Confirmed that its Oil Pollution First Strike Plan (FSP) for the proposed activity included a commitment to notify the DBCA Pilbara regional office via the provided phone number soon as practicable if there was potential for oiled wildlife or if the spill was expected to contact land or waters managed by the department.
  - **(7)** Acknowledged that DBCA would not implement an oiled wildlife management response on behalf of a petroleum operator unless mandated by a jurisdictional decision-maker, and that any advice from the DBCA would occur on a full cost recovery basis. Woodside confirmed it would engage with DBCA on monitoring and cleanup of any DBCA-managed lands or waters as required.
  - **(8)** Confirmed it had reviewed and referenced DTMI's maritime environmental emergencies information and provided details hereof.
  - **(9)** Confirmed it would continue to use the provided email address for any future notifications.

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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
(1) Noted that that numerous significant ecological areas were located in the EMBA.	**(1)** Woodside considers BIAs, marine parks and coastal reserves as a standard in the development of an EP.	**(1)** Woodside noted the closeness of the planned activities to several BIAs for conservation-significant marine fauna, as well as to marine parks and coastal reserves identified by DBCA	**(1)** No additional controls or measures are required. Woodside considers BIAs and AMPs as standard, including in Section 4.5, 4.8 and Appendix C of this EP.
(2) Stated that areas of high ecological value could be affected in the event of a major hydrocarbon release.	**(2)** Woodside maintains knowledge of areas of ecological importance adjacent to Operational Areas and its oil spill scientific monitoring program provides for a quantitative assessment of overall impacts in the event of an unplanned hydrocarbon release.	**(2)** Woodside noted that the SMP operated under the Joint Industry OSM Framework will enable quantitative assessment of environmental effects in the event of an unplanned hydrocarbon release, including scenarios where sensitive areas such as Ningaloo Marine Park, Barrow Island Nature Reserve or Montebello Islands Marine Park could be contacted.	**(2)** Appendix G of the EP covers that under the Operational and Scientific Monitoring (OSM) Program, executed under the Joint Industry OSM Framework (AEP, 2021).
(3) Noted that Woodside should collect appropriate baseline abundance and distribution data for benthic habitat and marine fauna species in the EMBA. DBCA also noted that where baseline information was lacking, Woodside should evaluate what information was required.	**(3)** Woodside considers baseline information, including on any potential information gaps, in the development of an EP.	**(3)** Woodside outlined that it had prepared an OSM-BIP aligned with the Joint Industry Framework, which outlines: • reviewing baseline information and identifying gaps • commitment to engage with key organisations early • The potential use of a BACI-type monitoring approach. Woodside further noted that the OSM-BIP contained an appendix listing the current environmental baseline studies available and stated that these datasets were regularly reassessed.	**(3)** No additional controls or measures are required. As a standard, Woodside conducts annual reviews of environmental baseline data, as described in the Oil Spill Preparedness and Response Mitigation Assessment for this EP and Appendix C of the OSM-BIP provides a detailed inventory of baseline environmental studies currently available to Woodside.
(4)	**(4)**	**(4)**	**(4)**

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Noted that DBCA conducted monitoring within marine parks but encouraged Woodside to acquire the necessary information to support a BACI-style monitoring framework.	Woodside noted the request about implementing a BACI framework and noted it maintains knowledge of areas of ecological importance and its oil spill scientific monitoring program (SMP) would provide for a quantitative assessment of the overall environmental impacts in the event of an unplanned hydrocarbon release.	Woodside confirmed its commitment to ensuring the availability or acquisition of environmental baseline information for environmental management needs, including collecting independent datasets where required, and emphasised alignment with recommended monitoring practices and the expectations of relevant stakeholders.	No additional controls or measures are required, see (3) above.
(5) Recommended that Woodside referred to DCCEEW's guidelines for managing potential impacts of light pollution on marine fauna.	**(5)** Woodside considers DCCEEW's guidelines in the development of an EP.	**(5)** Woodside confirmed it had considered DCCEEW's *National Light Pollution Guidelines for Wildlife* in line with DBCA's recommendation.	**(9)** No additional controls or measures are required. Woodside conducts and impact assessment for light emissions and implements controls as appropriate as a standard, see Section 6.7.3 of the EP.
(6) DBCA requested Woodside notified DBCA's Pilbara regional office in the event of a hydrocarbon release.	**(6)** Woodside agrees to notify DBCA's Pilbara regional office as defined in its Oil Pollution FSP.	**(6)** Woodside confirmed the DBCA Pilbara phone number had been incorporated as part of the Oil Pollution First Strike Plan.	**(6)** DBCA's Pilbara phone number has been incorporated into the Oil Pollution First Strike Plan for this EP (see Appendix H of EP).
(7) DBCA noted that it would not implement an oiled wildlife management response on behalf of a petroleum operator unless mandated to do so by regulatory decisionmakers.	**(7)** Woodside notes DBCA will not implement an oiled wildlife management response on behalf of a petroleum operator unless mandated to do so by regulatory decisionmakers.	**(7)** Woodside acknowledged that DBCA would not implement an oiled wildlife management response on behalf of a petroleum operator unless mandated by a jurisdictional decision-maker, and that any advice from the DBCA would occur on a full cost recovery basis. Woodside confirmed it would engage with DBCA on monitoring and cleanup of any DBCA-managed lands or waters as required.	**(7)** Woodside's Oiled Wildlife Response is included in the Oil Spill Preparedness and Response Mitigation Assessment for this EP (see Appendix G).
(8) DBCA informed that Woodside should refer DTMI's *Offshore Petroleum Industry Guidance Note: Marine Oil Pollution – Response and Consultation*	**(8)** Woodside has considered DTMI's *Offshore Petroleum Industry Guidance Note: Marine Oil Pollution – Response and Consultation Arrangements* (July	**(8)** Woodside confirmed it had reviewed and referenced DTMI's maritime	**(8)** No additional controls or measures are required.

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Arrangements (July 2020) and web content on marine pollution.	2020) and relevant online content in the development of the EP.	environmental emergencies information and provided details hereof.	
(9) Requested that Woodside continued to provide future notifications to a specified email address.	**(9)** Woodside agrees to continue to use the provided email address for any potential future notifications.	**(9)** Woodside confirmed it would continue to use the provided email address for any future contact.	**(9)** No additional controls or measures are required.
(10) Feedback previously provided remains current.	**(10)** Woodside understands that DBCA's feedback provided on 28 August 2025 remains current.	**(10)** Woodside noted that DBCA's feedback remains current.	**(10)** 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).	No additional controls or 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 July 2025 and updated Consultation Information Sheet since January 2026. Woodside gave this information to DBCA on 30 July 2025, marking the commencement of consultation on this EP and provided a consultation update on 10 February 2026. 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 PAP, 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*'.

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  - 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 28 August 2025 and 16 February 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.
- In addition to the information in the Consultation Information Sheet, Woodside provided additional information to DBCA in response to DBCA's feedback (Woodside's email of 24 September 2025 and 12 March 2026).

Reasonable Period

Woodside allowed DBCA a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence and in the consultation 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 and Woodside allowed DBCA 30 days for the initial consultation and an additional 17 days for the consultation update in February 2026.
- Consultation for this EP commenced 8 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 28 August 2025 and 16 February 2026.

Reasonable Opportunity

Woodside allowed DBCA a reasonable opportunity for consultation in the preparation of this EP because:

- Woodside published advertisements in 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside considers a reasonable opportunity was provided to DBCA as evidenced by its response on 28 August 2025 and 16 February 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 and 34(g), Woodside has:
  - Responded to feedback from DBCA.
  - 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:

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- On 29 July 2025, Woodside emailed DCCEEW advising of the proposed activity (Record of Consultation, reference 6.1.59), provided a Consultation Information Sheet, a link to NOPSEMA's brochure 'Consultation on offshore petroleum environment plans: Information for the community', and a list of relevant state and Commonwealth historical shipwrecks.
- On 30 July 2025, Woodside emailed DCCEEW to clarify that technical issues may have affected the display of the previous consultation email, Woodside re-issued the full consultation email, outlined that the Consultation Information Sheet is available on Woodside's website, and advised that the consultation period had been extended (Record of Consultation, reference 6.1.59.1).
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 10 February 2026, Woodside emailed DCCEEW a consultation update on this EP (Record of Consultation, reference 6.3.12). Woodside advised that additional modelling during the EP development process had resulted in changes to the EMBA and based on those changes, Woodside was undertaking additional consultation with DCCEEW. Woodside attached an updated Consultation Information Sheet which included a map of the revised EMBA.

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
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).	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 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 July 2025 and updated Consultation Information Sheet since January 2026. Woodside gave this information to DCCEEW on 29 July 2025, marking the commencement of consultation on this EP and provided a consultation update on 10 February 2026. 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 PAP, 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*'.

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– Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).

Reasonable Period

Woodside allowed DCCEEW a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence and in the consultation 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 and Woodside allowed DCCEEW 30 days for the initial consultation and an additional 17 days for the consultation update in February 2026.
- Consultation for this EP commenced 8 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:

- Woodside published advertisements in 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- In the absence of feedback following the initial consultation, Woodside sent a follow-up consultation email on 18 August 2025, reminding DCCEEW 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 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 29 July 2025, Woodside emailed DNP advising of the proposed activity (Record of Consultation, reference 6.1.17), provided a Consultation Information Sheet and a link to NOPSEMA's brochure 'Consultation on offshore petroleum environment plans: Information for the community'.
- On 30 July 2025, Woodside emailed DNP to clarify that technical issues may have affected the display of the previous consultation email, Woodside re-issued the full consultation email, outlined that the Consultation Information Sheet is available on Woodside's website, and advised that the consultation period had been extended (Record of Consultation, reference 6.1.17.1).

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- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- Between 2 October 2025 and 7 October 2025, Woodside and DNP exchanged three emails arranging and confirming an online meeting for 28 October 2025 (SI Report A, references 7.1 – 7.3).
- On 28 October 2025, Woodside and DNP held an online meeting (SI Report A, reference 7.4). During the meeting:
  - Woodside provided an overview of the GWF-4 Drilling and Subsea Installation EP including:
    - Background of the project and the progression from the OPP to the EP, which includes drilling for up to six wells (nearfield and Wilcox); timing of the activity; location of the activity overlapping the Montebello Marine Park.
    - Noting of a commitment in the OPP that no infrastructure would be installed in the marine park, however there may be anchoring, piling or vessel movement.
    - Noting piling modelling had been redone for the EP.
    - Information on potential seabed disturbance, including that the activity would not disturb more than 0.11km2 of seabed in the marine park.
  - DNP asked whether Woodside was proposing to move the piling from hard substrate areas.
    - Woodside noted that an ALARP assessment will be undertaken for anchor/piling locations *[This feedback is no longer relevant as piling has since been removed from the scope of the EP]*
- On 27 November 2025, DNP responded to Woodside (SI Report A, reference 7.5) thanking them for providing DNP the opportunity to comment and:
  - **(1)** Noted the proposed activity overlapped the Multi Use Zone of the Montebello Marine Park and advised Woodside to be aware of obligations under the class approval and highlighted the *North-west Marine Parks Network Management Plan 2018* that came into effect in 2018.
  - **(2)** Thanked Woodside for considering the '*Petroleum Activities and Australian Marine Parks'* guidance note and advised that the EP should consider all associated activities in the context of the management plan objectives and values, including representativeness and footprint within the marine park.
  - **(3)** Advised of the Australian marine park specific values for Montebello Marine Park, including the ancient coastline at the 125-m depth contour, diverse benthic and pelagic fish communities, migratory pathways for humpback whales, seabird breeding habitat, marine turtle habitats, and whale shark foraging habitat. DNP also noted that further information on marine park values was available in the management plan and spatial data could be accessed via the Australian Marine Spatial Information System.
  - **(4)** Requested that DNP be notified as soon as possible of any oil or gas pollution incidents occurring within or likely to impact a marine park, and indicated that DNP might request daily or weekly Situation Reports depending on the scale and severity of a pollution incident.
  - **(5)** Requested notification to a provided email address if the EP was approved by NOPSEMA, and further requested notification at least 10 days prior to all activities occurring within the marine park (excluding transiting) and at the conclusion of the activity, with information consistent with the guidance note.
- On 10 February 2026, Woodside replied to DNP (SI Report A, reference 7.6) thanking them for their response and:
  - **(1)** Confirmed that Woodside had referred to the North-west Marine Parks Network Management Plan 2018 during the development of the EP and noted DNP's information regarding the Montebello Marine Park and confirmed that Woodside was aware of its obligations under the class approval.
  - **(2)** Confirmed that Woodside had considered the '*Petroleum Activities and Australian Marine* Parks' guidance note while preparing the EP to identify and manage impacts and risks on Australian Marine Park values to an acceptable level, reduce them to ALARP, and demonstrate that the activity would not be inconsistent with the *North-west Marine Parks Network Management Plan 2018*.
  - **(3)** Noted the specific values for the Montebello Marine Park outlined by DNP and noted that spatial information was available through the Australian Marine Spatial Information System.

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– **(4)** Confirmed that in the unlikely event of a hydrocarbon release, Woodside would notify DNP within 24 hours if the incident occurred within or was likely to impact a marine park.
– **(5)** Confirmed that Woodside would provide notification to DNP upon acceptance of the EP by NOPSEMA and at least 10 days prior to activities occurring within the marine park (excluding transiting) and at the conclusion of activities.

- As part of the same email on 10 February 2026, Woodside provided DNP a consultation update on this EP. Woodside advised that additional modelling during the EP development process had resulted in changes to the EMBA and based on those changes, Woodside was undertaking additional consultation with DNP. Woodside attached an updated Consultation Information Sheet which included a map of the revised EMBA.
- **(6)** On 12 February 2026, DNP responded to Woodside (SI Report A, reference 7.7) thanking them for updating DNP on the new modelling and resulting EMBA revision and confirmed they had no further comments.

(6) On 4 March 2026, Woodside replied to DNP (SI Report A, reference 7.8) thanking them for their feedback and noted that DNP had no further comments beyond those provided in November 2025.

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
(1) Woodside has obligations under class approval and the *North-west Marine Parks Network Management Plan 2018*.	**(1)** Woodside understands its obligations under the class approval and has referred to the *North-west Marine Parks Network Management Plan 2018* for this EP.	**(1)** Woodside confirmed it was aware of its obligations under the class approval and that it had referred to the *North-west Marine Parks Network Management Plan 2018* during the development of this EP.	**(1)** No additional controls or measures are required.
(2) Ensure the EP identifies and manages all impacts and risks on AMP values, and clearly demonstrates that activities will not be inconsistent with the *North-west Marine Parks Network Management Plan 2018*.	**(2)** Woodside has considered the 'Petroleum Activities and Australian Marine Parks' guidance note to identify and manage impacts and risks to AMPs.	**(2)** Woodside confirmed it had taken into consideration the 'Petroleum Activities and Marine Parks' guidance note to ensure the EP identified and managed all risks on AMP values and demonstrated that activities would not be inconsistent with the *North-west Marine Parks Network Management Plan 2018*.	**(2)** 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 6.8 of the EP).
(3) Noted that the *North-west Marine Parks Network Management Plan 2018* provided information on values for Montebello Marine Park and that the Australian Marine Spatial Information	**(3)** Woodside considers AMPs in the development of an EP, which for this EP includes the Montebello Marine Park. Woodside references available resources as appropriate, which can include the sources mentioned by DNP,	**(3)** Woodside noted the *North-west Marine Parks Network Management Plan 2018* provided information on specific values for the Montebello Marine Park, and that the Australian Marine Spatial Information	**(3)** No additional controls or measures are required.

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System provided spatial information on the values for marine parks.	such as the *North-west Marine Parks Network Management Plan 2018*.	System provided spatial information on marine parks.	
(4) Requested notification as soon as possible of any oil or gas pollution incidents and potential situation reports	**(4)** In the highly unlikely event of a hydrocarbon release, Woodside agrees to notify DNP within 24 hours if the incident occurs within a marine park or was likely to impact a marine park.	**(4)** Woodside confirmed that in the highly unlikely event of a hydrocarbon release, it would notify DNP within 24 hours if the incident occurred within a marine park or was likely to impact a marine park.	**(4)** As described in Section 7 of the EP, Woodside will notify DNP within 24 hours of a hydrocarbon release incident if the incident occurs within a marine park or was likely to impact a marine park.
(5) Requested email notification of EP approval, activity start and end dates.	**(5)** Woodside will notify DNP on acceptance of the EP and at start and end of activities occurring within the marine park (excluding transiting).	**(5)** Woodside confirmed it would provide notification to DNP upon acceptance of the EP, and at least 10 days prior to activities occurring within the marine park (excluding transiting) and at the conclusion of activities.	**(5)** As referenced at PS 1.11 and set out in Table 7-5, Section 7.10, Woodside will notify DNP upon acceptance of this EP by NOPSEMA, and at least 10 days prior to activities occurring within the marine parks (excluding transiting) and at the conclusion of activities.
(6) No additional comments beyond those previously provided.	**(6)** Woodside understands DNP has no additional comments and recognises the comments previously shared.	**(6)** Woodside confirmed that DNP had no further comments beyond what was previously provided.	**(6)** 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).	No additional controls or 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 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:			

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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 July 2025 and updated Consultation Information Sheet since January 2026. Woodside gave this information to DNP on 29 July 2025, marking the commencement of consultation on this EP and provided a consultation update on 10 February 2026. 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 PAP, 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*'.
  - 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 28 October 2025, DNP shared feedback at an online meeting regarding this activity, and on 27 November 2025 and 12 February 2026, DNP shared its feedback via email 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.
- In addition to the information in the Consultation Information Sheet, Woodside provided additional information to DNP in response to DNP's feedback (Woodside's email of 10 February 2026 and 4 March 2026).

Reasonable Period

Woodside allowed DNP a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence and in the consultation 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 and Woodside allowed DNP 30 days for the initial consultation and an additional 17 days for the consultation update in February 2026.
- Consultation for this EP commenced 8 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 27 November 2025 and 12 February 2026.

Reasonable Opportunity

Woodside allowed DNP a reasonable opportunity for consultation in the preparation of this EP because:

- Woodside published advertisements in 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside considers a reasonable opportunity was provided to DNP as evidenced by its response on 27 November 2025 and 12 February 2026.

Outcomes of Consultation

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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 and 34(g), Woodside has:
  - Responded to feedback from DNP.
  - Based on DNP's feedback, updated Table 7-5 to include notifications to DNP upon acceptance of the EP, at least 10 days prior to activities occurring within the marine park, and at the conclusion of activities.
- 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 30 July 2025, Woodside emailed NCWHAC advising of the proposed activity (Record of Consultation, reference 6.1.8), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 10 February 2026, Woodside emailed NCWHAC a consultation update on this EP (Record of Consultation, reference 6.3.9). Woodside advised that additional modelling during the EP development process had resulted in changes to the EMBA and based on those changes, Woodside was undertaking additional consultation with NCWHAC. Woodside attached an updated Consultation Information Sheet which included a map of the revised EMBA.

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
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).	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 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:			

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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 July 2025 and updated Consultation Information Sheet since January 2026. Woodside gave this information to NCWHAC on 30 July 2025, marking the commencement of consultation on this EP and provided a consultation update on 10 February 2026. 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 PAP, 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).

Reasonable Period

Woodside allowed NCWHAC a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence and in the consultation 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 and Woodside allowed NCWHAC 30 days for the initial consultation and an additional 17 days for the consultation update in February 2026.
- Consultation for this EP commenced 8 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 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- From 2 August 2025 to 18 October 2025, Woodside held, or hosted information stalls at, a number of community events and roadshows in regional areas including the Pilbara and Gascoyne to raise awareness of the EP and provide another opportunity for feedback. These events were promoted in local newspapers and on social media.
- In the absence of feedback following the initial consultation, Woodside sent a follow-up consultation email on 18 August 2025, reminding NCWHAC of the opportunity to provide feedback.

Outcomes of Consultation

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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 30 July 2025, Woodside emailed DMPE advising of the proposed activity (Record of Consultation, reference 6.1.8), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).

On 10 February 2026, Woodside emailed DMPE a consultation update on this EP (Record of Consultation, reference 6.3.9). Woodside advised that additional modelling during the EP development process had resulted in changes to the EMBA and based on those changes, Woodside was undertaking additional consultation with DMPE. Woodside attached an updated Consultation Information Sheet which included a map of the revised EMBA.

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
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).	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 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:			

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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 July 2025 and updated Consultation Information Sheet since January 2026. Woodside gave this information to DMPE on 30 July 2025, marking the commencement of consultation on this EP and provided a consultation update on 10 February 2026. 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 PAP, 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).

Reasonable Period

Woodside allowed DMPE a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence and in the consultation 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.
- methodology allows a 30-day consultation period and Woodside allowed DMPE 30 days for the initial consultation and an additional 17 days for the consultation update in February 2026.
- Consultation for this EP commenced 8 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 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- In the absence of feedback following the initial consultation, Woodside sent a follow-up consultation email on 18 August 2025, reminding DMPE 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 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.

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- 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 30 July 2025, Woodside emailed DISR advising of the proposed activity (Record of Consultation, reference 6.1.8), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).

  On 10 February 2026, Woodside emailed DISR a consultation update on this EP (Record of Consultation, reference 6.3.9). Woodside advised that additional modelling during the EP development process had resulted in changes to the EMBA and based on those changes, Woodside was undertaking additional consultation with DISR. Woodside attached an updated Consultation Information Sheet which included a map of the revised EMBA.

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
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).	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 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 July 2025 and updated Consultation Information Sheet since January 2026. Woodside gave this information to DISR on 30 July 2025, marking the commencement of consultation on this EP and provided a consultation update on 10 February 2026. The Consultation Information Sheet included:
  - The purpose of consultation and set out what was being sought through consultation.

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- A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the PAP, 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).

Reasonable Period

Woodside allowed DISR a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence and in the consultation 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 and Woodside allowed DISR 30 days for the initial consultation and an additional 17 days for the consultation update in February 2026.
- Consultation for this EP commenced 8 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 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- In the absence of feedback following the initial consultation, Woodside sent a follow-up consultation email on 18 August 2025, reminding DISR 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 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.

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4.4 Commonwealth commercial fisheries and peak representative bodies

4.4.1 Commonwealth Fisheries Association (CFA)

Summary of information provided and record of consultation for this EP:

- On 29 July 2025, Woodside emailed CFA advising of the proposed activity (Record of Consultation, reference 6.1.57), provided a Consultation Information Sheet, information on potential impacts on fisheries, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 30 July 2025, Woodside emailed CFA to clarify that technical issues may have affected the display of the previous consultation email, Woodside re-issued the full consultation email, outlined that the Consultation Information Sheet is available on Woodside's website, and advised that the consultation period had been extended (Record of Consultation, reference 6.1.57.1).
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).

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
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).	No additional measures or controls are required. Woodside has assessed the potential for interaction with Commonwealth managed commercial fisheries issues in Section 4.9.2 of the EP. CFA will receive start and end of activity notifications per standard procedure in Table 7-5 in Section 7.10 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 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 July 2025. Woodside gave this information to CFA on 29 July 2025, 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.

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- A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the PAP, 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).

Reasonable Period

Woodside allowed CFA a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence 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 and Woodside allowed CFA 30 days for consultation.
- Consultation for this EP commenced 8 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 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). 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 18 August 2025, reminding CFA 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 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 North West Slope Trawl Fishery

Summary of information provided and record of consultation for this EP:

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- On 29 July 2025, Woodside emailed North West Slope Trawl Fishery licence holders advising of the proposed activity (Record of Consultation, reference 6.1.57), provided a Consultation Information Sheet, information on potential impacts on fisheries, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 30 July 2025, Woodside emailed North West Slope Trawl Fishery licence holders to clarify that technical issues may have affected the display of the previous consultation email, Woodside re-issued the full consultation email, outlined that the Consultation Information Sheet is available on Woodside's website, and advised that the consultation period had been extended.
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).

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
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).	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 North West Slope Trawl Fishery 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 North West Slope Trawl Fishery sufficient information to allow North West Slope Trawl Fishery 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 July 2025. Woodside gave this information to North West Slope Trawl Fishery on 29 July 2025, 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 PAP, 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).

Reasonable Period

Woodside allowed North West Slope Trawl Fishery a reasonable period for consultation in the preparation of this EP because:

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- A consultation period was stated in the initial correspondence to North West Slope Trawl Fishery 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 North West Slope Trawl Fishery 30 days for consultation.
- Consultation for this EP commenced 8 months ago.
- In this context, Woodside allowed North West Slope Trawl Fishery 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 North West Slope Trawl Fishery is appropriate and adapted to the nature of interests of North West Slope Trawl Fishery:

- Woodside published advertisements in 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- From 2 August 2025 to 18 October 2025, Woodside held, or hosted information stalls at, a number of community events and roadshows in regional areas including the Pilbara and Gascoyne to raise awareness of the EP and provide another opportunity for feedback. These events were promoted in local newspapers and on social media.
- In the absence of feedback, Woodside sent a follow-up consultation email on 18 August 2025, reminding North West Slope Trawl Fishery 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 North West Slope Trawl Fishery 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 North West Slope Trawl Fishery's functions, interests or activities.

4.4.3 Tuna Australia

Summary of information provided and record of consultation for this EP:

- On 29 July 2025, Woodside emailed Tuna Australia advising of the proposed activity (Record of Consultation, reference 6.1.57), provided a Consultation Information Sheet, information on potential impacts on fisheries, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 30 July 2025, Woodside emailed Tuna Australia to clarify that technical issues may have affected the display of the previous consultation email. Woodside re-issued the full consultation email, outlined that the Consultation Information Sheet is available on Woodside's website, and advised that the consultation period had been extended (Record of Consultation, reference 6.1.57.1).

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- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 27 August 2025, Tuna Australia responded to Woodside (SI Report A, reference 10.1) and:
  - **(1)** Provided advice on how Woodside can appropriately consult with members and non-members of the tuna fishing community.
  - **(2)** Recommended consulting with Australian Southern Bluefin Tuna Industry Association.
  - **(3)** Noted the planned and unplanned impacts associated with the activities and stated that while standard environmental risks and generic mitigation measures were presented, there were significant gaps requiring further consideration. This included that many mitigation measures relied on general compliance statements or ALARP principles without specific or measurable commitments.
  - Noted the absence of:
    - **(4)** A detailed benthic recovery monitoring program
    - **(5)** A real-time marine fauna monitoring for acoustic impacts,
    - **(6)** clear commitments regarding light minimisation.
  - **(7)** Advised that oil spill response plans were referenced but not described in sufficient detail.
  - **(8)** Stated that greenhouse gas management focused on reporting obligations rather than emission reduction strategies.
  - **(9)** Asserted that cultural heritage impacts were only addressed at a high level.
  - **(10)** Asserted that fisheries impacts were only addressed at a high level.
  - **(11)** Advised that oil spill modelling in the EP defined an EMBA that should be overlaid with tuna egg and larval distribution data to identify seasonal high-risk overlaps and recommended that the OPEP include pre-agreed fishery protection triggers, including dynamic closures and enhanced spill response where spill modelling indicated overlap with tuna larval areas.
  - **(12)** Stated that NOPSEMA enforced compliance under the Offshore Petroleum and Greenhouse Gas Storage framework and that the polluter-pays principle applied.
- On 24 November 2025, Woodside emailed Tuna Australia to arrange a meeting regarding consultation (SI Report A, reference 10.2).
- Between 28 November 2025 – 2 December 2025, Woodside and Tuna Australia exchanged four emails arranging and confirming a meeting for 10 December 2025 (SI Report A, references 10.3 – 10.6).
- On 10 December 2025, Woodside and Tuna Australia met to discuss stakeholder engagement (SI Report A, reference 21.7). During the meeting:
  - Woodside outlined its grievance process for fishery stakeholders.
  - Tuna Australia:
    - Discussed improvements to outreach to members and the tuna community and provided a review of the industry including:
      - Migratory and unpredictable nature of stock.
      - Past consultation challenges.
    - **(1)** Claimed that the AFMA database was incomplete.
    - Stated it currently worked with 15 companies to support consultation with industry and collaborated with other tuna representative bodies.
    - Covered operational insights from its perspective including:
      - Tuna fishing is in Commonwealth waters and is migratory currently with two boats in WA.
      - There were multiple international commitments and agreements which added complexity to management.

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    - Discussed its communications to stakeholders, including its approach for mailouts.
    - Noted that there were potential changes coming for marine parks.
  - **(1)** Woodside agreed to have Tuna Australia send its Service Agreement for review.
- On 26 February 2026, Woodside met with Tuna Australia regarding general consultation matters separate to this EP (SI Report A, reference 10.8).
- On 20 March 2026, Woodside replied to Tuna Australia (SI Report A, reference 10.9) thanking them for their feedback and:
  - **(1)** Acknowledged recent meetings with Tuna Australia regarding consultation and ongoing discussions about progressing a consultation services agreement.
  - **(2)** Confirmed that consultation had also occurred with ASBTIA in relation to the EP.
  - **(3)** Advised that Woodside had undertaken environmental risk assessments for both planned and unplanned activities as part of EP development and noted that the planned and unplanned impacts had been addressed in the Consultation Information Sheet and Section 6 of the EP. Woodside further noted Tuna Australia's comments on mitigation and monitoring and outlined that the EP managed impacts and risks through Environmental Performance Outcomes, Environmental Performance Standards, and Measurement Criteria. Woodside noted that controls, standards, and compliance monitoring measures had been established for planned and unplanned impacts, based on available environmental data and risk assessments.
  - **(4)** Advised that a benthic monitoring program had not been adopted because it was not considered ALARP given the predicted scale and nature of drill cuttings impacts and the availability of baseline data and modelling.
  - **(5)** Confirmed that, if piling was required, trained vessel crew would undertake real-time cetacean monitoring as marine fauna observers, enabling adaptive management including pre-start observations and shutdown procedures (consistent with *EPBC Act Policy Statement 2.1*).
  - **(6)** Advised that light emissions were expected to have negligible impacts on marine fauna due to distance from relevant habitats and that good industry practice controls had been adopted.
  - **(7)** Confirmed that the OPEP, including the Oil Spill Preparedness and Response Mitigation Assessment and Oil Pollution First Strike Plan, would be available for review on the NOPSEMA website once the EP was submitted.
  - **(8)** Noted Tuna Australia's feedback on greenhouse gas management and outlined that emissions were primarily vessel or MODU based, relatively small, and managed through a risk-based ALARP approach including compliance with international maritime requirements such as Marine Orders.
  - **(9)** Noted Tuna Australia's assertion that cultural heritage impacts are only acknowledged superficially and:
    - Outlined that both tangible and intangible cultural heritage values had been considered through consultation with relevant persons and organisations, including First Nations Traditional Custodians.
    - Advised that cultural heritage considerations were supported by reviews of publicly available information, including Marine Park and Healthy Country management plans, with impacts assessed and controls implemented where relevant.
    - Stated that cultural heritage controls included mandatory cultural awareness training and underwater cultural heritage assessments.
  - **(10)** Noted Tuna Australia's assertion regarding fisheries impacts and advised that fisheries interactions had been assessed using baseline information on activity and spatial overlap, fisheries interaction risks had been reduced to ALARP through operational controls, navigational safety measures, and stakeholder notifications.
  - **(11)** Acknowledged the potential for impacts to tuna larvae in the unlikely event of a hydrocarbon release during spawning periods but stated that the environmental performance outcome was to prevent any unplanned hydrocarbon release to the marine environment. Woodside advised that:
    - In the highly unlikely event of a hydrocarbon release, the OSM Framework would guide response activities and science-based monitoring, including a fisheries impact assessment.
    - Seasonal tuna-sensitive scheduling and explicit larval exposure monitoring or modelling had not been applied.

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  - In the event of a hydrocarbon release, Woodside committed to notifying DPIRD and WAFIC within 24 hours and liaising on appropriate fisheries-related actions.
  - Confirmed membership in the AEP Joint Industry Operational and Scientific Monitoring Framework.
- **(12)** Confirmed that Woodside maintained financial assurance for the duration of its activities and provided evidence to NOPSEMA prior to EP acceptance and advised that financial assurance estimates were prepared using industry methods endorsed by NOPSEMA and consistent with published guidance.

- On 30 March 2026, Tuna Australia emailed thanking Woodside for its response and ongoing engagement (SI Report A, reference 10.10). Tuna Australia:
  - **(3)** Acknowledged Woodside's environment assessment framework but noted its view that impacts to fisheries had not been assessed at an appropriate biological and management scale, and that impacts could not be confined to a defined area or assessed on recent fishing activity.
  - **(11)** Stated that reliance on a performance outcome of no planned release did not address the potential consequence should a release occur.
  - **(10)** Stated that the conclusion that impacts were reduced to ALARP through operational controls and stakeholder notifications did not address potential indirect effects, and noted an expectation of increased fishing activity in the Western Tuna and Billfish Fishery due to changes to WA fishing restrictions.
  - **(7)** Noted that the EP and OPEP were only available following submission to NOPSEMA.
- On 1 April 2026, Woodside responded to Tuna Australia (SI Report A, reference 10.11) thanking them for their feedback and:
  - **(3)** Noted Tuna Australia's comments and clarified that spatial overlap and baseline activity information had been considered in relation to planned activities during the development of the EP through a detailed environmental risk assessment.
  - **(11)** Outlined that potential impact pathways on pelagic fish populations had been considered under the highly unlikely event of a worst-case hydrocarbon spill scenario. Woodside further noted that, in such a scenario, there was potential for impacts to spawning fish and/or nursery areas within the EMBA, and noted that the severity of consequences would depend on the timing, duration and extent of any potential spill relative to key spawning periods and locations.
  - **(10)** Advised that, in the highly unlikely event of a hydrocarbon release, the OSM Framework would guide situational awareness and response activities and support the implementation of comprehensive science-based monitoring programs to assess potential impacts on fisheries, and noted that the OSM Framework was publicly available.
  - **(7)** Stated that, consistent with regulatory requirements, Woodside had provided sufficient information to enable Tuna Australia to make an informed assessment of the possible consequences of the activity on its functions, interests or activities.
- On 1 April 2026, Tuna Australia emailed Woodside thanking them for the response and clarification (SI Report A, reference 10.12). Tuna Australia:
  - **(11)** Requested clarification on how a potential hydrocarbon release had been assessed for tuna and billfish stocks.
- On 9 April 2026, Woodside responded to Tuna Australia (SI Report A, reference 10.13) thanking them for their feedback and:
  - **(11)** Noted that Woodside had assessed potential impacts to fish and fisheries, including pelagic species such as tuna and billfish, within the EP. Woodside also explained the risk assessment process, noted that the EMBA does not represent the extent of the predicted impact of a highly unlikely hydrocarbon release, and acknowledged that pelagic fish were migratory in nature and therefore the impact assessment for a potential unplanned hydrocarbon release was based on the assumption that pelagic fish and associated larvae were present within the EMBA.

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
(1) Provided advice on consultation with Tuna fishing community.	**(1)**	**(1)** Woodside acknowledged recent meeting and engagement with Tuna Australia	**(1)** Not required.

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	Woodside notes Tuna Australia's comments regarding consultation with the Tuna fishing community.	regarding consultation and discussion about entering into a service agreement.	
(2) Recommended contacting ASBTIA.	**(2)** Woodside has already provided consultation material to ASBTIA for this EP.	**(2)** Woodside confirmed that ASBTIA was contacted for this EP.	**(2)** Evidence of consultation with ASBTIA is included in Appendix F, Table 2.
(3) Noted planned and unplanned impacts and stated that gaps existed, as well as the mitigation measures relied on general compliance and ALARP principles and lacked measurable commitments.	**(3)** Section 6 of the EP identifies the potential impacts and risk of the activity, which includes specific mitigation measures and demonstrates that impacts and risks are reduced to ALARP and are of an acceptable level.	**(3)** Woodside advised that environmental risk assessments for both planned and unplanned activities are part of EP development and noted that the planned and unplanned impacts had been addressed in Section 6 of the EP. Woodside further noted Tuna Australia's comments on mitigation and monitoring and outlined that the EP managed impacts and risks. Woodside noted that controls, standards, and compliance monitoring measures had been established for planned and unplanned impacts, based on available environmental data and risk assessments.	**(3)** No additional controls or measures are required. Section 6 of the EP identifies the potential impacts and risk of the activity and includes specific mitigation measures.
(4) Stated that there was an absence of detailed benthic recovery monitoring program.	**(4)** Woodside considered the requirement for a monitoring program and undertook and ALARP demonstration in section 6.7.8 of the EP. This was not considered ALARP given the predicted scale and nature of drill cuttings impacts and the availability of baseline data and modelling.	**(4)** Woodside advised that a benthic monitoring program had not been adopted because it was not considered ALARP given the predicted scale and nature of drill cuttings impacts and the availability of baseline data and modelling.	**(4)** No additional controls or measures are required. The ALARP demonstration in Section 6.7.8 considers a monitoring program.
(5) Stated that there was an absence of real-time fauna monitoring for acoustic impacts	**(5)** Woodside has since removed piling from the scope of the EP and therefore the nature and scale of the predicted noise	**(5)** Woodside advised that if piling was required, trained vessel crew would	**(5)** Not required. Piling has since been removed from the scope of the EP.

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	impacts (vessel noise) do not require real-time monitoring.	undertake real-time cetacean monitoring. *[Piling has since been removed from the scope of the EP]*	
(6) Stated that there was an absence of clear commitments regarding light minimisation	**(6)** Woodside acknowledges Tuna Australia's interest in light emissions and has considered and managed these in section 6.7.3 of the EP.	**(6)** Woodside advised that light emissions were expected to have negligible impacts on marine fauna due to distance from relevant habitats and good industry practice controls had been adopted.	**(6)** No additional controls or measures are required. Light emissions have been considered and managed in section 6.7.3 of the EP.
(7) Stated that spill response plans were referenced but not described in detail.	**(7)** Woodside notes Tuna Australia's assertion and recognises the OPEP which contains the Oil Spill Preparedness and Response Mitigation Assessment and Oil Pollution First Strike Plan, which is included as part of the EP.	**(7)** Woodside confirmed that the OPEP would be available for review on the NOPSEMA website once the EP was submitted. Woodside further stated that it had provided sufficient information to enable Tuna Australia to make an informed assessment of the possible consequences of the activity on its functions, interests or activities.	**(7)** No additional controls or measures are required.
(8) Greenhouse gas management focused on reporting rather than emissions reduction.	**(8)** Woodside has considered atmospheric emissions and managed these in section 6.7.5 of the EP.	**(8)** Woodside noted Tuna Australia's comments on greenhouse gas management and outlined that emissions were primarily vessel or MODU based, relatively small, and managed through a risk-based ALARP approach.	**(8)** No additional controls or measures are required. Atmospheric emissions have been considered and managed in section 6.7.5 of the EP.
(9) Stated that cultural heritage impacts only addressed at a high level.	**(9)** Woodside has identified Cultural values and heritage in section 4.9.1 of the EP and considered and considered and managed any potential impacts throughout section 6.7 and 6.8 of the EP.	**(9)** Woodside noted Tuna Australia's assertion and outlined that cultural heritage values had been considered through consultation, advised that cultural heritage considerations were supported by reviews of publicly available information, and, stated that cultural heritage controls included	**(9)** No additional controls or measures are required. Cultural values and heritage are outlined in section 4.9.1 of the EP and considered and managed and potential impacts throughout section 6.7 and 6.8 of the EP

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		mandatory cultural awareness training and underwater cultural heritage assessments.	
(10) Stated that fisheries impacts had only addressed at a high level.	**(10)** Woodside has identified commercial fisheries in section 4.9.2 of the EP and considered and managed the interaction risks in Section 6.7.1 of the EP.	**(10)** Woodside noted Tuna Australia's assertion and advised that fisheries interactions had been assessed using baseline information on activity and spatial overlap, fisheries interaction risks had been reduced to ALARP through operational controls, navigational safety measures, and stakeholder notifications. Woodside further advised that, in the highly unlikely event of a hydrocarbon release, the OSM Framework would guide situational awareness and response activities.	**(10)** No additional controls or measures are required. Commercial fisheries are outlined in section 4.9.2 of the EP and considered and managed the interaction risks in Section 6.7.1 of the EP**.**
(11) Stated that spill modelling should be overlaid with tuna egg and larval distribution.	**(11)** Woodside has considered the potential impacts on fisheries and larva in the EP and these have been assessed in section 6.8.2 of the EP.	**(11)** Woodside acknowledged the potential for impacts to tuna larvae in the highly unlikely event of a hydrocarbon release during spawning periods but stated that the environmental performance outcome was to prevent any unplanned hydrocarbon release to the marine environment. Woodside further outlined that potential impact pathways on pelagic fish populations, under the highly unlikely event of a worst-case hydrocarbon spill scenario, had been considered.	**(11)** No additional controls or measures are required. Potential impacts on fisheries and larva have been assessed in section 6.8.2 of the EP.
(12) Stated that NOPSEMA enforces compliance under the OPGGS framework	**(12)** Woodside maintains financial assurance for the duration of its activities and provides evidence to NOPSEMA prior to the acceptance of an EP.	**(12)** Woodside confirmed that it maintained financial assurance for the duration of its activities and provided evidence to NOPSEMA prior to EP acceptance and advised that financial assurance estimates were prepared using industry	**(13)** Not required.

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		methods endorsed by NOPSEMA and consistent with published guidance.	
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).	No additional controls or 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 July 2025. Woodside gave this information to Tuna Australia on 29 July 2025, 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 PAP, 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*'.
  - 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 27 August 2025, Tuna Australia shared its feedback, claims or objections regarding this activity, indicating the information provided was sufficient to enable Tuna Australia to make an informed assessment of the possible consequences of the activity on its functions, interests or activities.
- In addition to the information in the Consultation Information Sheet, Woodside provided additional information to Tuna Australia in response to Tuna Australia's feedback (Woodside's email of 20 March 2026).

Reasonable Period

Woodside allowed Tuna Australia a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence 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.

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- Woodside's methodology allows a 30-day consultation period and Woodside allowed Tuna Australia 30 days for consultation.
- Consultation for this EP commenced 8 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 27 August 2025.

Reasonable Opportunity

Woodside allowed Tuna Australia a reasonable opportunity for consultation in the preparation of this EP because:

- Woodside published advertisements in 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside considers a reasonable opportunity was provided to Tuna Australia as evidenced by its response on 12 August 2025.

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 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.

4.4.4 Western Deepwater Trawl Fishery

Summary of information provided and record of consultation for this EP:

- On 29 July 2025, Woodside emailed Western Deepwater Trawl Fishery licence holders advising of the proposed activity (Record of Consultation, reference 6.1.57), provided a Consultation Information Sheet, information on potential impacts on fisheries, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 30 July 2025, Woodside emailed Western Deepwater Trawl Fishery licence holders to clarify that technical issues may have affected the display of the previous consultation email, Woodside re-issued the full consultation email, outlined that the Consultation Information Sheet is available on Woodside's website, and advised that the consultation period had been extended (Record of Consultation, reference 6.1.57.1).
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).

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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
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).	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 Western Deepwater Trawl Fishery 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 Western Deepwater Trawl Fishery sufficient information to allow Western Deepwater Trawl Fishery 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 July 2025. Woodside gave this information to Western Deepwater Trawl Fishery on 29 July 2025, 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 PAP, 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).

Reasonable Period

Woodside allowed Western Deepwater Trawl Fishery a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence to Western Deepwater Trawl Fishery 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 Western Deepwater Trawl Fishery 30 days for consultation.
- Consultation for this EP commenced 8 months ago.
- In this context, Woodside allowed Western Deepwater Trawl Fishery a reasonable period for consultation in preparation of the EP.

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Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with Western Deepwater Trawl Fishery is appropriate and adapted to the nature of interests of Western Deepwater Trawl Fishery:

- Woodside published advertisements in 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- From 2 August 2025 to 18 October 2025, Woodside held, or hosted information stalls at, a number of community events and roadshows in regional areas including the Pilbara and Gascoyne to raise awareness of the EP and provide another opportunity for feedback. These events were promoted in local newspapers and on social media.
- In the absence of feedback, Woodside sent a follow-up consultation email on 18 August 2025, reminding Western Deepwater Trawl Fishery 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 Western Deepwater Trawl Fishery 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 Western Deepwater Trawl Fishery's functions, interests or activities.

4.4.5 Western Tuna and Billfish Fishery

Summary of information provided and record of consultation for this EP:

- On 29 July 2025, Woodside emailed Western Tuna and Billfish Fishery licence holders advising of the proposed activity (Record of Consultation, reference 6.1.57), provided a Consultation Information Sheet, information on potential impacts on fisheries, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 30 July 2025, Woodside emailed Western Tuna and Billfish Fishery licence holders to clarify that technical issues may have affected the display of the previous consultation email, Woodside re-issued the full consultation email, outlined that the Consultation Information Sheet is available on Woodside's website, and advised that the consultation period had been extended (Record of Consultation, reference 6.1.57.1).
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).

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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
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).	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 Western Tuna and Billfish Fishery 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 Western Tuna and Billfish Fishery sufficient information to allow Western Tuna and Billfish Fishery 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 July 2025. Woodside gave this information to Western Tuna and Billfish Fishery on 29 July 2025, 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 PAP, 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).

Reasonable Period

Woodside allowed Western Tuna and Billfish Fishery a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence to Western Tuna and Billfish Fishery 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 Western Tuna and Billfish Fishery 30 days for consultation.
- Consultation for this EP commenced 8 months ago.
- In this context, Woodside allowed Western Tuna and Billfish Fishery a reasonable period for consultation in preparation of the EP.

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Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with Western Tuna and Billfish Fishery is appropriate and adapted to the nature of interests of Western Tuna and Billfish Fishery:

- Woodside published advertisements in 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- From 2 August 2025 to 18 October 2025, Woodside held, or hosted information stalls at, a number of community events and roadshows in regional areas including the Pilbara and Gascoyne to raise awareness of the EP and provide another opportunity for feedback. These events were promoted in local newspapers and on social media.
- In the absence of feedback, Woodside sent a follow-up consultation email on 18 August 2025, reminding Western Tuna and Billfish Fishery 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 Western Tuna and Billfish Fishery 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 Western Tuna and Billfish Fishery's functions, interests or activities.

4.4.6 Australian Southern Bluefin Tuna Industry Association (ASBTIA)

Summary of information provided and record of consultation for this EP:

- On 11 August 2025, following advice received by AFMA on 11 August 2025, Woodside emailed ASBTIA 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 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).

Summary of Feedback, Objection or Claim	Assessment of Merits of Feedback, Objection or Claim	Woodside's Statement of 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	No additional measures or controls are required.

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		Change and Revision process (see Section 7.8 of the EP).	

Outcomes of Consultation

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with ASBTIA or 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 July 2025. Woodside gave this information to ASBTIA on 11 August 2025, 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 PAP, 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).

Reasonable Period

Woodside allowed ASBTIA a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence 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 and Woodside allowed ASBTIA 30 days for consultation.
- Consultation for this EP commenced 8 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:

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- Woodside published advertisements in 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). 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 18 August 2025, reminding ASBTIA 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 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 29 July 2025, Woodside emailed ACWA advising of the proposed activity (Record of Consultation, reference 6.1.15), provided a Consultation Information Sheet, a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community'*.
- On 30 July 2025, Woodside emailed ACWA to clarify that technical issues may have affected the display of the previous consultation email, Woodside re-issued the full consultation email, outlined that the Consultation Information Sheet is available on Woodside's website, and advised that the consultation period had been extended (Record of Consultation, reference 6.1.15.1).
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 10 February 2026, Woodside emailed ACWA a consultation update on this EP (Record of Consultation, reference 6.3.18). Woodside advised that additional modelling during the EP development process had resulted in changes to the EMBA and based on those changes, Woodside was undertaking additional consultation with ACWA. Woodside attached an updated Consultation Information Sheet which included a map of the revised EMBA.

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
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,	No additional measures or controls are required.

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		Woodside will apply its Management of Change and Revision process (see Section 7.8).	

Summary Report – Consultation Complete

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 July 2025 and updated Consultation Information Sheet since January 2026. Woodside gave this information to ACWA on 30 July 2025, marking the commencement of consultation on this EP and provided a consultation update on 10 February 2026. 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 PAP, 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).

Reasonable Period

Woodside allowed ACWA a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence and in the consultation 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 and Woodside allowed ACWA 30 days for the initial consultation and an additional 17 days for the consultation update in February 2026.
- Consultation for this EP commenced 8 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 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.

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- In the absence of feedback following the initial consultation, Woodside sent a follow-up consultation email on 18 August 2025, reminding ACWA 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 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 29 July 2025, Woodside emailed WAFIC advising of the proposed activity (Record of Consultation, reference 6.1.11), provided a Consultation Information Sheet, information on potential impacts to fisheries, and a link to NOPSEMA's brochure 'Consultation on offshore petroleum environment plans: Information for the community'.
- On 30 July 2025, WAFIC emailed the Mackerel Managed Fishery (Area 2), Marine Aquarium Managed Fishery, Onslow Prawn Managed Fishery, Pilbara Line Fishery, Pilbara Trap Fishery licence holders (Record of Consultation, reference 6.1.11), advising of the proposed activity, provided a Consultation Information Sheet, information on potential impacts to fisheries, and a link to NOPSEMA's brochure 'Consultation on offshore petroleum environment plans: Information for the community'.
- On 31 July 2025, WAFIC emailed Woodside to advise that the email and Consultation Information Sheet had been distributed to licence holders (SI Report A, reference 11.1).
- On 1 August 2025, Woodside replied to WAFIC thanking them for confirming that consultation had been distributed to licence holders (SI Report A, reference 11.2).
- On 28 August 2025, WAFIC emailed Woodside to provide feedback on the EP (SI Report, reference 11.3). WAFIC:
  - **(1)** Confirmed that no feedback was received from licence holders.
  - **(2)** Sought clarification on the location and habitat characteristic of the anchorages areas associated with EP.
  - **(3)** Advised that fishers had previously raised concerns with WAFIC about the effects of vessel anchoring on benthic habitats, fishers had also informed WAFIC that they had observed proponents anchoring barges and other vessels on coral features to the north-east of the Montebello Islands
  - **(4)** Stated that both WAFIC and fishers considered that the combined impacts of anchoring on sensitive and recovering seabed habitats required more thorough consideration by all proponents operating in the area.
  - **(5)** Noted that it is WAFIC's understanding that Woodside will have a number of measures in place in the event of an unplanned event.
  - **(6)** Requested start of activity notification and to be included in any vessel operations look ahead.
  - Requested that Woodside follow up on an unrelated matter.

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- **(1)** On 24 September 2025, Woodside replied to WAFIC thanking them for advising that no feedback was received from licence holders (SI Report, reference 11.4) and:
  - **(2)** Outlined that currently anchoring is planned for the MODU and an initiation anchor for flowline installation, however as the Project is still in the engineering phase the exact location of anchor placements is yet to be determined but anchoring will occur within the Operational Area. The benthic habitats in the:
    - South-west of the Operational Area (where wells WCA01 and 02 and associated flowline are located) are a combination of soft sediments and hard substrates with sand veneer (with the potential for filter feeder communities).
    - North-east of the Operational Area (where wells YDA01, ESA01 and TPA04 are located) are predicted to be soft sediments.
  - **(3)** Confirmed that subsea installation and MODU anchoring will not occur on shoals (as identified in the Goodwyn Area Infill Development OPP) within the Operational Area.
  - **(4)** Noted the feedback and confirmed the EP will assess the impacts of anchoring on the expected benthic habitats within the Operational Area and potential recovery.
  - **(5)** Confirmed that in the event of an unplanned event it had the following protocols in place:
    - an Oil Pollution First Strike Plan for all EPs which details potential impacts, notifications and response mitigations that may be executed to manage an emergency event.
    - a list of WA commercial fisheries that have a potential for interaction within the Operational Area and EMBA for this EP.
    - a well-established Operational and Scientific Monitoring Program (OSMP).
  - **(6)** Confirmed that it will provide WAFIC notifications at least 10 days prior to the commencement and following completion of activities.
- On 9 October 2025, WAFIC responded to Woodside thanking them for the responses and advised that there were no further comments (SI Report, reference 11.5).
- On 13 October 2025, Woodside replied to WAFIC noting that WAFIC had no further comments (SI Report, reference 11.6).
- On 10 February 2026, Woodside emailed WAFIC a consultation update on this EP (SI Report, reference 11.7) Woodside advised that additional modelling during the EP development process had resulted in changes to the EMBA and based on those changes, Woodside was undertaking additional consultation with WAFIC. Woodside attached an updated Consultation Information Sheet which included a map of the revised EMBA.
- In the same email on 10 February 2026, Woodside sought WAFIC's advise on whether Specimen Shell Managed Fishery licence holders should be contacted as a result of 2025 data now being included in the FishCube dataset.
- **(7)** On 10 February 2026, WAFIC responded to Woodside and recommended that consultation should be undertaken with Specimen Shell Managed Fishery licence holders (SI Report, reference 11.8).
- **(7)** On 10 February 2026, Woodside emailed WAFIC requesting that WAFIC provide Specimen Shell Managed Fishery licence holders with the Consultation Information Sheet and the covering email (SI Report, reference 11.9).
- On 11 February 2026, WAFIC emailed Specimen Shell Managed Fishery licence holders (Record of Consultation, reference 6.1.63) advising of the proposed activity, provided a Consultation Information Sheet, information on potential impacts to fisheries, and a link to NOPSEMA's brochure 'Consultation on offshore petroleum environment plans: Information for the community'.
- On 17 March 2026, Woodside emailed WAFIC requesting confirmation whether feedback had been received by Specimen Shell Managed Fishery licence holders (SI Report, reference 11.10).
- **(1)** On 18 March 2026, WAFIC emailed Woodside confirming that no feedback was received from Specimen Shell Managed Fishery licence holders (SI Report, reference 11.11).

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- **(1)** On 18 March 2026, Woodside replied to WAFIC thanking them for advising that no feedback was received from Specimen Shell Managed Fishery licence holders (SI Report, reference 11.12).

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
(1) No feedback received from licence holders.	**(1)** Woodsides notes that no feedback was received from licence holders.	**(1)** Woodside noted that no feedback had been received by licence holders	**(1)** No additional measures or controls are required.
(2) Sought clarification on anchorage areas	**(2)** Woodside recognises that WAFIC has an interest in anchorage location and associated habitat characteristic.	**(2)** Woodside outlined the current planning for anchoring in the Operational Area, but the exact location of anchor placements is yet to be determined.	**(2)** No additional measures or controls are required and is addressed in Section 6.7.4 of the EP.
(3) Advised that fishers had previously raised concerns regarding proponents anchoring on coral features	**(3)** Woodside acknowledges that WAFIC has concerns regarding the proponents anchoring on shoals.	**(3)** Woodside confirmed that anchoring would not occur on shoals (as identified in the Goodwyn Area Infill Development OPP) within the Operational Area.	**(3)** No additional measures or controls are required. Section 6.7.4 of the EP outlines the control C 3.4 which addresses this.
(4) Stated that combined impacts of anchoring needs to be considered further by all proponents.	**(4)**Woodside understand that WAFIC has an interest in the combined impacts of anchoring on seabed habitats.	**(4)** Woodside confirmed the EP will assess the impacts of anchoring on the expected benthic habitats within the Operational Area and potential recovery.	**(4)** No additional measures or controls are required and is addressed in Section 6.7.4 of the EP.
(5) Noted their understanding of Woodside's management of unplanned events.	**(5)** Woodside recognises WAFIC's concerns related to an unplanned event and notes that its Oil Pollution First Strike Plan and involvement with the industry OSMP addresses the concerns.	**(5)** Woodside confirmed its Oil Pollution First Strike Plan and OSMP.	**(5)** Refer to the First Strike Plan, Appendix H of the EP.
(6) Requested notifications.	**(6)** Woodside understands WAFIC needs to be notified given activities will take place in areas where state fisheries are active.	**(6)** Woodside confirmed WAFIC would receive start and end of activity notifications.	**(6)** Woodside will provide notifications to WAFIC as set out in Section 7.10, Table 7-5, PS 1.6 of the EP.
(7)	**(7)**	**(7)**	**(7)**

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Recommended consultation with Specimen Shell Managed Fishery licence holders.	Woodside notes WAFIC's recommendation and proceeded with consultation with Specimen Shell Managed Fishery licence holders.	Woodside requested that WAFIC provide the Consultation Information Sheet and the covering email Specimen Shell Managed Fishery licence holders.	No additional measures or controls are required. Woodside's consultation with Specimen Shell Managed Fishery licence holders is set out in Table 2 of Appendix F.
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).	No additional controls or 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 July 2025 and updated Consultation Information Sheet since January 2026. Woodside gave this information to WAFIC on 29 July 2025, marking the commencement of consultation on this EP and provided a consultation update on 10 February 2026. 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 PAP, 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*'.
  - 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 28 August 2025, WAFIC shared its feedback, claims or objections regarding this activity, indicating the information provided was sufficient to enable WAFIC to make an informed assessment of the possible consequences of the activity on its functions, interests or activities.
- In addition to the information in the Consultation Information Sheet, Woodside provided additional information to WAFIC in response to WAFIC's feedback (Woodside's email of 24 September 2025).

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Reasonable Period

Woodside allowed WAFIC a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence and in the consultation 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 and Woodside allowed WAFIC 30 days for the initial consultation and an additional 17 days for the consultation update in February 2026.
- Consultation for this EP commenced 8 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 28 August 2025.

Reasonable Opportunity

Woodside allowed WAFIC a reasonable opportunity for consultation in the preparation of this EP because:

- Woodside published advertisements in 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside considers a reasonable opportunity was provided to WAFIC as evidenced by its response on 28 August 2025.

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 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 (Area 2), Marine Aquarium Managed Fishery, Onslow Prawn Managed Fishery, Pilbara Line Fishery, Pilbara Trap Fishery

Summary of information provided and record of consultation for this EP:

- On 30 July 2025, WAFIC, on behalf of Woodside, emailed Mackerel Managed Fishery (Area 2), Marine Aquarium Managed Fishery, Onslow Prawn Managed Fishery, Pilbara Line Fishery, Pilbara Trap Fishery licence holders advising of the proposed activity (Record of Consultation, reference 6.1.62), provided a Consultation Information Sheet, information on potential impacts to fisheries, and a link to NOPSEMA's brochure 'Consultation on offshore petroleum environment plans: Information for the community'.
- As per advice from WAFIC regarding its consultation guidelines, no follow-up email was required for Mackerel Managed Fishery (Area 2), Marine Aquarium Managed Fishery, Onslow Prawn Managed Fishery, Pilbara Line Fishery, Pilbara Trap Fishery.

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- On 28 August 2025, WAFIC emailed Woodside confirming that no feedback had been received from licence holders in the Mackerel Managed Fishery (Area 2), Marine Aquarium Managed Fishery, Onslow Prawn Managed Fishery, Pilbara Line Fishery, Pilbara Trap Fishery (SI Report A, reference 11.3).

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
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).	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 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 July 2025. Woodside gave this information to licence holders on 30 July 2025, 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 PAP, 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).

Reasonable Period

Woodside allowed licence holders a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence 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 and Woodside allowed licence holders 30 days for consultation.
- Consultation for this EP commenced 8 months ago.

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- 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 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- From 2 August 2025 to 18 October 2025, Woodside held, or hosted information stalls at, a number of community events and roadshows in regional areas including the Pilbara and Gascoyne to raise awareness of the EP and provide another opportunity for feedback. These events were promoted in local newspapers and on social media.
- Woodside facilitated consultation with licence holders via WAFIC.

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.

4.5.4 Pearl Producers Association (PPA)

Summary of information provided and record of consultation for this EP:

- On 25 February 2026, as a result of additional modelling during the EP development process changes were made to the EMBA and based on those changes, Woodside undertook consultation with PPA as the representative body for the Pearl Oyster Fishery. Woodside emailed PPA advising of the proposed activity (Record of Consultation, reference 6.3.19), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 16 March 2026, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.4.2).

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
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 additional measures or controls are required.

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		Change and Revision process (see Section 7.8).	

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with PPA 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 PPA sufficient information to allow PPA 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 July 2025. Woodside gave this information to PPA on 25 February 2026, marking the commencement of consultation for PPA 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 PAP, 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).

Reasonable Period

Woodside allowed PPA a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence to PPA 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 PPA 30 days for consultation.
- Consultation for this EP commenced 1 month ago.
- In this context, Woodside allowed PPA 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 PPA is appropriate and adapted to the nature of interests of PPA:

- Woodside published advertisements in 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- From 2 August 2025 to 18 October 2025, Woodside held, or hosted information stalls at, a number of community events and roadshows in regional areas including the Pilbara and Gascoyne to raise awareness of the EP and provide another opportunity for feedback. These events were promoted in local newspapers and on social media.

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- In the absence of feedback, Woodside sent a follow-up consultation email on 16 March 2026, reminding PPA 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 PPA 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 PPA's functions, interests or activities.

4.5.5 Specimen Shell Managed Fishery

Summary of information provided and record of consultation for this EP:

- On 11 February, WAFIC, on behalf of Woodside, emailed Specimen Shell Managed Fishery licence holders advising of the proposed activity (Record of Consultation, reference 6.1.63), provided a Consultation Information Sheet, information on potential impacts to fisheries, and a link to NOPSEMA's brochure 'Consultation on offshore petroleum environment plans: Information for the community'.
- As per advice from WAFIC regarding its consultation guidelines, no follow-up email was required for Specimen Shell Managed Fishery.
- On 18 March 2026, WAFIC emailed Woodside confirming that no feedback had been received from licence holders in the Specimen Shell Managed Fishery (SI Report A, reference 11.11).

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
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).	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 Specimen Shell Managed Fishery licence holders (referred to as licence holders below) 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:

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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 July 2025. WAFIC, on behalf of Woodside, sent this information to licence holders on 11 February 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 PAP, 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).

Reasonable Period

Woodside allowed licence holders a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence 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 and Woodside allowed licence holders 30 days for consultation.
- Consultation for this EP commenced 1 month 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 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- From 2 August 2025 to 18 October 2025, Woodside held, or hosted information stalls at, a number of community events and roadshows in regional areas including the Pilbara and Gascoyne to raise awareness of the EP and provide another opportunity for feedback. These events were promoted in local newspapers and on social media.
- Woodside facilitated consultation with licence holders via WAFIC.

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.

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- The measures and controls described in this EP address the potential impact from the proposed activity on licence holders functions, interests or activities.

4.5.6 West Coast Rock Lobster Fishery

Summary of information provided and record of consultation for this EP:

- On 29 July 2025, Woodside sent a letter to West Coast Rock Lobster Fishery licence holders advising of the proposed activity (Record of Consultation, references 6.1.61), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up letter (Record of Consultation, references 6.2.3).
- On 15 September 2025, a licence holder emailed Woodside noting that their address had changed (SI Report A, reference 12.1).
- On 15 September 2025, Woodside responded thanking the licence holder of advising them of this change and confirmed that their records had been updated (SI Report A, reference 12.2).

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
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).	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 West Coast Rock Lobster Fishery licence holders (referred to licence holders below) 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 July 2025. Woodside gave this information to licence holders on 29 July 2025, 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.

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- A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the PAP, 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).

Reasonable Period

Woodside allowed licence holders a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence 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 and Woodside allowed licence holders 30 days for consultation.
- Consultation for this EP commenced 8 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 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- From 2 August 2025 to 18 October 2025, Woodside held, or hosted information stalls at, a number of community events and roadshows in regional areas including the Pilbara and Gascoyne to raise awareness of the EP and provide another opportunity for feedback. These events were promoted in local newspapers and on social media.
- In the absence of feedback, Woodside sent a follow-up consultation email on 18 August 2025, reminding licence holders 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 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.

4.5.7 Western Rock Lobster Council

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Summary of information provided and record of consultation for this EP:

- On 29 July 2025, Woodside emailed Western Rock Lobster Council advising of the proposed activity (Record of Consultation, reference 6.1.18), provided a Consultation Information Sheet, a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community'*.
- On 30 July 2025, Woodside emailed Western Rock Lobster Council to clarify that technical issues may have affected the display of the previous consultation email, Woodside re-issued the full consultation email, outlined that the Consultation Information Sheet is available on Woodside's website, and advised that the consultation period had been extended (Record of Consultation, reference 6.1.18.1).
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).

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
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).	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 Western Rock Lobster Council 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 Western Rock Lobster Council sufficient information to allow Western Rock Lobster Council 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 July 2025. Woodside gave this information to Western Rock Lobster Council on 29 July 2025, 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 PAP, 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).

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Reasonable Period

Woodside allowed Western Rock Lobster Council a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence to Western Rock Lobster Council 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 Western Rock Lobster Council 30 days for consultation.
- Consultation for this EP commenced 8 months ago.
- In this context, Woodside allowed Western Rock Lobster Council 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 Western Rock Lobster Council is appropriate and adapted to the nature of interests of Western Rock Lobster Council:

- Woodside published advertisements in 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- From 2 August 2025 to 18 October 2025, Woodside held, or hosted information stalls at, a number of community events and roadshows in regional areas including the Pilbara and Gascoyne to raise awareness of the EP and provide another opportunity for feedback. These events were promoted in local newspapers and on social media.
- In the absence of feedback, Woodside sent a follow-up consultation email on 18 August 2025, reminding Western Rock Lobster Council 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 Western Rock Lobster Council 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 Western Rock Lobster Council's functions, interests or activities.

4.6 Recreational marine users and peak representative bodies

4.6.1 Gascoyne Recreational Marine Users

Summary of information provided and record of consultation for this EP:

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- On 29 July 2025, Woodside emailed or sent a letter to Gascoyne Recreational Marine Users advising of the proposed activity (Record of Consultation, references 6.1.60 and 6.1.61), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 30 July 2025, Woodside emailed Gascoyne Recreational Marine Users to clarify that technical issues may have affected the display of the previous consultation email, Woodside re-issued the full consultation email, outlined that the Consultation Information Sheet is available on Woodside's website, and advised that the consultation period had been extended (Record of Consultation, reference 6.1.60.1).
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email or letter (Record of Consultation, references 6.2.1 and 6.2.3),

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
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).	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 Gascoyne 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 Gascoyne Recreational Marine Users sufficient information to allow Gascoyne 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 July 2025. Woodside gave this information to Gascoyne Recreational Marine Users on 29 July 2025, 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 PAP, 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).

Reasonable Period

Woodside allowed Gascoyne Recreational Marine Users a reasonable period for consultation in the preparation of this EP because:

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- A consultation period was stated in the initial correspondence to Gascoyne 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 and Woodside allowed Gascoyne Recreational Marine Users 30 days for consultation.
- Consultation for this EP commenced 8 months ago.
- In this context, Woodside allowed Gascoyne 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 Gascoyne Recreational Marine Users is appropriate and adapted to the nature of interests of Gascoyne Recreational Marine Users:

- Woodside published advertisements in 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- From 2 August 2025 to 18 October 2025, Woodside held, or hosted information stalls at, a number of community events and roadshows in the Gascoyne to raise awareness of the EP and provide another opportunity for feedback. These events were promoted in local newspapers and on social media.
- In the absence of feedback, Woodside sent a follow-up consultation email on 18 August 2025, reminding Gascoyne 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 Gascoyne 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 Gascoyne 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 29 July 2025, Woodside emailed Marine Tourism WA advising of the proposed activity (Record of Consultation, reference 6.1.60), provided a Consultation Information Sheet, a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community'*.
- On 30 July 2025, Woodside emailed Marine Tourism WA to clarify that technical issues may have affected the display of the previous consultation email, Woodside re-issued the full consultation email, outlined that the Consultation Information Sheet is available on Woodside's website, and advised that the consultation period had been extended.

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- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).

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
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).	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 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 July 2025. Woodside gave this information to Marine Tourism WA on 29 July 2025, 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 PAP, 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).

Reasonable Period

Woodside allowed Marine Tourism WA a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence 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 and Woodside allowed Marine Tourism WA 30 days for consultation.
- Consultation for this EP commenced 8 months ago.
- In this context, Woodside allowed Marine Tourism WA a reasonable period for consultation in preparation of the EP.

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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 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). 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 18 August 2025, reminding Marine Tourism WA 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 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 Pilbara/Kimberley Recreational Marine Users

Summary of information provided and record of consultation for this EP:

- On 29 July 2025, Woodside emailed or sent a letter to Pilbara/Kimberley Recreational Marine Users advising of the proposed activity (Record of Consultation, references 6.1.60 and 6.1.61), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 30 July 2025, Woodside emailed Pilbara/Kimberley Recreational Marine Users to clarify that technical issues may have affected the display of the previous consultation email, Woodside re-issued the full consultation email, outlined that the Consultation Information Sheet is available on Woodside's website, and advised that the consultation period had been extended (Record of Consultation, references 6.1.60.1).
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email or letter (Record of Consultation, references 6.2.1 and 6.2.3),

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
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 additional measures or controls are required.

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		Change and Revision process (see Section 7.8).	

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with Pilbara/Kimberley 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 Pilbara/Kimberley Recreational Marine Users sufficient information to allow Pilbara/Kimberley 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 July 2025. Woodside gave this information to Pilbara/Kimberley Recreational Marine Users on 29 July 2025, 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 PAP, 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).

Reasonable Period

Woodside allowed Pilbara/Kimberley Recreational Marine Users a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence to Pilbara/Kimberley 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 and Woodside allowed Pilbara/Kimberley Recreational Marine Users 30 days for consultation.
- Consultation for this EP commenced 8 months ago.
- In this context, Woodside allowed Pilbara/Kimberley 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 Pilbara/Kimberley Recreational Marine Users is appropriate and adapted to the nature of interests of Pilbara/Kimberley Recreational Marine Users:

- Woodside published advertisements in 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- From 2 August 2025 to 18 October 2025, Woodside held, or hosted information stalls at, a number of community events and roadshows in the Pilbara to raise awareness of the EP and provide another opportunity for feedback. These events were promoted in local newspapers and on social media.

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- In the absence of feedback, Woodside sent a follow-up consultation email on 18 August 2025, reminding Pilbara/Kimberley 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 Pilbara/Kimberley 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 Pilbara/Kimberley Recreational Marine Users functions, interests or activities.

4.6.4 Recfishwest

Summary of information provided and record of consultation for this EP:

- On 29 July 2025, Woodside emailed Recfishwest 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 30 July 2025, Woodside emailed Recfishwest to clarify that technical issues may have affected the display of the previous consultation email, Woodside re-issued the full consultation email, outlined that the Consultation Information Sheet is available on Woodside's website, and advised that the consultation period had been extended (Record of Consultation, reference 6.1.14.1).
- On 14 August 2025, Recfishwest responded to Woodside (SI Report A, reference 14.1) thanking them for the email and:
  - Noted the proposed activities covered by the EP
  - **(1)** Noted that although the activities were planned to occur approximately 140 km northwest of Karratha, the proximity to the Montebello Islands meant that the area is still accessed by the charter sector and recreational fishers using larger vessels.
  - **(2)** Requested to be kept informed as the activities progressed, particularly when specific timing for activities was confirmed, so that Recfishwest could pass on relevant information to the recreational fishing community.
- On 1 September 2025, Woodside replied to Recfishwest (SI Report A, reference 14.2) thanking them for their response and:
  - **(1)** Noted Recfishwest's comments regarding the activities proximity to the Montebello Islands
  - **(2)** Confirmed that Woodside would continue to keep Recfishwest updated as the activities progressed via Woodside's notifications protocol.

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
(1) Activities were planned to occur in close proximity to the Montebello Islands.	**(1)** Woodside is aware that the activities are planned in proximity to the Montebello Islands and notes that potential impacts	**(1)**	**(1)** No additional controls or measures are required as Woodside has considered potential impacts on the Marine Park

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	on Marine Parks will be assessed in the EP.	Woodside noted Recfishwest's comments regarding the activities proximity to the Montebello Islands.	throughout section 6.7 and 6.8 of the EP.
(2) Requested to be kept informed as activities progress.	**(2)** Woodside acknowledges Recfishwest's request to be informed as the activities progress.	**(2)** Woodside confirmed it would provide notifications so Recfishwest could pass on relevant information to the recreational fishing community.	**(2)** Woodside will provide notifications to Recfishwest as set out in Section 7.10, Table 7-5, PS 1.6 of the EP.
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).	No additional controls or 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

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 July 2025. Woodside gave this information to Recfishwest on 29 July 2025, 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 PAP, 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*'.
  - 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 August 2025, Recfishwest shared its feedback, claims or objections regarding this activity, indicating the information provided was sufficient to enable Recfishwest to make an informed assessment of the possible consequences of the activity on its functions, interests or activities.

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- In addition to the information in the Consultation Information Sheet, Woodside provided additional information to Recfishwest in response to Recfishwest's feedback (Woodside's email of 1 September 2025).

Reasonable Period

Woodside allowed Recfishwest a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence 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 and Woodside allowed Recfishwest 30 days for consultation.
- Consultation for this EP commenced 8 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 14 August 2025.

Reasonable Opportunity

Woodside allowed Recfishwest a reasonable opportunity for consultation in the preparation of this EP because:

- Woodside published advertisements in 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside considers a reasonable opportunity was provided to Recfishwest as evidenced by its response on 14 August 2025.

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:

- 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 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.

4.6.5 WA Game Fishing Association

Summary of information provided and record of consultation for this EP:

- On 29 July 2025, Woodside emailed WA Game Fishing Association advising of the proposed activity (Record of Consultation, reference 6.1.60), provided a Consultation Information Sheet, a link to NOPSEMA's brochure *'Consultation on offshore petroleum environment plans: Information for the community'*.
- On 30 July 2025, Woodside emailed WA Game Fishing Association to clarify that technical issues may have affected the display of the previous consultation email, Woodside re-issued the full consultation email, outlined that the Consultation Information Sheet is available on Woodside's website, and advised that the consultation period had been extended (Record of Consultation, reference 6.1.60.1).

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- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).

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
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).	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 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

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 July 2025. Woodside gave this information to WA Game Fishing Association on 29 July 2025, 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 PAP, 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).

Reasonable Period

Woodside allowed WA Game Fishing Association a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence 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 and Woodside allowed WA Game Fishing Association 30 days for consultation.
- Consultation for this EP commenced 8 months ago.
- In this context, Woodside allowed WA Game Fishing Association a reasonable period for consultation in preparation of the EP.

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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 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- From 2 August 2025 to 18 October 2025, Woodside held, or hosted information stalls at, a number of community events and roadshows in regional areas including the Pilbara and Gascoyne to raise awareness of the EP and provide another opportunity for feedback. These events were promoted in local newspapers and on social media.
- In the absence of feedback, Woodside sent a follow-up consultation email on 18 August 2025, reminding WA Game Fishing Association 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 WA Game Fishing Association 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 WA Game Fishing Association's functions, interests or activities.

4.7 Titleholders and operators

4.7.1 3D Energi, Allasso Energy, Beagle No 1, Bounty Oil and Gas, BP Developments Australia, Carbon CQ, Carnarvon Energy, Coastal Oil and Gas, Energy Resources, Exxon Mobil Australia Resources Company, Finder No 9 /10/16/17, INPEX Alpha, Jadestone, JX Nippon O&G Exploration (Australia), Longreach Capital Investment, KATO Energy / KATO Corowa/ KATO NWS / KATO Amulet, KUFPEC, Kyushu Electric Wheatstone, OMV Australia / Sapura OMV Upstream, Pelsart Resources, PE Wheatstone, SK Earthon, Shell Australia, Skye Napoleon/Skye Resources, Tanami Energy, Vermilion Energy, Western Gas

Summary of information provided and record of consultation for this EP:

- On 30 July 2025, Woodside emailed titleholders advising of the proposed activity (Record of Consultation, reference 6.1.8), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.

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- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).

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
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).	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 titleholders 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 sufficient information to allow titleholders 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 July 2025. Woodside gave this information to titleholders on 30 July 2025, 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 PAP, 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).

Reasonable Period

Woodside allowed titleholders a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence to titleholders 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 titleholders 30 days for consultation.
- Consultation for this EP commenced 8 months ago.
- In this context, Woodside allowed titleholders a reasonable period for consultation in preparation of the EP.

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Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with titleholders is appropriate and adapted to the nature of interests of titleholders:

- Woodside published advertisements in 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). 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 18 August 2025, reminding titleholders 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 titleholders 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 functions, interests or activities.

4.7.2 Melbana Exploration, and Pathfinder Energy

Summary of information provided and record of consultation for this EP:

- On 6 February 2026, as a result of additional modelling during the EP development process changes were made to the EMBA and based on those changes, Woodside undertook consultation with Melbana Exploration and Pathfinder Energy. Woodside emailed Melbana Exploration and Pathfinder Energy advising of the proposed activity (Record of Consultation, reference 6.3.8), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 25 February 2026, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.4.1).

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
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).	No additional measures or controls are required.
Summary Report – Consultation Complete			

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Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with Melbana Exploration and Pathfinder Energy 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 Melbana Exploration and Pathfinder Energy sufficient information to allow Melbana Exploration and Pathfinder Energy 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 July 2025. Woodside gave this information to Melbana Exploration and Pathfinder Energy on 6 February 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 PAP, 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).

Reasonable Period

Woodside allowed Melbana Exploration and Pathfinder Energy a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence to Melbana Exploration and Pathfinder Energy 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 Melbana Exploration and Pathfinder Energy 30 days for consultation.
- Consultation for this EP commenced approximately 2 months ago.
- In this context, Woodside allowed Melbana Exploration and Pathfinder Energy 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 Melbana Exploration and Pathfinder Energy is appropriate and adapted to the nature of interests of Melbana Exploration and Pathfinder Energy:

- Woodside published advertisements in 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). 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 25 February 2026, reminding Melbana Exploration and Pathfinder Energy 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 Melbana Exploration and Pathfinder Energy did not provide feedback for this EP.

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- 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 Melbana Exploration and Pathfinder Energy's functions, interests or activities.

4.7.3 Chevron Australia / JERA Gorgon / MidOcean Gorgon / Osaka Gas Gorgon

Summary of information provided and record of consultation for this EP:

- On 29 July 2025, Woodside emailed Chevron advising of the proposed activity (Record of Consultation, reference 6.1.23), provided a Consultation Information Sheet and a link to NOPSEMA's brochure 'Consultation on offshore petroleum environment plans: Information for the community'. Woodside also included GIS Shape Files and asked that the consultation information be forwarded to Chevron's Joint Venture participants Jera Gorgon, MidOcean Gorgon and Osaka Gas Gorgon for feedback.
- On 30 July 2025, Woodside emailed Chevron to clarify that technical issues may have affected the display of the previous consultation email, Woodside re-issued the full consultation email, outlined that the Consultation Information Sheet is available on Woodside's website, and advised that the consultation period had been extended (Record of Consultation, reference 6.1.23.1).
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- **(1)** On 28 August 2025, Chevron thanked Woodside for the considering their functions, interests, activities in relation to the planned activities and confirmed they had reviewed the materials provided and no issues were identified (SI Report A, reference 15.1).
- **(1)** On 29 August 2025, Woodside thanked Chevron for their feedback and noted that they had reviewed the information and had identified no issues (SI Report A, reference 15.2).

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
(1) Confirmed that no issues were identified with the EP.	**(1)** Woodside accepts Chevron has no feedback on this EP.	**(1)** Woodside thanked Chevron for confirming it had identified no issues with the EP.	**(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	No additional controls or measures are required.

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		Management of Change and Revision process (see Section 7.8).	

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with Chevron 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 sufficient information to allow Chevron 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 July 2025. Woodside gave this information to Chevron on 29 July 2025, 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 PAP, 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*'.
  - 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 28 August 2025, Chevron shared its feedback, claims or objections regarding this activity, indicating the information provided was sufficient to enable Chevron to make an informed assessment of the possible consequences of the activity on its functions, interests or activities.
- In addition to the information in the Consultation Information Sheet, Woodside provided additional information to Chevron in response to Chevron's feedback (Woodside's email of 29 August 2025).

Reasonable Period

Woodside allowed Chevron a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence to Chevron 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 Chevron 30 days for consultation.
- Consultation for this EP commenced 8 months ago.
- In this context, Woodside allowed Chevron a reasonable period for consultation in preparation of the EP as evidenced by Chevron's response on 28 August 2025.

Reasonable Opportunity

Woodside allowed Chevron a reasonable opportunity for consultation in the preparation of this EP because:

- Woodside published advertisements in 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.

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- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside considers a reasonable opportunity was provided to Chevron as evidenced by its response on 28 August 2025.

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 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 and 34(g), Woodside has:
  - Responded to feedback from Chevron.
  - Made no changes or inclusions to the EP as a result of consultation with Chevron 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 30 July 2025, Woodside emailed InCapture advising of the proposed activity (Record of Consultation, reference 6.1.8), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- **(1)** On 30 July 2025, InCapture thanked Woodside for notifying them of upcoming activities and confirmed they had no objections (SI Report A, reference 16.1).
- **(1)** On 5 August 2025, Woodside thanked InCapture for their response and noted that they had no objections to the proposed activities (SI Report A, reference 16.2).

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
(1) Confirmed no objections with the EP.	(1)Woodside accepts InCapture has no objections with the EP.	(1)Woodside thanked InCapture for confirming it had no objections with the EP.	**(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	No additional controls or measures are required.

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		Management of Change and Revision process (see Section 7.8).	

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 July 2025. Woodside gave this information to InCapture on 30 July 2025, 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 PAP, 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*'.
  - 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 30 July 2025, 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.
- In addition to the information in the Consultation Information Sheet, Woodside provided additional information to InCapture in response to InCapture's feedback (Woodside's email of 5 August 2025).

Reasonable Period

Woodside allowed InCapture a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence 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 and Woodside allowed InCapture 30 days for consultation.
- Consultation for this EP commenced 8 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 30 July 2025.

Reasonable Opportunity

Woodside allowed InCapture a reasonable opportunity for consultation in the preparation of this EP because:

- Woodside published advertisements in 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.

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- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside considers a reasonable opportunity was provided to InCapture as evidenced by its response on 30 July 2025.

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 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.

4.7.5 OPIC Australia

Summary of information provided and record of consultation for this EP:

- On 30 July 2025, Woodside emailed OPIC Australia advising of the proposed activity (Record of Consultation, reference 6.1.8), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- **(1)** On 19 August 2025, OPIC Australia thanked Woodside and confirmed they had no comments on the EP (SI Report A, reference 17.1).
- **(1)** On 20 August 2025, Woodside thanked OPIC Australia for their response and noted that they had no comments on the EP (SI Report A, reference 17.2).

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
(1) Confirmed no comments on the EP.	**(1)** Woodside accepts OPIC Australia has no comments on the EP.	**(1)** Woodside thanked OPIC Australia for confirming it had no comments on the EP.	**(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	No additional controls or measures are required.

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		Management of Change and Revision process (see Section 7.8).	

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with OPIC 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 OPIC Australia sufficient information to allow OPIC 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 July 2025. Woodside gave this information to OPIC Australia on 30 July 2025, 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 PAP, 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*'.
  - 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 19 August 2025, OPIC Australia shared its feedback, claims or objections regarding this activity, indicating the information provided was sufficient to enable OPIC Australia to make an informed assessment of the possible consequences of the activity on its functions, interests or activities.
- In addition to the information in the Consultation Information Sheet, Woodside provided additional information to OPIC Australia in response to OPIC Australia's feedback (Woodside's email of 20 August 2025).

Reasonable Period

Woodside allowed OPIC Australia a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence to OPIC 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 and Woodside allowed OPIC Australia 30 days for consultation.
- Consultation for this EP commenced 8 months ago.
- In this context, Woodside allowed OPIC Australia a reasonable period for consultation in preparation of the EP as evidenced by OPIC Australia's response on 19 August 2025.

Reasonable Opportunity

Woodside allowed OPIC Australia a reasonable opportunity for consultation in the preparation of this EP because:

- Woodside published advertisements in 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.

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- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside considers a reasonable opportunity was provided to OPIC Australia as evidenced by its response on 19 August 2025.

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:

- OPIC 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 and 34(g), Woodside has:
  - Responded to feedback from OPIC Australia.
  - Made no changes or inclusions to the EP as a result of consultation with OPIC 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.

4.7.6 Santos NA Energy Holdings / Santos Ltd / Santos WA Northwest / Santos Offshore / Santos WA Southwest / Santos (BOL) / Santos WA PVG

Summary of information provided and record of consultation for this EP:

- On 30 July 2025, Woodside emailed Santos advising of the proposed activity (Record of Consultation, reference 6.1.8), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- **(1)** On 2 September 2025, Santos thanked Woodside and confirmed they had no objections or claims related to the planned activity (SI Report A, reference 18.1).
- **(1)** On 3 September 2025, Woodside thanked Santos for their response and noted that they had no objections or claims related to the planned activities (SI Report A, reference 18.2).

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
(1) Confirmed no objections or claims.	**(1)** Woodside accepts Santos has no objections or claims related to the planned activities.	**(1)** Woodside thanked Santos for confirming it had no objections or claims related to the planned activities.	**(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	Woodside engages in ongoing consultation throughout the life of an EP. Woodside notes that further feedback may be received as part of ongoing	No additional controls or measures are required.

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	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).	

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 July 2025. Woodside gave this information to Santos on 30 July 2025, 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 PAP, 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*'.
  - 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 2 September 2025, 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.
- In addition to the information in the Consultation Information Sheet, Woodside provided additional information to Santos in response to Santos' feedback (Woodside's email of 3 September 2025).

Reasonable Period

Woodside allowed Santos a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence 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 and Woodside allowed Santos 30 days for consultation.
- Consultation for this EP commenced 8 months ago.
- In this context, Woodside allowed Santos a reasonable period for consultation in preparation of the EP as evidenced by Santos' response on 2 September 2025.

Reasonable Opportunity

Woodside allowed Santos a reasonable opportunity for consultation in the preparation of this EP because:

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- Woodside published advertisements in 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside considers a reasonable opportunity was provided to Santos as evidenced by its response on 2 September 2025.

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 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 30 July 2025, Woodside emailed AEP advising of the proposed activity (Record of Consultation, reference 6.1.8), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).

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
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).	No additional measures or controls are required.

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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 July 2025. Woodside gave this information to AEP on 30 July 2025, 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 PAP, 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).

Reasonable Period

Woodside allowed AEP a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence 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 and Woodside allowed AEP 30 days for consultation.
- Consultation for this EP commenced 8 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 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). 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 18 August 2025, 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:

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- 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 30 July 2025, Woodside emailed Broome CCI advising of the proposed activity (Record of Consultation, reference 6.1.8), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).

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
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).	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 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 July 2025. Woodside gave this information to Broome CCI on 30 July 2025, 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.

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- A summary of the activity description, location of the activity, timing of the activity, receiving environment, impacts and risks associated with the PAP, 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).

Reasonable Period

Woodside allowed Broome CCI a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence 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 and Woodside allowed Broome CCI 30 days for consultation.
- Consultation for this EP commenced 8 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 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). 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 18 August 2025, 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 Carnarvon Chamber of Commerce and Industry (Carnarvon CCI)

Summary of information provided and record of consultation for this EP:

- On 30 July 2025, Woodside emailed Carnarvon CCI advising of the proposed activity (Record of Consultation, reference 6.1.8), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.

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- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).

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
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).	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 Carnarvon 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 Carnarvon CCI sufficient information to allow Carnarvon 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 July 2025. Woodside gave this information to Carnarvon CCI on 30 July 2025, 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 PAP, 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).

Reasonable Period

Woodside allowed Carnarvon CCI a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence to Carnarvon 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 and Woodside allowed Carnarvon CCI 30 days for consultation.
- Consultation for this EP commenced 8 months ago.
- In this context, Woodside allowed Carnarvon CCI a reasonable period for consultation in preparation of the EP.

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Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with Carnarvon CCI is appropriate and adapted to the nature of interests of Carnarvon CCI:

- Woodside published advertisements in 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). 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 18 August 2025, reminding Carnarvon 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 Carnarvon 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 Carnarvon CCI's functions, interests or activities.

4.9.3 Exmouth Chamber of Commerce and Industry (Exmouth CCI)

Summary of information provided and record of consultation for this EP:

- On 30 July 2025, Woodside emailed Exmouth CCI advising of the proposed activity (Record of Consultation, reference 6.1.8), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).

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
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).	No additional measures or controls are required.
Summary Report – Consultation Complete			

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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 July 2025. Woodside gave this information to Exmouth CCI on 30 July 2025, 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 PAP, 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).

Reasonable Period

Woodside allowed Exmouth CCI a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence 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 and Woodside allowed Exmouth CCI 30 days for consultation.
- Consultation for this EP commenced 8 months ago.
- In this context, Woodside allowed Exmouth 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 Exmouth CCI is appropriate and adapted to the nature of interests of Exmouth CCI:

- Woodside published advertisements in 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- From 2 August 2025 to 18 October 2025, Woodside held, or hosted information stalls at, a number of community events and roadshows in the Gascoyne to raise awareness of the EP and provide another opportunity for feedback. These events were promoted in local newspapers and on social media.
- In the absence of feedback, Woodside sent a follow-up consultation email on 18 August 2025, 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:

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- 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 Karratha and Districts Chamber of Commerce and Industry (KDCCI)

Summary of information provided and record of consultation for this EP:

- On 30 July 2025, Woodside emailed KDCCI advising of the proposed activity (Record of Consultation, reference 6.1.8), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).

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
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).	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 KDCCI 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 KDCCI sufficient information to allow KDCCI 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 July 2025. Woodside gave this information to KDCCI on 30 July 2025, 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 PAP, and proposed mitigation and management measures.
  - A timeframe for consultation and the provision of feedback.

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- 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).

Reasonable Period

Woodside allowed KDCCI a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence to KDCCI 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 KDCCI 30 days for consultation.
- Consultation for this EP commenced 8 months ago.
- In this context, Woodside allowed KDCCI 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 KDCCI is appropriate and adapted to the nature of interests of KDCCI:

- Woodside published advertisements in 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- From 2 August 2025 to 18 October 2025, Woodside held, or hosted information stalls at, a number of community events and roadshows in the Pilbara to raise awareness of the EP and provide another opportunity for feedback. These events were promoted in local newspapers and on social media.
- In the absence of feedback, Woodside sent a follow-up consultation email on 18 August 2025, reminding KDCCI 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 KDCCI 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 KDCCI's functions, interests or activities.

4.9.5 Onslow Chamber of Commerce and Industry (Onslow CCI)

Summary of information provided and record of consultation for this EP:

- On 30 July 2025, Woodside emailed Onslow CCI advising of the proposed activity (Record of Consultation, reference 6.1.8), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).

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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
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).	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 Onslow 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 Onslow CCI sufficient information to allow Onslow 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 July 2025. Woodside gave this information to Onslow CCI on 30 July 2025, 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 PAP, 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).

Reasonable Period

Woodside allowed Onslow CCI a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence to Onslow 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 and Woodside allowed Onslow CCI 30 days for consultation.
- Consultation for this EP commenced 8 months ago.
- In this context, Woodside allowed Onslow CCI a reasonable period for consultation in preparation of the EP.

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Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with Onslow CCI is appropriate and adapted to the nature of interests of Onslow CCI:

- Woodside published advertisements in 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). 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 18 August 2025, reminding Onslow 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 Onslow 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 Onslow CCI's functions, interests or activities.

4.9.6 Exmouth Community Liaison Group (Exmouth CLG)

Summary of information provided and record of consultation for this EP:

- On 30 July 2025, Woodside emailed Exmouth CLG advising of the proposed activity (Record of Consultation, reference 6.1.8), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 12 November 2025, Woodside presented to the Exmouth CLG on EP consultation requirements and Woodside activities. In addition, slides on past EPs were presented to the group (SI Report A, reference 20.1).
  - No feedback was received on the EP.
  - The slides included a QR code and a URL for the Consultation Activities page of the Woodside website.
  - 10 CLG members attended the meeting representing:
    - Shire of Exmouth
    - Gascoyne Development Commission
    - WA Country Health Service
    - Exmouth Chamber of Commerce and Industry
    - PHI
    - St John WA
- On 28 November 2025, Woodside's November presentation pack was emailed to CLG members regardless of their attendance at the meeting.

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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).	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 Exmouth CLG 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 sufficient information to allow Exmouth CLG 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 July 2025 Woodside gave this information to Exmouth CLG on 30 July 2025 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 PAP, 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).

Reasonable Period

Woodside allowed Exmouth CLG a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence to Exmouth CLG 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 Exmouth CLG 30 days for consultation.
- Consultation for this EP commenced 8 months ago.
- In this context, Woodside allowed Exmouth CLG a reasonable period for consultation in preparation of the EP.

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Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with Exmouth CLG is appropriate and adapted to the nature of interests of Exmouth CLG:

- Woodside published advertisements in 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- From 2 August 2025 to 18 October 2025, Woodside held, or hosted information stalls at, a number of community events and roadshows in the Gascoyne to raise awareness of the EP and provide another opportunity for feedback. These events were promoted in local newspapers and on social media. Woodside also presented EP information at the Exmouth CLG meeting in November 2025.
- In the absence of feedback, Woodside sent a follow-up consultation email on 18 August 2025, reminding Exmouth CLG 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 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.

4.9.7 Karratha Community Liaison Group (Karratha CLG)

Summary of information provided and record of consultation for this EP:

- On 20 June 2025, Woodside presented to the Karratha CLG on EP consultation requirements and Woodside activities, including activities for this EP (SI Report A, reference 21.1).
- Woodside presented slides on how it consults relevant persons in the course of preparing EPs and provided information on relevant persons. In addition, Woodside flagged upcoming consultation on the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation EP.
  - The slides included a QR code and a URL for the Consultation Activities page of the Woodside website.
  - 9 CLG members attended the meeting representing:
    - City of Karratha
    - Department of Education
    - Murujuga Aboriginal Corporation
    - Department of Communities
    - Development WA
    - Dampier Community Association

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    - Karratha Central Healthcare
    - Karratha & Districts Chamber of Commerce and Industry
    - Community member.
  - No feedback was provided for this EP.
- On 30 July 2025, Woodside emailed Karratha CLG advising of the proposed activity (Record of Consultation, reference 6.1.8), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 31 July 2025, a CLG member from the Dampier Community Association emailed Woodside to advise that another member of the organisation is attending these meetings and to remove this email from the contact list (SI Report A, reference 21.2).
- On 18 August 2025, as no response on the EP had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).
- On 1 September 2025, Woodside responded to the CLG member and advised that the contact details for the Dampier Community Association had been updated (SI Report A, reference 21.3).
- On 26 September 2025, Woodside's June presentation to the CLG was emailed to the CLG members regardless of their attendance at the meeting.
- On 25 September 2025, Woodside presented to the Karratha CLG on EP consultation requirements and Woodside activities, including activities for this EP (SI Report A, reference 21.4).
- Woodside presented slides on how it consults relevant persons in the course of preparing EPs and provided information on relevant persons and EMBAs. In addition, slides on past EPs were presented to the group.
  - The slides included a QR code and a URL for the Consultation Activities page of the Woodside website.
  - 9 CLG members attended the meeting representing:
    - City of Karratha
    - Department of Education
    - Dampier Community Association
    - Karratha Central Healthcare
    - Karratha & Districts Chamber of Commerce and Industry
    - Pilbara Ports
    - Department of Creative Industries, Tourism and Sport
    - Community member x 2
  - No feedback was provided for this Environment Plans.
- On 26 September 2025, the following day, Woodside's September presentation summary pack to the CLG was emailed to the CLG members regardless of their attendance at the meeting.

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.	No additional measures or controls are required.

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		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).	

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with Karratha CLG 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 sufficient information to allow Karratha CLG 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 July 2025 Woodside gave this information to Karratha CLG on 30 July 2025 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 PAP, 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).

Reasonable Period

Woodside allowed Karratha CLG a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence to Karratha CLG 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 Karratha CLG 30 days for consultation.
- Consultation for this EP commenced 8 months ago.
- In this context, Woodside allowed Karratha CLG 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 is appropriate and adapted to the nature of interests of Karratha CLG:

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- Woodside published advertisements in 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- From 2 August 2025 to 18 October 2025, Woodside held, or hosted information stalls at, a number of community events and roadshows in the Pilbara to raise awareness of the EP and provide another opportunity for feedback. These events were promoted in local newspapers and on social media. Woodside also presented EP information at the Karratha CLG meetings in June and September 2025,
- In the absence of feedback, Woodside sent a follow-up consultation email on 18 August 2025, reminding Karratha CLG 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 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's functions, interests or activities.

4.9.8 City of Karratha

Summary of information provided and record of consultation for this EP:

- On 30 July 2025, Woodside emailed the City of Karratha advising of the proposed activity (Record of Consultation, reference 6.1.8), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).

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
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).	No additional measures or controls are required.
Summary Report – Consultation Complete			

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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

Woodside has given the City of Karratha sufficient information to allow the 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 July 2025. Woodside gave this information to the City of Karratha on 30 July 2025, 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 PAP, 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).

Reasonable Period

Woodside allowed City of Karratha a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence to the 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 and Woodside allowed City of Karratha 30 days for consultation.
- Consultation for this EP commenced 8 months ago.
- In this context, Woodside allowed the City of Karratha 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 City of Karratha is appropriate and adapted to the nature of interests of the City of Karratha:

- Woodside published advertisements in 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- From 2 August 2025 to 18 October 2025, Woodside held, or hosted information stalls at, a number of community events and roadshows in regional areas including the Pilbara to raise awareness of the EP and provide another opportunity for feedback. These events were promoted in local newspapers and on social media.
- In the absence of feedback, Woodside sent a follow-up consultation email on 18 August 2025, reminding City of Karratha 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:

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- No additional measures were considered as a result of consultation as City of Karratha 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 City of Karratha's functions, interests or activities.

4.9.9 Shire of Ashburton

Summary of information provided and record of consultation for this EP:

- On 30 July 2025, Woodside emailed the Shire of Ashburton advising of the proposed activity (Record of Consultation, reference 6.1.64), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 21 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.2).

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
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).	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 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

Woodside has given the Shire of Ashburton sufficient information to allow the 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 July 2025. Woodside gave this information to the Shire of Ashburton on 30 July 2025, 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 PAP, and proposed mitigation and management measures.
  - A timeframe for consultation and the provision of feedback.

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- 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).

Reasonable Period

Woodside allowed Shire of Ashburton a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence to the 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 and Woodside allowed Shire of Ashburton 30 days for consultation.
- Consultation for this EP commenced 8 months ago.
- In this context, Woodside allowed the 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 the Shire of Ashburton:

- Woodside published advertisements in 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- From 2 August 2025 to 18 October 2025, Woodside held, or hosted information stalls at, a number of community events and roadshows in regional areas including the Pilbara to raise awareness of the EP and provide another opportunity for feedback. These events were promoted in local newspapers and on social media.
- In the absence of feedback, Woodside sent a follow-up consultation email on 21 August 2025, 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.
- 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.

4.9.10 Shire of Broome

Summary of information provided and record of consultation for this EP:

- On 30 July 2025, Woodside emailed the Shire of Broome advising of the proposed activity (Record of Consultation, reference 6.1.8), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).

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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
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).	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 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 the Shire of Broome sufficient information to allow the 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 July 2025. Woodside gave this information to the Shire of Broome on 30 July 2025, 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 PAP, 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).

Reasonable Period

Woodside allowed Shire of Broome a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence to the 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 and Woodside allowed Shire of Broome 30 days for consultation.
- Consultation for this EP commenced 8 months ago.
- In this context, Woodside allowed the Shire of Broome a reasonable period for consultation in preparation of the EP.

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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 the Shire of Broome:

- Woodside published advertisements in 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). 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 18 August 2025, 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.

4.9.11 Shire of Carnarvon

Summary of information provided and record of consultation for this EP:

- On 30 July 2025, Woodside emailed the Shire of Carnarvon advising of the proposed activity (Record of Consultation, reference 6.1.8), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).

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
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).	No additional measures or controls are required.
Summary Report – Consultation Complete			

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Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with Shire of Carnarvon 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 the Shire of Carnarvon sufficient information to allow the Shire of Carnarvon 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 July 2025. Woodside gave this information to the Shire of Carnarvon on 30 July 2025, 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 PAP, 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).

Reasonable Period

Woodside allowed Shire of Carnarvon a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence to the Shire of Carnarvon 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 Shire of Carnarvon 30 days for consultation.
- Consultation for this EP commenced 8 months ago.
- In this context, Woodside allowed the Shire of Carnarvon 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 Carnarvon is appropriate and adapted to the nature of interests of the Shire of Carnarvon:

- Woodside published advertisements in 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). 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 18 August 2025, reminding Shire of Carnarvon 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 Carnarvon 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.

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- The measures and controls described in this EP address the potential impact from the proposed activity on Shire of Carnarvon's functions, interests or activities.

4.9.12 Shire of Exmouth

Summary of information provided and record of consultation for this EP:

- On 30 July 2025, Woodside emailed the Shire of Exmouth advising of the proposed activity (Record of Consultation, reference 6.1.8), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).

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
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).	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 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 the Shire of Exmouth sufficient information to allow the 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 July 2025. Woodside gave this information to the Shire of Exmouth on 30 July 2025, 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 PAP, and proposed mitigation and management measures.
  - A timeframe for consultation and the provision of feedback.

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- 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).

Reasonable Period

Woodside allowed Shire of Exmouth a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence to the 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 and Woodside allowed Shire of Exmouth 30 days for consultation.
- Consultation for this EP commenced 8 months ago.
- In this context, Woodside allowed the 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 the Shire of Exmouth:

- Woodside published advertisements in 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- From 2 August 2025 to 18 October 2025, Woodside held, or hosted information stalls at, a number of community events and roadshows in regional areas including the Gascoyne to raise awareness of the EP and provide another opportunity for feedback. These events were promoted in local newspapers and on social media.
- In the absence of feedback, Woodside sent a follow-up consultation email on 18 August 2025, 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.

4.9.13 Shire of Shark Bay

Summary of information provided and record of consultation for this EP:

- On 30 July 2025, Woodside emailed the Shire of Shark Bay advising of the proposed activity (Record of Consultation, reference 6.1.8), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.

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- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).

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
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).	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 Shire of Shark Bay 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 the Shire of Shark Bay sufficient information to allow the Shire of Shark Bay 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 July 2025. Woodside gave this information to the Shire of Shark Bay on 30 July 2025, 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 PAP, 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).

Reasonable Period

Woodside allowed Shire of Shark Bay a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence to the Shire of Shark Bay 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 Shire of Shark Bay 30 days for consultation.
- Consultation for this EP commenced 8 months ago.
- In this context, Woodside allowed the Shire of Shark Bay a reasonable period for consultation in preparation of the EP.

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Reasonable Opportunity

A reasonable opportunity to provide feedback has been provided because Woodside's approach to consultation with Shire of Shark Bay is appropriate and adapted to the nature of interests of the Shire of Shark Bay:

- Woodside published advertisements in 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). 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 18 August 2025, reminding Shire of Shark Bay 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 Shark Bay 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 Shark Bay's functions, interests or activities.

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4.10 Other non-government groups or organisations (NGOs) or individuals

4.10.1 Conservation Council of Western Australia (CCWA)

Summary of information provided and record of consultation for this EP:

- On 30 July 2025, Woodside emailed CCWA advising of the proposed activity (Record of Consultation, reference 6.1.8), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).

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
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).	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 CCWA 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 CCWA sufficient information to allow CCWA 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 July 2025. Woodside gave this information to CCWA on 30 July 2025, 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 PAP, 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*'.

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- Advice that relevant persons can request that particular information provided during consultation not be published (to align with 25(4) of the Environment Regulations).

Reasonable Period

Woodside allowed CCWA a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence to CCWA 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 CCWA 30 days for consultation.
- Consultation for this EP commenced 8 months ago.
- In this context, Woodside allowed CCWA 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 CCWA is appropriate and adapted to the nature of interests of the CCWA:

- Woodside published advertisements in 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- From 2 August 2025 to 18 October 2025, Woodside held, or hosted information stalls at, a number of community events and roadshows in regional areas including the Pilbara and Gascoyne to raise awareness of the EP and provide another opportunity for feedback. These events were promoted in local newspapers and on social media.
- In the absence of feedback, Woodside sent a follow-up consultation email on 18 August 2025, reminding CCWA 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 CCWA 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 CCWA's functions, interests or activities.

4.10.2 Telstra

Summary of information provided and record of consultation for this EP:

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- On 29 July 2025, Woodside emailed Telstra advising of the proposed activity (Record of Consultation, reference 6.1.9), provided a Consultation Information Sheet, a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community',* and a map of the submarine communication cables in the vicinity of the Operational Area.
- On 1 August 2025, Telstra responded to Woodside advising that the information had been forwarded on to the appropriate stakeholders in Telstra and comments would be provided by 28 August 2025 (SI Report A, reference 23.1).
- On 1 August 2025, Telstra responded to Woodside thanking them for the opportunity to comment and that comments will be provided later in the month (SI Report A, reference 23.2).
- On 28 August 2025, Telstra responded to Woodside (SI Report A, reference 23.3) and:
  - **(1)** Stated that after reviewing the documents, it had become evident that the Geotechnical Survey activities might create risks for Telstra's subsea network cables.
  - **(2)** Advised that confirming the exact positions of Telstra's subsea network cables before beginning any geotechnical survey work would be prudent.
  - **(3)** Requested that if any survey activities were planned near subsea network cables, Telstra should be notified so that liaison could occur and an appropriate safety buffer could be maintained around the cables. Telstra also advised that CMART Requests might need to be raised so that Telstra could monitor the cables for any possible damage.
- On 15 September 2025, Woodside replied to Telstra thanking them for their response (SI Report A, reference 23.4) and:
  - **(1, 2)** Noted Telstra's comments about geotechnical survey activities and the need to identify Telstra's subsea cable assets.
  - **(2)** Outlined that the Pipeline Crossing Contract between Telstra and Woodside was still under negotiation and indicated that it recognised the planned route for the Wilcox flowline and umbilical, which intersected with two fibre-optic cables owned by Telstra. Woodside also advised that the flowline and umbilical would be installed in line with the terms of the Agreement, with work expected to be completed by mid-2028. Woodside further advised Telstra of their primary contact for the Agreement.
  - **(3)** Woodside also confirmed that Telstra would receive notifications in accordance with the Pipeline Crossing Contract.

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
(1) Stated that geotechnical survey activities could pose risks to Telstra's subsea network cables.	**(1)** Woodside notes Telstra's comments in relation to geotechnical surveys.	**(1)** Woodside noted Telstra's comments in relation to geotechnical surveys and subsea network cables.	**(1)** No additional controls or measures are required.
(2) Advised that the location of subsea network cables should be confirmed before beginning geotechnical surveys.	**(2)** Woodside notes the need to confirm the location of subsea network cables, and that Woodside and Telstra have negotiated a Pipeline Crossing Contract which identifies the location of subsea network cables.	**(2)** Woodside outlined that the Pipeline Crossing Contract under negotiation with Telstra recognises the planned route for the flowlines and umbilicals and that these would be installed in line with the Agreement.	**(2)** No additional controls or measures are required. Section 3.8.3.8 of the EP provides the locations for the infrastructure crossing.
(3)	**(3)**	**(3)**	**(3)**

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Requested that Telstra be notified of any survey activities planned near subsea network cables.	Woodside notes the need to notify Telstra of activities occurring in proximity to subsea network cables.	Woodside confirmed that Telstra would receive appropriate notifications in accordance with the Pipeline Crossing Contract.	No additional controls or measures are required as notifications will occur in accordance with the Pipeline Crossing Contract.
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).	No additional controls or 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 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:

- The Consultation Information Sheet for this EP has been publicly available on the Woodside website since July 2025. Woodside gave this information to Telstra on 30 July 2025, 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 PAP, 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*'.
  - 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 1 August 2025 and 28 August 2025, Telstra shared its feedback, claims or objections regarding this activity, indicating the information provided was sufficient to enable Telstra to make an informed assessment of the possible consequences of the activity on its functions, interests or activities.
- In addition to the information in the Consultation Information Sheet, Woodside provided additional information to Telstra in response to Telstra's feedback (Woodside's email of 15 September 2025).

Reasonable Period

Woodside allowed Telstra a reasonable period for consultation in the preparation of this EP because:

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- A consultation period was stated in the initial correspondence 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 and Woodside allowed Telstra 30 days for consultation.
- Consultation for this EP commenced 8 months ago.
- In this context, Woodside allowed Telstra a reasonable period for consultation in preparation of the EP as evidenced by Telstra's response on 1 August 2025 and 28 August 2025.

Reasonable Opportunity

Woodside allowed Telstra a reasonable opportunity for consultation in the preparation of this EP because:

- Woodside published advertisements in 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside considers a reasonable opportunity was provided to Telstra as evidenced by its response on 1 August 2025 and 28 August 2025.

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:

- Telstra 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 and 34(g), Woodside has:
  - Responded to feedback from Telstra.
  - Made no changes or inclusions to the EP as a result of consultation with Telstra 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.

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4.10.3 The Wilderness Society (TWS)

Summary of information provided and record of consultation for this EP:

- On 30 July 2025, Woodside emailed TWS advising of the proposed activity (Record of Consultation, reference 6.1.8), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, 6.2.1).
- On 25 August 2025, TWS responded to Woodside (SI Report A, reference 22.1) thanking them for the opportunity to comment and:
  - **(1)** Noted that they have an interest in companies, including Woodside, demonstrating full life-cycle planning for infrastructure, from installation through to decommissioning.
  - **(2)** Outlined NOPSEMA's "*Planning for proactive decommissioning Information Paper*".
  - **(3)** Asked what the cessation-of-production date would be.
  - **(4)** Asked when and how the infrastructure would be removed.
  - **(5)** Asked whether Woodside intended to leave any infrastructure in the marine environment.
  - **(6)** Requested information about the financial assurance in place to cover decommissioning costs
- On 20 March 2026, Woodside replied to TWS (SI Report A, reference 22.2) thanking them for their feedback and:
  - **(1)** Noted TWS' interest in decommissioning and full lifecycle planning.
  - **(2)** Noted the content from NOPSEMA's "*Planning for proactive decommissioning Information Paper*".
  - **(3)** Advised that end-of-field-life decommissioning for the Greater Western Flank Phase 4 Project would occur after the reservoirs reached the end of their economic lifespan, with the indicative timeframe currently estimated to be around 2040 in alignment with the approved end-of-life date for the Goodwyn Alpha Facility under the *Goodwyn Alpha Facility Operations Environment Plan*.
  - **(4)** Outlined that decommissioning planning typically commenced between two and 10 years prior to cessation of production and that future technical feasibility studies would be undertaken closer to end-of-field-life to determine optimal recovery methods for the subsea infrastructure.
  - **(5)** Advised that Woodside's current planning is based on subsea infrastructure above the mudline being removed from the title area.
  - **(6)** Noted that Woodside had recognised provisions for future decommissioning costs within its financial statements, and that these were reviewed on an annual basis.

Summary of Feedback, Objection or Claim	Assessment of Merits of Feedback, Objection or Claim	Woodside's Statement of Response	Inclusion in Environment Plan
(1) Noted an interest in full life-cycle planning and decommissioning.	**(1)** Woodside understands that TWS has an interest in decommissioning.	**(1)** Woodside noted TWS' interest in decommissioning.	**(1)** No additional measures or controls are required.
(2) Outlined NOPSEMA's "*Planning for*	**(2)** Woodside is aware of NOPSEMA's	**(2)** Woodside noted the content from	**(2)** No additional measures or controls are

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proactive decommissioning Information Paper".	"*Planning for proactive decommissioning Information Paper*".	NOPSEMA's "*Planning for proactive decommissioning Information Paper*".	required.
(3) Asked what the cessation of production date would be.	**(3)** Cessation of production is outside the scope of this EP.	**(3)** Woodside advised that the indicative end of field life is estimated to be around 2040 in alignment with the approved end of life date for the Goodwyn Alpha Facility, under the *Goodwyn Alpha Facility Operations Environment Plan.*	**(3)** Not required.
(4) Asked how the infrastructure would be removed.	**(4)** Decommissioning, including infrastructure removal, is outside the scope of this EP.	**(4)** Woodside advised that decommissioning planning typically takes place closer to end of field life and future technical feasibility studies would inform the optimal recovery methods.	**(4)** Not required.
(5) Asked whether Woodside intended to leave infrastructure behind.	**(5)** Decommissioning, including infrastructure removal, is outside of the scope of this EP. All subsea structures installed during the Petroleum Activity have been designed to be removed above the mudline.	**(5)** Woodside advised that decommissioning planning typically takes place closer to end of field life, however current planning was based on subsea infrastructure above the mudline being removed from the title area.	**(5)** Not required. Information on subsea structures is outlined in Section 3.8.7 of the EP.
(6) Requested information on financial assurance to cover decommissioning cost.	**(6)** Financial assurance for decommissioning is outside the scope of this EP.	**(6)** Woodside noted that there are recognised provisions for future decommissioning cost within its financial statements, these are reviewed annually.	**(6)** 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 of the EP).	No additional measures or controls are required.

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Outcomes of Consultation
Woodside has discharged its obligations for consultation under regulation 25 of the Environment Regulations and considers consultation with TWS 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 TWS sufficient information to allow TWS 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 July 2025. Woodside gave this information to TWS on 30 July 2025, 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 PAP, 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*'. – 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 25 August 2025, TWS shared its feedback, claims or objections regarding this activity, indicating the information provided was sufficient to enable TWS to make an informed assessment of the possible consequences of the activity on its functions, interests or activities. • In addition to the information in the Consultation Information Sheet, Woodside provided additional information to TWS in response to TWS' feedback (Woodside's email of 20 March 2026). **Reasonable Period** Woodside allowed TWS a reasonable period for consultation in the preparation of this EP because: • A consultation period was stated in the initial correspondence to TWS 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 TWS 30 days for consultation. • Consultation for this EP commenced 8 months ago. • In this context, Woodside allowed TWS a reasonable period for consultation in preparation of the EP as evidenced by TWS' response on 25 August 2025. **Reasonable Opportunity** Woodside allowed TWS a reasonable opportunity for consultation in the preparation of this EP because: • Woodside published advertisements in 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation. • Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation. • Woodside considers a reasonable opportunity was provided to TWS as evidenced by its response on 25 August 2025.

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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:

- TWS 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 and 34(g), Woodside has:
  - Responded to feedback from TWS.
  - Made no changes or inclusions to the EP as a result of consultation with TWS 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.

4.11 Research institutes and local conservation groups or organisations

4.11.1 Cape Conservation Group (CCG)

Summary of information provided and record of consultation for this EP:

- On 30 July 2025, Woodside emailed CCG advising of the proposed activity (Record of Consultation, reference 6.1.8), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community'*.
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).

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
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).	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 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:			

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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 July 2025. Woodside gave this information to CCG on 30 July 2025, 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 PAP, 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).

Reasonable Period

Woodside allowed CCG a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence 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 and Woodside allowed CCG 30 days for consultation.
- Consultation for this EP commenced 8 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 the CCG:

- Woodside published advertisements in 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- From 2 August 2025 to 18 October 2025, Woodside held, or hosted information stalls at, a number of community events and roadshows in regional areas including the Gascoyne to raise awareness of the EP and provide another opportunity for feedback. These events were promoted in local newspapers and on social media.
- In the absence of feedback, Woodside sent a follow-up consultation email on 18 August 2025, reminding CCG 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 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.

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- The measures and controls described in this EP address the potential impact from the proposed activity on CCG's functions, interests or activities.

4.11.2 Protect Ningaloo

Summary of information provided and record of consultation for this EP:

- On 30 July 2025, Woodside emailed Protect Ningaloo advising of the proposed activity (Record of Consultation, reference 6.1.8), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).

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
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).	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 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:

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 July 2025. Woodside gave this information to Protect Ningaloo on 30 July 2025, 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 PAP, and proposed mitigation and management measures.
  - A timeframe for consultation and the provision of feedback.

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- 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).

Reasonable Period

Woodside allowed Protect Ningaloo a reasonable period for consultation in the preparation of this EP because:

- A consultation period was stated in the initial correspondence 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 and Woodside allowed Protect Ningaloo 30 days for consultation.
- Consultation for this EP commenced 8 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 the Protect Ningaloo:

- Woodside published advertisements in 7 national, state, and relevant local newspapers (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- Woodside ran a targeted social media campaign (see Consultation Activities). This allowed for broad awareness of the activity under the EP and also of consultation.
- From 2 August 2025 to 18 October 2025, Woodside held, or hosted information stalls at, a number of community events and roadshows in regional areas including the Gascoyne to raise awareness of the EP and provide another opportunity for feedback. These events were promoted in local newspapers and on social media.
- In the absence of feedback, Woodside sent a follow-up consultation email on 18 August 2025, 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.
- 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.

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4.12 Traditional custodians and nominated representative corporations

4.12.1 Bardi and Jawi Niimidiman Aboriginal Corporation (BJNAC)

BJNAC is established under the *Native Title Act 1993* by the Bardi and Jawi People to represent the Bardi and Jawi 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 28 July 2025, Woodside emailed BJNAC 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.
  - A request for information on how BJNAC would like to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
  - A request for feedback by 27 August 2025 for the purposes of preparation of this 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 BJNAC to provide information about the proposed activity to other individuals as required.
  - Acknowledgement that discussions relating to Woodside's consultation framework agreement has been ongoing and that these discussions will progress in parallel with consultation for the proposed activity's EP.
- On 19 August 2025, Woodside emailed BJNAC a reminder about the proposed activity (SI Report B, reference 1.1.1). The email included:
  - A reference to the original consultation email for this EP sent to BJNAC on 28 July 2025, which included a Summary Information Sheet and a link to the Consultation Information Sheet.
  - A reminder that consultation for the preparation of this EP closes on 27 August 2025.
  - A request for information on how BJNAC would like 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.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim	Woodside's Response	Inclusion in Environment Plan

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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 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 with BJNAC 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 28 July 2025, Woodside made the Consultation Information Sheet available on the Woodside website.
- Woodside provided information to BJNAC on 28 July 2025 when consultation commenced. Woodside provided:
  - A Summary Information Sheet developed specifically for Indigenous groups and reviewed by a member of the Indigenous Affairs Engagement team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, 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 BJNAC's interests and how the activity could impact those interests.
  - A request for the 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.

Reasonable Period

A reasonable period for consultation in the preparation of the EP has been provided because:

- Woodside commenced consultation on this EP with BJNAC on 28 July 2025 and requested BJNAC provide feedback by 27 August 2025 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.
- Woodside has addressed and responded to BJNAC for more than 8 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 BJNAC's preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Indigenous groups.

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- Woodside has made information on this EP publicly available for more than 8 months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (30 July 2025) and National Indigenous Times (30 July 2025) advising of the proposed activities and requesting comments or feedback.
- Woodside's initial email about this EP on 28 July 2025:
  - 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 BJNAC members as well as the BJNAC Board.
  - Asked BJNAC to advise how it would like Woodside to engage and whether BJNAC required further information.
- Throughout the consultation period, Woodside and BJNAC have had direct contact lines to each other.

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 8 months, BJNAC has not raised 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).

4.12.2 Bundi Yamatji Aboriginal Corporation (BYAC)

BYAC is established under the *Native Title Act 1993* (Cth) by the Bundi Yamatji people to represent the Bundi Yamatji 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.

The Yamatji Southern Regional Corporation (YSRC) is responsible for fulfilling the contractual obligations under the ILUA on behalf of the Yamatji Nation Community, and as such, BYAC is a part of YSRC's corporate structure. In preparation for this EP, YSRC informed Woodside that all correspondence to BYAC relating to EP consultation, is forwarded, in the first instance, to YSRC's office holders.

Summary of information provided and record of consultation for this EP:

- On 28 July 2025, Woodside emailed BYAC 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.
  - Information on the cultural values relating to BYAC that Woodside considers relevant to the activity:
    - **(1)** Migratory marine animals.
    - **(2)** Sea Country management: Yamatji sea connections and impacts to heritage values.

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  - **(1, 2)** A request from Woodside that BYAC 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 how BYAC would like to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
  - A request for feedback by 27 August 2025 for the purposes of preparation of this 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 BYAC to provide information about the proposed activity to other individuals as required.
- On 28 July 2025, in response to Woodside emailing the Record of Consultation for this activity, Woodside received an email from BYAC notifying that the email address/account would no longer be active from 4 July 2025. The email identified an alternative email address for heritage related enquiries (SI Report B, reference 1.2.1).
- On 28 July 2025, in response to an automated email from BYAC, Woodside emailed BYAC the Record of Consultation to an alternative email address (SI Report B, reference 1.2.2).
- On 19 August 2025, Woodside emailed BYAC a reminder about the proposed activity (SI Report B, reference 1.2.3). The email included:
  - A reference to the original consultation email for this EP sent to BYAC on 28 July 2025, which included a Summary Information Sheet and a link to the Consultation Information Sheet and listed cultural values previously provided by BYAC to Woodside.
  - A reminder that consultation for the preparation of this EP closes on 27 August 2025.
  - A request for information on how BYAC would like 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 19 August 2025, in response to Woodside emailing the reminder email about EP consultation regarding the proposed activity to BYAC, Woodside received an email from BYAC (via Yamatji Southern Regional Corporation [YSRC]) notifying that the email address/account would no longer be active from 4 July 2025. The email identified an alternative email address for heritage related enquiries (SI Report B, reference 1.2.4).
- On 19 August 2025, in response to an automated email from BYAC (via YSRC), Woodside emailed the reminder email about EP consultation regarding the proposed activity to BYAC, confirming that Woodside had updated the contact details for BYAC so that future communications are emailed to the alternative email address and offering to discuss the matter further (SI Report B, reference 1.2.5).
- On 19 August 2025, BYAC (via YSRC) emailed Woodside confirming receipt of the email sent earlier that day and that it looked forward to keeping informed about the project and any matters relating to Yamaji Heritage, rangers and the ILUA (SI Report B, reference 1.2.6).
- On 19 August 2025, Woodside telephoned BYAC (YSRC) to understand the relationship between YSRC and BYAC and the process for notifying BYAC about Woodside's EP consultations (SI Report B, reference 1.2.7). YSRC and Woodside discussed the appropriate persons to contact for both YSRC and BYAC.
- On 19 August 2025, BYAC (via YSRC) emailed Woodside thanking for the telephone conversation and welcoming the opportunity to meet and discuss Woodside's activities and how YSRC can collaborate with Woodside, and provided additional contact details for YSRC office holders (SI Report B, reference 1.2.8).
- On 19 August 2025, Woodside emailed BYAC (via YSRC) referring to previous communications with YSRC about the best process for notifying YSRC and BYAC about Woodside's activities (SI Report B, reference 1.2.9). Woodside requested confirmation of the most appropriate process for sharing information about Woodside's

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EPs for both PBCs and the most suitable approach that ensures that YSCR and BYAC are informed about Woodside's activities and the opportunities to share the information. Woodside also included previous emails and information about the proposed activity.

- On 26 August 2025, BYAC (via YSRC) emailed Woodside with the contact details when sending information about EPs (SI Report B, reference 1.2.10).
- On 26 August 2025, Woodside emailed BYAC (via YSRC) confirming contact details had been received and noted for future EP correspondence (SI Report B, reference 1.2.11).

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim	Woodside's Response	Inclusion in Environment Plan
(1) Migratory marine animals.	**(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 invited BYAC to make changes or provide additional information about these cultural values (ROC, 6.1.25). BYAC did not request changes.	**(1)** Woodside has updated Section 4.9 to record these interests and cultural values. Whale migration has been included in Section 4.9 of the EP. Controls have been adopted where appropriate in Sections 6.7 and 6.8 of the EP.
(2) Sea Country management: • Yamatji sea connections and impacts to heritage values.	**(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 invited BYAC to make changes or provide additional information about these cultural values (ROC, 6.1.25). BYAC did not request changes.	**(2)** Woodside has updated Section 4.9 to record these interests and cultural values. Controls have been adopted where appropriate in Sections 6.7 and 6.8 of the EP.
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. Woodside notes that further feedback may be received as part of ongoing consultation. 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 this 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 with BYAC 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:

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Sufficient Information

Sufficient information has been provided because:

- On 28 July 2025, Woodside made the Consultation Information Sheet available on the Woodside website.
- Woodside provided information to BYAC on 28 July 2025 when consultation commenced. Woodside provided:
  - A Summary Information Sheet developed specifically for Indigenous groups and reviewed by a member of the Indigenous Affairs Engagement team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, the potential risks and impacts of the activity, diagrams and details about how to provide feedback.
  - A list of BYAC's cultural values, previously provided to Woodside during consultation of unrelated EPs.
  - 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 BYAC 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.

Reasonable Period

A reasonable period for consultation in the preparation of the EP has been provided because:

- Woodside commenced consultation on this EP with BYAC on 28 July 2025 and requested BYAC provide feedback by 27 August 2025 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.
- Woodside has addressed and responded to BYAC for more than 8 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 BYAC's preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Indigenous groups.
- Woodside has made information on this EP publicly available for more than 8 months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (30 July 2025) and National Indigenous Times (29 July 2025) advising of the proposed activities and requesting comments or feedback.
- Woodside's initial email about this EP on 28 July 2025:
  - 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 BYAC members as well as the BYAC Board.
  - Asked BYAC to advise how it would like Woodside to engage and whether BYAC required further information.
- Throughout the consultation period, Woodside and BYAC have had direct contact lines to each other.

Outcomes of Consultation

The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

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- Woodside has incorporated cultural values previously provided by BYAC into the EP.
- During the past 8 months, BYAC has raised 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).

4.12.3 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.

Summary of information provided and record of consultation for this EP:

- On 29 July 2025, Woodside emailed BTAC 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.
  - information on the cultural values relating to BTAC that Woodside considers relevant to the activity:
    - **(1)** BTAC's cultural obligation to care for the environmental values of 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.
      - 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.
  - **(1)** A request from Woodside that BTAC 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 how BTAC would like to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
  - A request for feedback by 27 August 2025 for the purposes of preparation of this 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.

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- Woodside's commitment to managing gender-restricted or other culturally sensitive information.
- A request for BTAC to provide information about the proposed activity to other individuals as required.
- Acknowledgement that discussions relating to Woodside's consultation framework agreement has been ongoing and that these discussions will progress in parallel with consultation for the proposed activity's EP.

- On 20 August 2025, Woodside emailed BTAC a reminder about the proposed activity (SI Report B, reference 1.3.1). The email included:
  - A reference to the original consultation email for this EP sent to BTAC on 29 July 2025, which included a Summary Information Sheet and a link to the Consultation Information Sheet and listed cultural values previously provided by BTAC to Woodside.
  - A reminder that consultation for the preparation of this EP closes on 27 August 2025.
  - A request for information on how BTAC would like 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.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim	Woodside's Response	Inclusion in Environment Plan
(1) Cultural Values: 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. • 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.	**(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 invited BTAC to make changes or provide additional information about these cultural values (ROC, 6.1.26). BTAC did not request changes.	**(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 6.7 and 6.8.

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• 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/ 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).	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 with BTAC 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 28 July 2025, Woodside made the Consultation Information Sheet available on the Woodside website.
- Woodside provided information to BTAC on 29 July 2025 when consultation commenced. Woodside provided:
  - A Summary Information Sheet developed specifically for Indigenous groups and reviewed by a member of the Indigenous Affairs Engagement team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, the potential risks and impacts of the activity, diagrams and details about how to provide feedback.
  - A list of BTAC's cultural values, previously provided to Woodside during consultation of unrelated EPs.
  - 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 BTAC's interests and how the activity could impact those interests.
  - A request for the information sheets to be distributed to members and individuals as required.
  - An offer to provide more specific information, maps and images if required.

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- Woodside provided contact information for Woodside and NOPSEMA.

Reasonable Period

A reasonable period for consultation in the preparation of the EP has been provided because:

- Woodside commenced consultation on this EP with BTAC on 29 July 2025 and requested BTAC provide feedback by 27 August 2025 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.
- Woodside has addressed and responded to BTAC for more than 8 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 BTAC's preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Indigenous groups.
- Woodside has made information on this EP publicly available for more than 8 months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (30 July 2025) and National Indigenous Times (29 July 2025) advising of the proposed activities and requesting comments or feedback.
- Woodside's initial email about this EP on 29 July 2025:
  - 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 BTAC members as well as the BTAC Board.
  - Asked BTAC to advise how it would like Woodside to engage and whether BTAC required further information.
- Throughout the consultation period, Woodside and BTAC have had direct contact lines to each other.

Outcomes of Consultation

The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- Woodside has incorporated cultural values previously provided by BTAC into the EP.
- During the past 8 months, BTAC has not raised 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).

4.12.4 Gogolanyngor Aboriginal Corporation (GAC)

GAC is established under the *Native Title Act 1993 (Cth)* by the Jabirr Jabirr/Ngumbarl and Bindunbur people to represent the Jabirr Jabirr/Ngumbarl and Bindunbur 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.

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Summary of information provided and record of consultation for this EP:

- On 28 July 2025, Woodside emailed GAC 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.
  - A request for information on how GAC would like to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
  - A request for feedback by 27 August 2025 for the purposes of preparation of this 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 GAC to provide information about the proposed activity to other individuals as required.
- On 28 July 2025, GAC emailed Woodside acknowledging receipt of Woodside's email sent earlier the same day (SI Report B, reference 1.4.1).
- On 19 August 2025, Woodside emailed GAC a reminder about the proposed activity (SI Report B, reference 1.4.2). The email included:
  - A reference to the original consultation email for this EP sent to GAC on 28 July 2025, which included a Summary Information Sheet and a link to the Consultation Information Sheet.
  - A reminder that consultation for the preparation of this EP closes on 27 August 2025.
  - A request for information on how GAC would like 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.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim	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 this EP).	No action required.
Summary Report – Consultation Complete			

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Woodside has discharged its obligations for consultation under regulation 25 of the Environmental Regulations and consultation with GAC 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 28 July 2025, Woodside made the Consultation Information Sheet available on the Woodside website.
- Woodside provided information to GAC on 28 July 2025 when consultation commenced. Woodside provided:
  - A Summary Information Sheet developed specifically for Indigenous groups and reviewed by a member of the Indigenous Affairs Engagement team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, 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 GAC's 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.

Reasonable Period

A reasonable period for consultation in the preparation of the EP has been provided because:

- Woodside commenced consultation on this EP with GAC on 28 July 2025 and requested GAC provide feedback by 27 August 2025 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.
- Woodside has addressed and responded to GAC for more than 8 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 GAC's preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Indigenous groups.
- Woodside has made information on this EP publicly available for more than 8 months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (30 July 2025) and National Indigenous Times (29 July 2025) advising of the proposed activities and requesting comments or feedback.
- Woodside's initial email about this EP on 28 July 2025:
  - 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 GAC members as well as the GAC Board.
  - Asked GAC to advise how it would like Woodside to engage and whether GAC required further information.
- Throughout the consultation period, Woodside and GAC have had direct contact lines to each other.

Outcomes of Consultation

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The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- During the past 8 months, GAC has not raised 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).

4.12.5 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 28 July 2025, Woodside emailed KTLA 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.
  - A request for information on how KTLA would like to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
  - A request for feedback by 27 August 2025 for the purposes of preparation of this 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 KTLA to provide information about the proposed activity to other individuals as required.
- On 19 August 2025, Woodside emailed KTLA a reminder about the proposed activity (SI Report B, reference 1.5.1). The email included:
  - A reference to the original consultation email for this EP sent to KTLA on 28 July 2025, which included a Summary Information Sheet and a link to the Consultation Information Sheet.
  - A reminder that consultation for the preparation of this EP closes on 27 August 2025.
  - A request for information on how KTLA would like 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.

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Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim	Woodside's Response	Inclusion in Environment Plan
No feedback, objection or claim 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 this 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 with KTLA 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 28 July 2025, Woodside made the Consultation Information Sheet available on the Woodside website.
- Woodside provided information to KTLA on 28 July 2025 when consultation commenced. Woodside provided:
  - A Summary Information Sheet developed specifically for Indigenous groups and reviewed by a member of the Indigenous Affairs Engagement team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, 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 KTLA's 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.

Reasonable Period

A reasonable period for consultation in the preparation of the EP has been provided because:

- Woodside commenced consultation on this EP with KTLA on 28 July 2025 and requested KTLA provide feedback by 27 August 2025for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.
- Woodside has addressed and responded to KTLA for more than 8 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 KTLA's preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Indigenous groups.

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- Woodside has made information on this EP publicly available for more than 8 months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (30 July 2025) and National Indigenous Times (29 July 2025) advising of the proposed activities and requesting comments or feedback.
- Woodside's initial email about this EP on 28 July 2025:
  - 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 KTLA members as well as the KTLA Board.
  - Asked KTLA to advise how it would like Woodside to engage and whether KTLA required further information.
- Throughout the consultation period, Woodside and KTLA have had direct contact lines to each other.

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 8 months, KTLA has not raised 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).

4.12.6 Kariyarra Aboriginal Corporation (KAC)

KAC 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.

Summary of information provided and record of consultation for this EP:

- On 28 July 2025, Woodside emailed KAC 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.
  - Information on the cultural values that KAC has previously provided to Woodside considered relevant to the activity:
    - **(1)** Marine animals:
      - Turtles – management of sea turtle nesting.
      - Whales - impacts to whale migration, connected to Songlines.
    - **(2)** Sea Country:

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    - 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.
  - **(3)** Yinta:
    - Significant cultural/spiritual sites.
    - Cultural rights to land.
  - **(4)** Marine species as resources:
    - Marine mammals.
    - Fish.
    - Molluscs.
  - **(5)** Potential impacts on coastal landforms and vegetation.
  - **(6)** Heritage sites associated with the coast and ocean including the presence of mythical snakes.
  - **(7)** Transfer of knowledge to future generations:
    - Impacts of species reduction.
    - Temporary exclusion to areas in the case of an oil spill.
  - **(8)** Islands of the coast of Port Hedland are significant:
    - Little Turtle.
    - North Turtle
    - Bedout.
- **(1, 2, 3, 4, 5, 6, 7, 8)** A request from Woodside that KAC 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 how KAC would like to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
- A request for feedback by 27 August 2025 for the purposes of preparation of this 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 KAC to provide information about the proposed activity to other individuals as required.
- Acknowledgement that discussions relating to Woodside's consultation framework agreement has been ongoing and that these discussions will progress in parallel with consultation for the proposed activity's EP.

- On 29 July 2025, KAC emailed Woodside acknowledging the receipt of the Record of Consultation email the day before and stating that KAC may arrange for a consultation meeting regarding the proposed activity (SI Report B, 1.6.1).

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- On 29 July 2025, Woodside emailed KAC stating that KAC is welcome to consult on relevant EPs for the life of the plans, and that Woodside can organise a meeting at a time convenient to the Kariyarra community and provide further information about the proposed activity (SI Report B, reference 1.6.2).
- On 29 July 2025, KAC emailed Woodside requesting a consultation meeting with the KAC Board, and to discuss possible dates so a quote can be sent to Woodside for approval (SI Report B, reference 1.6.3).
- On 29 July 2025, Woodside telephoned KAC and it was confirmed that KAC's Board of Directors had requested an EP consultation about the proposed activity, and were available on 21 August 2025. Woodside and KAC also discussed consultation meeting logistics and attendance by Woodside subject matter experts (SI Report B, reference 1.6.4).
- On 30 July 2025, KAC emailed Woodside a quote for EP consultation meeting costings for approval, and its policy for meeting with proponents (SI Report B, reference 1.6.5).
- On 6 August 2025, Woodside emailed KAC, approving the quote for meeting costs and stating that Woodside would be in contact leading up to the meeting to discuss the meeting particulars (SI Report B, reference 1.6.6).
- Between 12 – 20 August 2025, KAC and Woodside exchanged emails and telephone calls regarding the planned EP consultation meeting scheduled for 21 August 2025. During this exchange KAC requested Woodside include details about presenting this proposed activity and EP during the meeting, as well as meeting costs, attendees and logistics (SI Report B, references 1.6.7 – 1.6.21). There was also a reminder email on the 19 August 2025 about the about the proposed activity which included:
  - A reference to the original consultation email for this EP sent to KAC on 28 July 2025, which included a Summary Information Sheet and a link to the Consultation Information Sheet and listed cultural values previously provided by KAC to Woodside.
  - A reminder that consultation for the preparation of this EP closes on 27 August 2025.
  - A request for information on how KAC would like 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 21 August 2025, Woodside met with KAC in Port Hedland to consult on this EP and another (SI Report B, reference 1.6.22). During the meeting:
  - Woodside provided an explanation of EPs and regulatory requirements.
  - Woodside discussed how modelling was used to determine EMBAs.
  - **(9)** KAC enquired about EMBAs in regard to extreme weather events such as cyclones and spill response times. **(9)** Woodside stated that there are many factors that affect spill modelling for EMBAs including weather conditions, ocean currents, and the type of vessels. Woodside took the query about cyclone data being included in EMBA modelling on notice.
  - **(10)** KAC asked about timeframes around plugging and abandonment or drilling because the Board needs to be aware of the circumstances that may impact cultural values and the environment. **(10)** Woodside stated that it puts plans in place to mitigate impacts to cultural values and the environment in EPs, and that is why consultation about cultural values is important.
  - **(11)** KAC asked about cement being used for plug and abandonment activities and if there is an environmental risk of cement degradation over time. **(11)** Woodside took the question on notice.
  - **(12)** KAC queried where Woodside had collated its list of KAC's cultural values. **(12)** Woodside stated it had sourced KAC's cultural values via consultation and feedback from KAC when consulting on other EPs and desktop research.

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- **(1)** KAC provided addition information on marine species identified as cultural values which include: shellfish, cockles, oysters, clam shells, con shells, mullets and sea cow (dugong), as well as the importance of **(13)** river systems as food chains. **(1, 13)** Woodside acknowledged this new information and advised it would update it records and current and future EPs accordingly.
- **(14)** KAC asked if Woodside considered historical mapping of cultural values and prehistoric coastlines when understanding the closeness of the activity to KAC's Native Title determination. **(14)** Woodside stated that maritime archaeologists are often engaged to assess potential underwater archaeological material prior to undertaking its activities.

- On 26 August 2025, Woodside emailed KAC to clarify the names of people present during the 21 August 2025 meeting. KAC replied with the names of attendees (SI Report B, references 1.6.23 – 1.6.24).
- On 17 September 2025, Woodside emailed KAC updated information about its record of Cultural Values for KAC and responses to questions taken on notice during their 21 August 2025 meeting (SI Report B, reference 1.6.25):
  - **(9)** Information about consideration of cyclone events in spill modelling. The modelling does capture large-scale ocean changes caused by cyclones.
  - **(11)** Information about the use of cement to plug wells. Cement is non-corrosive and resistant to chemical degradation. it will not pose significant damage or harm to the immediate surrounding marine environment.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim	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). Additional species identified during consultation for this EP include: • Shellfish • Cockles • Oysters • Clam shells • Con shells • Mullets • Sea cow (dugong).	**(1)** This value has been identified through Woodside's data collection processes (consultation).	**(1)** At the beginning of consultation for this EP, Woodside invited KAC to make changes or provide additional information about this cultural value (See ROC, 6.1.29). During consultation for this EP, KAC identified additional species. Woodside has updated its records and the EP to reflect this feedback.	**(1)** Woodside has updated Section 4.9 to record these interests and cultural values. Whale migration and turtle nesting has been included in Section 4 of the EP. Controls have been adopted where appropriate in Sections 6.7 and 6.8 of the EP.
(2) Cultural Value: Sea Country	**(2)** This value has been identified through Woodside's data collection processes	**(2)** At the beginning of consultation for this EP, Woodside invited KAC to make	**(2)** Woodside has updated Section 4.9 to record these interests and cultural

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• 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.	(consultation and reviews of publicly available literature).	changes or provide additional information about this cultural value (See ROC, 6.1.29). KAC did not request changes.	values and assessed the potential impacts on these and where appropriate included controls, in Sections 6.7 and 6.8.
(3) Cultural Value: Yinta • Significant cultural/spiritual sites. • Cultural rights to land.	**(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 invited KAC to make changes or provide additional information about this cultural value (See ROC, 6.1.29). KAC did not request changes.	**(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 6.7 and 6.8.
(4) Cultural Value: Marine species as resources • Marine mammals • Fish • Molluscs.	**(4)** This value has been identified through Woodside's data collection processes (consultation).	**(4)** At the beginning of consultation for this EP, Woodside invited KAC to make changes or provide additional information about this cultural value (See ROC, 6.1.29). KAC did not request changes.	**(4)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate including controls, in Sections 6.7 and 6.8.
(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 invited KAC to make changes or provide additional information about this cultural value (See ROC, 6.1.29). KAC did not request changes.	**(5)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate including controls, in Sections 6.7 and 6.8.
(6) Cultural Value: • Heritage sites associated with the coast and ocean including the presence of mythical snakes.	**(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 invited KAC to make changes or provide additional information about this cultural value (See ROC, 6.1.29).	**(6)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate

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		KAC did not request changes.	including controls, in Sections 6.7 and 6.8.
(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 invited KAC to make changes or provide additional information about this cultural value (See ROC, 6.1.29). KAC did not request changes.	**(7)** Woodside recorded this cultural value in section 4.9 of the EP. Measures relating to oil spills are covered in Appendix G - Oil Spill Preparedness and Response Strategy Selection and Evaluation, and Appendix H – First Strike Plan.
(8) Islands off the coast of Port Hedland are extremely important to KAC (Little Turtle, North Turtle and Bedout).	**(8)** This value has been identified through Woodside's data collection processes (consultation).	**(8)** At the beginning of consultation for this EP, Woodside invited KAC to make changes or provide additional information about this cultural value (See ROC, 6.1.29). KAC did not request changes.	**(8)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate including controls, in Sections 6.7 and 6.8.
(9) KAC enquired about EMBAs in regard to extreme weather events such as cyclones and spill response times.	**(9)** Spill modelling for EMBAs includes assessment of weather conditions, ocean currents and vessel types.	**(9)** Woodside provided information about EMBA spill modelling during its meeting on 21 August 2025, further information was provided via email on 17 September 2025.	**(9)** Spill modelling is described in Section 6.8.1 of the EP and measures relating to oil spills are covered in Appendix G - Oil Spill Preparedness and Response Strategy Selection and Evaluation, and Appendix H – First Strike Plan.
(10) KAC asked about timeframes around plugging and abandonment or drilling because the Board needs to be aware of the circumstances that may impact cultural values and the environment.	**(10)** Woodside stated that it puts in place plans to mitigate impacts to cultural values and the environment in EPs	**(10)** Woodside provided information about timeframes to KAC in the Summary Information Sheet (ROC, 6.1.2). Woodside explained that consultation about Cultural Values is important so appropriate mitigation measures can be put in place.	**(10)** Woodside records cultural values in section 4.9 of the EP. Mitigation measures are in Sections 6.7 and 6.8.
(11) KAC asked about cement being used for plug and abandonment activities and if	**(11)** Cement is non-corrosive and resistant to chemical degradation, making it a	**(11)** The use of any environment/cement plugs for decommissioning activities considers that any potential minor	**(11)** No additional measures or controls are required

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there is an environmental risk of cement degradation over time.	suitable and reliable choice for permanent well abandonment (P&A).	degradation of cement over significantly long periods (hundreds of years) will not pose significant damage or harm to the immediate surrounding marine environment. Woodside provided additional information about cement to KAC via email on 17 September 2025.	
(12) KAC queried how Woodside had collated its list of KAC's cultural values.	**(12)** At the start of consultation, Woodside provided KAC with information about the Cultural Values it had collated for the group through consultation and publicly available literature (See ROC, 6.1.29).	**(12)** Woodside explained to KAC that it had sourced KAC's cultural values via consultation and feedback from KAC when consulting on other EPs and desktop research.	**(12)** No further action required.
(13) River systems are important to the food chain.	**(13)** Woodside assesses environmental impacts of its EPs and puts in place appropriate mitigation measures. River systems are not relevant for this EP.	**(13)** Woodside has informed KAC that it will update it records and current and future EPs accordingly.	**(13)** Cultural values relating to river systems are documented in Section 4.9.
(14) KAC asked if Woodside considered historical mapping of cultural values and prehistoric coastlines when understanding the closeness of the activity to KAC's Native Title determination.	**(14)** Woodside conducts a thorough assessment of coastlines when developing EPs.	**(14)** Woodside has informed KAC that that maritime archaeologists are often engaged to assess potential for underwater archaeological material prior to undertaking its activities.	**(14)** Cultural values relating to historical mapping of prehistorical coastlines are in Section 4.9. Mitigation measures relating to coastlines are in Sections 6.7 and 6.8.
While feedback has been received, there were no objections or claims.	Woodside has assessed the merits of the feedback 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 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 this EP).	Based on the engagement to date, no additional measures or controls are required.

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Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environmental Regulations and consultation with KAC 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 28 July 2025, Woodside made the Consultation Information Sheet available on the Woodside website.
- Woodside provided information to KAC on 28 July 2025 when consultation commenced. Woodside provided:
  - A Summary Information Sheet developed specifically for Indigenous groups and reviewed by a member of the Indigenous Affairs Engagement team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, the potential risks and impacts of the activity, diagrams and details about how to provide feedback.
  - A list of KAC's cultural values, previously provided to Woodside during consultation of unrelated EPs.
  - 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 KAC's 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.

Reasonable Period

A reasonable period for consultation in the preparation of the EP has been provided because:

- Woodside commenced consultation on this EP with KAC on 28 July 2025 and requested KAC provide feedback by 27 August 2025 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.
- Woodside has addressed and responded to KAC for more than 8 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 KAC's preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Indigenous groups.
- Woodside has made information on this EP publicly available for more than 8 months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (30 July 2025) and National Indigenous Times (29 July 2025) advising of the proposed activities and requesting comments or feedback.
- Woodside's initial email about this EP on 28 July 2025:
  - 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 KAC members as well as the KAC Board.
  - Asked KAC to advise how it would like Woodside to engage and whether KAC required further information.

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- Throughout the consultation period, Woodside and KAC have had direct contact lines to each other.

Outcomes of Consultation

The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- Woodside has incorporated cultural values previously provided by KAC into the EP.
- Additional cultural values were identified during consultation for this EP including shellfish, cockles, oysters, clam shells, con shells, mullets and sea cow (dugong). Section 4.9 in the EP has been updated to record these cultural interest and values.
- During the past 8 months, KAC has not raised objections or claims about the adverse impact of the activity to which this EP relates.
- KAC raised concerns during an EP consultation meeting about the noise produced by the activity and the safety of marine fauna during surveying activities. Woodside provided responses to the concerns during the meeting, and where appropriate, controls have been included in the EP.
- KAC has provided no additional feedback or claims during consultation.

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).

4.12.7 Malgana Aboriginal Corporation (Malgana)

Malgana is established under the *Native Title Act 1993 (Cth)* by the Malgana people to represent the Malgana 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. YMAC provides Malgana with administrative assistance.

Summary of information provided and record of consultation for this EP:

- On 28 July 2025, Woodside emailed Malgana 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.
  - Links to the NOPSEMA *Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information*, and contact details.
  - Information on the cultural values that Woodside consider relevant to the activity:
    - **(1)** Interest in Shark Bay:
      - Environment, stromatolites and microbial mats.
    - **(2)** Access to Country for resources:

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- Bird and turtle eggs.
- Dugongs.
- Turtles.
- Fish including sharks.
- Shellfish including crabs.

▪ **(3)** Freshwater seeps – traditional knowledge.

▪ **(4)** Cultural significant species:

- Green sea turtles.
- Dugongs.
- Shags.
- Bottlenose dolphins.

▪ **(5)** Knowledge – sharing and controlling, transfer of knowledge to younger generations.

– **(1, 2, 3, 4, 5)** A request from Woodside that Malgana 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 how Malgana would like to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.

– A request for feedback by 27 August 2025 for the purposes of preparation of this 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 Malgana to provide information about the proposed activity to other individuals as required.

- On 19 August 2025, Woodside emailed Malgana 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 to Malgana on 28 July 2025, which included a Summary Information Sheet and a link to the Consultation Information Sheet and listed cultural values previously provided by Malgana to Woodside.

– A reminder that consultation for the preparation of this EP closes on 27 August 2025.

– A request for information on how Malgana would like 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.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim	Woodside's Response	Inclusion in Environment Plan
(1) Cultural Value:	**(1)**	**(1)** At the beginning of consultation for this EP, Woodside invited Malgana to make	**(1)** Woodside has updated Section 4.9 to record these interests and cultural

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• Interest in Shark Bay – environment and stromatolites and microbial mats.	This value has been identified through Woodside's data collection processes (consultation).	changes or provide additional information about this cultural value (ROC, 6.1.30). Malgana did not request changes.	values and assessed the potential impacts on these and where appropriate included controls, in Sections 6.7 and 6.8.
(2) Cultural Value: • Access to Country for resources – bird and turtle eggs, dugongs, turtle, fish including sharks, shellfish, crabs.	**(2)** This value has been identified through Woodside's data collection processes (publicly available literature).	**(2)** At the beginning of consultation for this EP, Woodside invited Malgana to make changes or provide additional information about this cultural value (See ROC, 6.1.30). Malgana did not request changes.	**(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 6.7 and 6.8.
(3) Cultural Value: • Freshwater seeps – traditional knowledge.	**(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 invited Malgana to make changes or provide additional information about this cultural value (See ROC, 6.1.30). Malgana did not request changes.	**(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 6.7 and 6.8. Freshwater seeps are not present in the Operational Area.
(4) Cultural significant species: • green sea turtles • dugongs • shags • bottlenose dolphins.	**(4)** This value has been identified through Woodside's data collection processes (publicly available literature).	**(4)** At the beginning of consultation for this EP, Woodside invited Malgana to make changes or provide additional information about this cultural value (See ROC, 6.1.30). Malgana did not request changes.	**(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 6.7 and 6.8.
(5) Cultural Value Knowledge: • Sharing and controlling of knowledge. • Transfer of knowledge to younger generations.	**(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 invited Malgana to make changes or provide additional information about this cultural value (See ROC, 6.1.30). Malgana did not request changes.	**(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 6.7 and 6.8.

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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).	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 with Malgana 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 28 July 2025, Woodside made the Consultation Information Sheet available on the Woodside website.
- Woodside provided information to Malgana on 28 July 2025 when consultation commenced. Woodside provided:
  - A Summary Information Sheet developed specifically for Indigenous groups and reviewed by a member of the Indigenous Affairs Engagement team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, the potential risks and impacts of the activity, diagrams and details about how to provide feedback.
  - A list of Malgana's cultural values, previously provided to Woodside during consultation of unrelated EPs.
  - 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 Malgana's 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.

Reasonable Period

A reasonable period for consultation in the preparation of the EP has been provided because:

- Woodside commenced consultation on this EP with Malgana on 28 July 2025 and requested Malgana provide feedback by 27 August 2025 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.
- Woodside has addressed and responded to Malgana for more than 8 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 Malgana's preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Indigenous groups.

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- Woodside has made information on this EP publicly available for more than 8 months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (30 July 2025) and National Indigenous Times (29 July 2025) advising of the proposed activities and requesting comments or feedback.
- Woodside's initial email about this EP on 28 July 2025:
  - 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 Malgana members as well as the Malgana Board.
  - Asked Malgana to advise how it would like Woodside to engage and whether Malgana required further information.
- Throughout the consultation period, Woodside and Malgana have had direct contact lines to each other.

Outcomes of Consultation

The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- Woodside has incorporated cultural values previously provided by Malgana into the EP.
- During the past 8 months, Malgana has not raised 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).

4.12.8 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. In July 2025, United Nations Educational, Scientific and Cultural Organization (UNESCO) inscribed the Murujuga Cultural Landscape on the World Heritage list.

Historical Information:

- **(1)** On 2 August 2024, MAC emailed a letter to Woodside about an unrelated EP. In the letter, MAC requested separate assessments for the protection of environmental and cultural values.
- **(1)** On 17 September 2024, Woodside replied to MAC's letter and explained that Woodside assesses cultural impacts collaboratively with environmental impacts and controls in an EP.

Please see Julimar Operations Environment Plan App F and SI for further details.

Summary of information provided and record of consultation for this EP:

- On 28 July 2025, Woodside emailed MAC advising of the proposed activity (Record of Consultation, reference 6.1.34). The email included:
  - A Summary Information Sheet.

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- 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.
- Information on the cultural values that MAC has previously provided to Woodside considered relevant to the activity:
  - **(2)** Ecosystem and health of Mermaid Sound.
  - **(3)** Marine species:
    - Whales
    - Dolphins.
    - Dugongs.
    - Fish.
    - Sea snakes.
    - Turtles.
    - Coral.
    - Seagrass.
  - **(4)** Marine eco-systems:
    - Mangroves.
    - Macroalgal (seaweed) communities.
    - Subtidal soft bottom communities.
    - Intertidal sand and mudflat communities.
    - Rocky shores.
  - **(5)** Fish traps in Conzinc Bay, and Angel and Gidley Islands.
  - **(6)** Harvesting squid around Conzinc Bay.
  - **(7)** MAC is the appropriate cultural authority for Murujuga.
  - **(8)** Potential impact on Jinna (Songlines) on the submerged landscape.
- **(2, 3, 4, 5, 6, 7, 8)** A request from Woodside that MAC 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 how MAC would like to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
- A request for feedback by 27 August 2025 for the purposes of preparation of this 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 MAC to provide information about the proposed activity to other individuals as required.

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- On 28 July 2025, Woodside received an out of office email notification from MAC, in response to the Record of Consultation email for this activity (SI Report B, reference 1.8.1).
- On 19 August 2025, Woodside emailed MAC a reminder about the proposed activity (SI Report B, reference 1.8.2). The email included:
  - A reference to the original consultation email for this EP sent to MAC on 28 July 2025, which included a Summary Information Sheet and a link to the Consultation Information Sheet and listed cultural values previously provided by MAC to Woodside.
  - A reminder that consultation for the preparation of this EP closes on 27 August 2925.
  - A request for information on how MAC would like 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 22 August 2025, MAC emailed Woodside stating it had reviewed the proposed activity's Summary Information Sheet and Consultation Information Sheet, and queried where MAC could find the cultural values listed in Appendix A, which had been collated by Woodside (SI Report B, reference 1.8.3).
- On 22 August 2025, Woodside emailed MAC advising that Woodside would respond to MAC's query regarding the collation of cultural values (SI Report B, reference 1.8.4).
- On 22 August 2025, Woodside emailed MAC with an Appendix A attachment listing MAC's cultural values known to Woodside (SI Report B, reference 1.8.5).
- On 22 August 2025, MAC responded via email to Woodside requesting clarification on its cultural values including (SI Report B, reference 1.8.6):
  - **(3)** Species identified by Woodside as being significant to MAC was too narrow. Stingrays, sharks, crustaceans, octopus, sea stars, sea urchins, sponges and molluscs are also culturally valued species.
  - **(9)** Any changes to the feeding, breeding or migratory behaviour of culturally significant species would impact significantly on subsistence, cultural and ceremonial activities.
  - **(8)** Submerged landscape: potential impact to aboriginal heritage, the submerged coastline at initial occupation of the region, landscape features that would have defined the first travel routes used to move through Country.
  - **(5)** It is not clear why fish traps at Conzinc, Angel and Gidley have been singled out as significant amongst Murujuga's fish traps.
  - **(6)** It is not clear why harvesting squid at Conzinc Bay is singled out above other subsistence activities that have been and continue to be practiced across the archipelago.
- On 28 August 2025, Woodside responded by email to MAC's feedback about this EP and another (SI Report B, reference 1.8.7). Woodside:
  - **(3, 5, 6, 8, 9)** Provided MAC with an expanded Cultural Values table which included new information provided by MAC and details about sources.
  - **(5, 6)** Explained how Woodside sources information about Cultural Values for EPs.
  - **(3, 5, 6, 8, 9)** Invited MAC to review the Cultural Values table and provide further feedback if necessary.
- On 19 March 2026, Traditional Owner members from MAC, NAC and Yindjibarndi attended Woodside's Monthly Community Luncheon for Traditional Owners held in Roebourne. During the lunch Woodside provided information about the EP consultation process (SI Report B, reference 5.2).

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim	Woodside's Response	Inclusion in Environment Plan

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(1) MAC requested separate assessments for the protection of environmental and cultural values.	**(1)** Woodside undertakes assessments for both environmental and cultural values. These are considered individually and collaboratively.	**(1)** Woodside has advised MAC that it assesses environmental and cultural values both individually and collaboratively.	**(1)** Woodside discusses cultural value sin Section 4.9. Potential impacts and mitigation measures in relation to these values are documented in Section 6.7 and 6.8 of this EP.
(2) Cultural Value: • Ecosystem and health of Mermaid Sound.	**(2)** This value has been identified through Woodside's data collection processes (consultation).	**(2)** At the beginning of consultation for this EP, Woodside provided MAC with 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 ROC, 6.1.31). MAC did not request changes.	**(2)** Woodside has record these interests and cultural values in Section 4.9 to and assessed the potential impacts on these and where appropriate included controls, in Sections 6.7 and 6.8 in this EP.
(3) Cultural Value – 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 Bay, and between Angel and Gidley Islands. On 22 August 2025, MAC advised Woodside that these species also had cultural value: • stingrays • sharks • crustaceans	**(3)** This value has been identified through Woodside's data collection processes (consultation). On 28 August 2025, Woodside informed MAC that is updated its record of MAC's cultural values, and provided MAC the opportunity to provide further feedback.	**(3)** At the beginning of consultation for this EP, Woodside provided MAC with 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 ROC, 6.1.31). On 22 August 2025, MAC advised Woodside that this list was too narrow and provided more details. Woodside has amended its records and informed MAC of these changes.	**(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 6.7 and 6.8 in this EP.

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• octopus • sea star • sea urchins • sponges • molluscs.			
(4) Cultural Value – marine eco-systems: • Mangroves. • Macroalgal (seaweed) communities. • Subtidal soft bottom communities. • Intertidal sand and mudflat communities. • Rocky shores.	**(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 MAC with 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 ROC, 6.1.31) MAC did not request changes.	**(4)** Woodside has recorded these interests and cultural in Section 4.9 to values and assessed the potential impacts on these and where appropriate included controls, in Sections 6.7 and 6.8 in this EP.
(5) Cultural Value: • Fish traps in Conzinc Bay, and Angel and Gidley Islands. On 22 August 2025, MAC queried this cultural value.	**(5)** This value has been identified through Woodside's data collection processes (publicly available literature). Although this area is not within the EP EMBA Woodside has noted this value in the EP. On 28 August 2025, Woodside informed MAC that is updated its record of MAC's cultural values, explained our values were sourced and provided MAC the opportunity to provide further feedback.	**(5)** At the beginning of consultation for this EP, Woodside provided MAC with 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 ROC, 6.1.31) On 22 August 2025, MAC queried this cultural value.	**(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 6.7 and 6.8 in this EP.
(6) Cultural Value: • Harvesting squid around Conzinc Bay.	**(6)** This value has been identified through Woodside's data collection processes (publicly available literature). On 28 August 2025, Woodside informed MAC that is updated its record of MAC's	**(6)** At the beginning of consultation for this EP, Woodside provided MAC with a list of the cultural values known to Woodside that it believed relevant to the group and invited it to make changes or	**(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 6.7 and 6.8 in this EP.

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On 22 August 2025, MAC queried this cultural value.	cultural values, explained our values were sourced and provided MAC the opportunity to provide further feedback.	provide additional information (See ROC,6.1.31). On 22 August 2025, MAC queried this cultural value.	
(7) Cultural Value: • MAC is the appropriate cultural authority for Murujuga.	**(7)** This value has been identified through Woodside's data collection processes (consultation).	**(7)** At the beginning of consultation for this EP, Woodside provided MAC with 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 ROC, 6.1.31). MAC did not request changes.	**(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 6.7 and 6.8 in this EP.
(8) Cultural Value: • Potential impact on Jinna (Songlines) on the submerged landscape. On 22 August MAC provided this additional detail: • Potential impact to Aboriginal heritage, the submerged coastline at initial occupation of the region, landscape features that would have defined the first travel routes used to move through Country.	**(8)** This value has been identified through Woodside's data collection processes (consultation). On 28 August 2025, Woodside informed MAC that is updated its record of MAC's cultural values, and provided MAC the opportunity to provide further feedback.	**(8)** At the beginning of consultation for this EP, Woodside provided MAC with 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 ROC, 6.1.31). On 22 August 2025, MAC provided additional information about this Cultural Value. Woodside has amended its records and informed MAC of these changes.	**(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 6.7. and 6.8 in this EP.
(9) Any changes to the feeding, breeding or migratory behaviour of culturally significant species would impact significantly on subsistence, cultural and ceremonial activities.	**(9)** Woodside acknowledges this feedback and has updated its Cultural Values records for MAC. Woodside has also included this information in the EP.	**(9)** Woodside has provided MAC with details of Woodside's updated Cultural Values records.	**(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 6.7. and 6.8 in this EP.

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While feedback has been received, there were no objections or claims.	Woodside has assessed the merits of the feedback 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 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 this 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 with MAC 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 28 July 2025, Woodside made the Consultation Information Sheet available on the Woodside website.
- Woodside provided information to MAC on 28 July 2025 when consultation commenced. Woodside provided:
  - A Summary Information Sheet developed specifically for Indigenous groups and reviewed by a member of the Indigenous Affairs Engagement team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, the potential risks and impacts of the activity, diagrams and details about how to provide feedback.
  - A list of MAC's cultural values, previously provided to Woodside during consultation of unrelated EPs.
  - 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 MAC's 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.

Reasonable Period

A reasonable period for consultation in the preparation of the EP has been provided because:

- Woodside commenced consultation on this EP with MAC on 28 July 2025 and requested MAC provide feedback by 27 August 2025 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.
- Woodside has addressed and responded to MAC for more than 8 months, demonstrating a "reasonable period" of consultation.

Reasonable Opportunity

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A reasonable opportunity to provide feedback has been provided and Woodside's approach to consultation is appropriate and adapted because:

- Woodside sought direction on MAC's preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Indigenous groups.
- Woodside has made information on this EP publicly available for more than 8 months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (30 July 2025) and National Indigenous Times (29 July 2025) advising of the proposed activities and requesting comments or feedback.
- Woodside's initial email about this EP on 28 July 2025:
  - 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 MAC members as well as the MAC Board.
  - Asked MAC to advise how it would like Woodside to engage and whether MAC required further information.
- Throughout the consultation period, Woodside and MAC have had direct contact lines to each other.

Outcomes of Consultation

The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- Woodside has incorporated cultural values provided by MAC into the EP.
- Additional cultural values were identified during consultation for this EP including stingrays, sharks, crustaceans, octopus, sea stars, sea urchins, sponges and molluscs. Section 4.9 in the EP has been updated to record these cultural interests and values.
- During the past 8 months, MAC has not raised 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).

4.12.9 Nanda Aboriginal Corporation (Nanda)

Nanda was established under the *Native Title Act 1993* (Cth) by the Nanda people to represent the Nanda 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.

YMAC is the Native Title Representative Body for Nanda.

Historical engagement:

- On 12 May 2025, Woodside and Nanda (via YMAC) met in-person at the YMAC Geraldton office to consult on an unrelated EP. Matters raised relevant to the proposed activity include:
  - **(1)** Nanda asked about whale migration pathways. **(1)** Woodside explained the mitigation methods employed where activities overlap migration pathways.

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- **(2)** Nanda noted that the Abrolhos Islands are culturally significant noting the presence of artefacts and historical significance. **(2)** Woodside acknowledged this and explained the opportunities with industry, universities, and government to support sea mapping. Woodside invited Nanda to discuss this further.
- **(3)** Nanda raised concerns around retaining cultural knowledge and the implications of sharing cultural values. **(3)** Woodside explained that it is the decision of Nanda whether cultural values are shared or not.
- **(4, 5)** Nanda shared further cultural values which include white snow crabs, North Island artefacts and food sources. **(4)** Woodside acknowledged these cultural values.

- On 10 June 2025, Woodside emailed Nanda (via YMAC) following up from the consultation from 12 May 2025. Woodside thanked Nanda for the meeting and acknowledged the cultural values shared which include:
  - **(2, 4)** White snow crabs of Shark Bay, North Island artefacts and the importance of food sources.
  - **(2)** Abrolhos Islands, noting the presence of artefacts and their historical significance.

Summary of information provided and record of consultation for this EP:

- On 28 July 2025, Woodside emailed Nanda 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.
  - Information on the cultural values previously provided by Nanda that Woodside consider relevant for consultation:
  - **(5)** Connection to Country:
    - Kalbarri Coastal Cliffs have Dreamtime and creation stories.
    - Archaeological sites.
    - Red sandstone outcrops.
    - Freshwater springs.
    - Abundance of artefacts on islands adjacent to the state marine park.
  - **(6)** Shorelines are culturally significant.
  - **(1)** Whales and migration patterns.
  - **(1, 5, 6)** A request from Woodside that Nanda 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 how Nanda would like to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
  - A request for feedback by 27 August 2025 for the purposes of preparation of this 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 Nanda to provide information about the proposed activity to other individuals as required.

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- Acknowledgement that discussions relating to Woodside's consultation framework agreement has been ongoing and that these discussions will progress in parallel with consultation for the proposed activity's EP.

- On 19 August 2025, Woodside emailed Nanda 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 to Nanda on 28 July 2025, which included a Summary Information Sheet and a link to the Consultation Information Sheet and listed cultural values previously provided by Nanda to Woodside.
  - A reminder that consultation for the preparation of this EP closes on 27 August 2025.
  - A request for information on how Nanda would like 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.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim	Woodside's Response	Inclusion in Environment Plan
(1) Cultural value • whales • whale migration patterns.	**(1)** This value has been identified through Woodside's data collection processes (consultation).	**(1)** At the beginning of consultation for this EP, Woodside invited Nanda to make changes or provide additional information about this cultural value (ROC, 6.1.32). Nanda did not request any changes. Woodside acknowledges Nanda's previously raised cultural values. As Nanda's determination falls outside of the EMBA for this EP, Woodside has made note of this information, but has not included this value or any associated mitigation measures in the EP.	**(1)** No action required.
(2) Cultural value: Abrolhos Islands and North Island • artefacts • historical significance	**(2)** This value has been identified through Woodside's data collection processes (consultation).	**(2)** Woodside acknowledges Nanda's cultural values. As Nanda's determination falls outside of the EMBA for this EP, Woodside has made note of this information, but has not included this value or any associated mitigation measures in the EP.	**(2)** No action required

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(3) Nanda raised concerns around retaining cultural values.	**(3)** Woodside explained that it is the decision of Nanda whether cultural values are conveyed to Woodside or not.	**(3)** Woodside acknowledges Nanda's feedback. As Nanda is not considered a relevant person for this EP, Woodside has made note of this feedback.	**(3)** No action required.
(4) Cultural value: significance of: • white snow crabs • food sources.	**(4)** This value has been identified through Woodside's data collection processes (consultation).	**(4)** Woodside acknowledges Nanda's cultural values. As Nanda's determination falls outside of the EMBA for this EP, Woodside has made note of this information, but has not included this value or any associated mitigation measures in the EP.	**(4)** No action required
(5) Cultural Value: Connection to Country: • Kalbarri Coastal Cliffs: Dreamtime, mythological/ creation stories • archaeological sites • red sandstone outcrops • freshwater springs • abundant artefacts on islands adjacent to the state marine park.	**(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 invited Nanda to make changes or provide additional information about this cultural value (ROC, 6.1.32). Nanda did not request any changes. Woodside acknowledges Nanda's previously raised cultural values. As Nanda's determination falls outside of the EMBA for this EP, Woodside has made note of this information, but has not included this value or any associated mitigation measures in the EP.	**(5)** No action required
(6) Cultural value: • shorelines.	**(6)** This value has been identified through Woodside's data collection processes (consultation).	**(6)** At the beginning of consultation for this EP, Woodside invited Nanda to make changes or provide additional information about this cultural value (ROC, 6.1.32). Nanda did not request any changes.	**(6)** No action required

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		Woodside acknowledges Nanda's previously raised cultural values. As Nanda's determination falls outside of the EMBA for this EP, Woodside has made note of this information, but has not included this value or any associated mitigation measures in the EP.	
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. Woodside notes that further feedback may be received as part of ongoing consultation. 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 this 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 with Nanda 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 28 July 2025, Woodside made the Consultation Information Sheet available on the Woodside website.
- Woodside provided information to Nanda on 28 July 2025 when consultation commenced. Woodside provided:
  - A Summary Information Sheet developed specifically for Indigenous groups and reviewed by a member of the Indigenous Affairs Engagement team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, the potential risks and impacts of the activity, diagrams and details about how to provide feedback.
  - A list of Nanda's cultural values, previously provided to Woodside during consultation of unrelated EPs.
  - 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 Nanda's 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.

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Reasonable Period

A reasonable period for consultation in the preparation of the EP has been provided because:

- Woodside commenced consultation on this EP with Nanda on 28 July 2025 and requested Nanda provide feedback by 27 August 2025 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.
- Woodside has addressed and responded to Nanda for more than 8 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 Nanda's preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Indigenous groups.
- Woodside has made information on this EP publicly available for more than 8 months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (30 July 2025) and National Indigenous Times (29 July 2025) advising of the proposed activities and requesting comments or feedback.
- Woodside's initial email about this EP on 28 July 2025:
  - 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 Nanda members as well as the Nanda Board.
  - Asked Nanda to advise how it would like Woodside to engage and whether Nanda required further information.
- Throughout the consultation period, Woodside and Nanda have had direct contact lines to each other.

Outcomes of Consultation

The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- Woodside has incorporated cultural values previously provided by Nanda into the EP.
- During the past 8 months, Nanda has not raised 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).

4.12.10 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.

Summary of information provided and record of consultation for this EP:

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- On 28 July 2025, Woodside emailed NTGAC 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.
  - Information on the cultural values that Woodside consider relevant to the activity:
    - **(1)** Interests in marine ecosystems and species:
      - Invasive marine species.
      - Chemicals released into the water (ballast water discharges).
      - Risks to marine parks.
  - **(1)** A request from Woodside that NTGAC 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 how NTGAC would like to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
  - A request for feedback by 27 August 2025 for the purposes of preparation of this 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 NTGAC to provide information about the proposed activity to other individuals as required.
  - Acknowledgement that discussions relating to Woodside's consultation framework agreement has been ongoing and that these discussions will progress in parallel with consultation for the proposed activity's EP.
- On 19 August 2025, Woodside emailed NTGAC 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 to NTGAC on 28 July 2025, which included a Summary Information Sheet and a link to the Consultation Information Sheet and listed cultural values previously provided by NTGAC to Woodside.
  - A reminder that consultation for the preparation of this EP closes on 27 August 2025.
  - A request for information on how NTGAC would like 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 19 August 2025, NTGAC emailed Woodside requesting that email contact details for NTGAC be updated for future and ongoing correspondence (SI Report B, reference 1.10.2).
- On 19 August 2025, Woodside emailed NTGAC confirming that NTGAC's email contact details had been updated (SI Report B, reference 1.10.3).

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim	Woodside's Response	Inclusion in Environment Plan

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(1) Cultural Value: Interests in marine ecosystems and species: • Invasive marine species. • Chemicals released into the water – ballast water discharge. • Marine parks – risks.	**(1)** This value has been identified through Woodside's data collection processes (consultation).	**(1)** At the beginning of consultation for this EP, Woodside provided NTGAC with 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 ROC, 6.1.33). NTGAC did not request changes.	**(1)** Woodside recorded cultural values in Section 4.9 of the EP. The management of ballast water discharges is covered in Section 6.78 in this EP.
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).	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 with NTGAC 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 28 July 2025, Woodside made the Consultation Information Sheet available on the Woodside website.
- Woodside provided information to NTGAC on 28 July 2025 when consultation commenced. Woodside provided:
  - A Summary Information Sheet developed specifically for Indigenous groups and reviewed by a member of the Indigenous Affairs Engagement team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, the potential risks and impacts of the activity, diagrams and details about how to provide feedback.
  - A list of NTGAC's cultural values, previously provided to Woodside during consultation of unrelated EPs.
  - 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 NTGAC's 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.

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Reasonable Period

A reasonable period for consultation in the preparation of the EP has been provided because:

- Woodside commenced consultation on this EP with NTGAC on 28 July 2025 and requested NTGAC provide feedback by 27 August 2025 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.
- Woodside has addressed and responded to NTGAC for more than 8 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 NTGAC's preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Indigenous groups.
- Woodside has made information on this EP publicly available for more than 8 months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (30 July 2025) and National Indigenous Times (29 July 2025) advising of the proposed activities and requesting comments or feedback.
- Woodside's initial email about this EP on 28 July 2025:
  - 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 NTGAC members as well as the NTGAC Board.
  - Asked NTGAC to advise how it would like Woodside to engage and whether NTGAC required further information.
- Throughout the consultation period, Woodside and NTGAC have had direct contact lines to each other.

Outcomes of Consultation

The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- Woodside has incorporated cultural values previously provided by NTGAC into the EP.
- During the past 8 months, NTGAC has not raised 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).

4.12.11 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.

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Summary of information provided and record of consultation for this EP:

- On 28 July 2025, Woodside emailed NAC 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.
  - Information on the cultural values that Woodside consider relevant to the activity:
  - **(1)** Onshore heritage.
  - **(2)** Potential of submerged heritage.
  - **(1, 2)** 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 how NAC would like to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
  - A request for feedback by 27 August 2025 for the purposes of preparation of this 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 NAC to provide information about the proposed activity to other individuals as required.
  - Acknowledgement that discussions relating to Woodside's consultation framework agreement has been ongoing and that these discussions will progress in parallel with consultation for the proposed activity's EP.
- On 29 July 2025, Woodside telephoned NAC to discuss a range of matters including the proposed activity (SI Report B, reference 1.11.1). Woodside enquired if NAC received information about the proposed activity and would like to meet and further discuss. Woodside and NAC also discussed engagement between NAC and Woodside. NAC acknowledged Woodside's willingness to engage and consult, and confirmed NAC's resourcing constraints had impacted their ability to meet. NAC expressed gratitude for Woodside's patience and suggested meeting to discuss ways to develop engagement opportunities.
- On 19 August 2025, Woodside emailed NAC a reminder about the proposed activity (SI Report B, reference 1.11.2). The email included:
  - A reference to the original consultation email for this EP sent to NAC on 28 July 2025, which included a Summary Information Sheet and a link to the Consultation Information Sheet and listed cultural values previously provided by NAC to Woodside.
  - A reminder that consultation for the preparation of this EP closes on 27 August 2025.
  - A request for information on how NAC would like 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 September 2025, Wong Goo Tt Oo, WAC and NAC attended Woodside's Quarterly Heritage Meeting (SI Report B, reference 6.1). Matters discussed relating to this EP included:
  - Cultural heritage update.

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- Training and contracting opportunities.
- Project updates.

- On 2 December 2025, Woodside emailed NAC an invitation to Woodside's Quarterly Heritage Meeting on 3 December 2025, as an opportunity for Woodside to provide updates on Woodside's activities to Traditional Owner groups and to receive feedback from the community (SI Report B, reference 1.11.3).
- On 3 December 2025, NAC attended Woodside's Quarterly Heritage Meeting, at which Woodside stated that consultation for future EPs would recommence in Q1 2026 and showed an example of new animations videos used to support EP consultation (SI Report B, reference 6.2).
- On 28 January 2026, Woodside emailed NAC a reminder for the Heritage Meeting scheduled for 4 March 2026 (SI Report B, reference 1.11.4).
- On 5 February 2026, Woodside emailed NAC, WAC and Wong-Goo-Tt-Oo dates of upcoming heritage meetings (SI Report B, reference 1.11.5).
- On 17 February 2026, Woodside emailed NAC to confirm attendance numbers for the Quarter 1 Heritage Meeting scheduled for the 4 March 2026 (SI Report B, reference 1.11.6).
- On 25 February 2026, Woodside distributed an invitation to a community luncheon to NAC, WAC and NYFL. The invitation stated that the event in Roebourne on 19 March 2026 was an opportunity for groups to share stories and receive updates from Woodside (SI Report B, reference 5.1).
- On 4 March 2026, NAC and Wong-Goo-Tt-Oo attended a Quarterly Heritage Meeting (SI Report B, reference 6.3). Matters discussed included:
  - Woodside explained the consultation process for all EPs.
  - Woodside requested information about cultural values.
  - Woodside emphasised that consultation is a two-way dialogue.
- On 19 March 2026, Traditional Owner members from MAC, NAC and Yindjibarndi attended Woodside's Monthly Community Luncheon for Traditional Owners held in Roebourne. During the lunch Woodside provided information about the EP consultation process (SI Report B, reference 5.2).

• Summary of Feedback, Objection or Claim	**Woodside's Assessment of Merits of Feedback, Objection or Claim**	**Woodside's Response**	**Inclusion in Environment Plan**
(1) Cultural Value: • Onshore Heritage.	**(1)** This value has been identified through Woodside's data collection processes (consultation).	**(1)** At the beginning of consultation for this EP, Woodside provided NAC with 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 ROC, 6.1.34). NAC did not request changes.	**(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 6.7 and 6.8 of the EP. Onshore Heritage is not present in the Operational Area but may be contacted in the event of a large hydrocarbon spill (Section 6.8).
(2) Cultural Value: • Potential of submerged heritage.	**(2)**	(2) At the beginning of consultation for this EP, Woodside provided NAC with a list	**(2)** Woodside has updated Section 4.9 to record these interests and cultural

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	This value has been identified through Woodside's data collection processes (consultation).	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 ROC, 6.1.34). NAC did not request changes.	values and assessed the potential impacts on these and where appropriate included controls, in Sections 6.7 in this EP.
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).	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 with NAC 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 28 July 2025, Woodside made the Consultation Information Sheet available on the Woodside website.
- Woodside provided information to NAC on 28 July 2025 when consultation commenced. Woodside provided:
  - A Summary Information Sheet developed specifically for Indigenous groups and reviewed by a member of the Indigenous Engagement team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, the potential risks and impacts of the activity, diagrams and details about how to provide feedback.
  - A list of NAC's cultural values, previously provided to Woodside during consultation on unrelated EPs.
  - 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 NAC's 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.

Reasonable Period

A reasonable period for consultation in the preparation of the EP has been provided because:

- Woodside commenced consultation on this EP with NAC on 28 July 2025 and requested NAC provide feedback by 27 August 2025 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.

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- Woodside has addressed and responded to NAC for more than 8 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 NAC’s preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Indigenous groups.
- Woodside has made information on this EP publicly available for more than 8 months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (30 July 2025) and National Indigenous Times (29 July 2025) advising of the proposed activities and requesting comments or feedback.
- Woodside’s initial email about this EP on 28 July 2025:
  - 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 Engagement team. Woodside also provided contact details for NOPSEMA.
  - Offered for Woodside to speak with NAC members as well as the NAC Board.
  - Asked NAC to advise how it would like Woodside to engage and whether NAC required further information.
- Throughout the consultation period, Woodside and NAC have had direct contact lines to each other.

Outcomes of Consultation

The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- Woodside has incorporated cultural values previously provided by NAC into the EP.
- During the past 8 months, NAC has not raised 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).

4.12.12 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. On 19 August 2025, YMAC telephoned Woodside to confirm that YMAC is supporting the Nhuwala Native Title claim and to discuss EP consultation.

Before consultation commenced for this EP, Nhuwala (via YMAC) requested an EP consultation meeting with Woodside on 22 September 2025 to discuss other EPs. When informed about being a relevant person for consultation for this EP on 8 September 2025, Nhuwala requested the proposed activity to be included for discussion at the meeting.

The meeting was rescheduled and booked for 4 November 2025 but was cancelled by Nhuwala (via YMAC) on 30 October 2025, with a request for the meeting to be postponed to the week beginning 17 November 2025. Woodside informed Nhuwala (via YMAC) that formal consultation for this EP closed on 24 October 2025 and any feedback received during the meeting would be considered ongoing consultation. This context and process demonstrates that Woodside’s consultation approach with Nhuwala is appropriate and adapted to its nature and interests.

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Summary of information provided and record of consultation for this EP:

- On 26 August 2025, Woodside emailed Nhuwala Claim Group (via YMAC) 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.
  - A request for information on how Nhuwala would like to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
  - A request for feedback by 25 September 2025 for the purposes of preparation of this 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 Nhuwala to provide information about the proposed activity to other individuals as required.
- On 26 August 2025, Nhuwala (via YMAC) emailed Woodside acknowledging receipt of the consultation email for this activity and informing Woodside that the activity would be added to an EP consultation meeting agenda (SI Report B, reference 1.12.1). YMAC also proposed a meeting date, time and venue, as well as stating it would send a meeting budget for Woodside's review and approval.
- On 27 August 2025, Woodside sent a text message to Nhuwala (via YMAC) requesting a change to the meeting date due to subject matter expert availability (SI Report B, reference 1.12.2).
- On 5 September 2025, Woodside emailed Nhuwala (via YMAC) to follow-up on the request for a proposed new meeting date on 22 September 2025 to accommodate resourcing and travel arrangements (SI Report B, reference 1.12.3).
- On 8 September 2025, Nhuwala (via YMAC) emailed Woodside regarding the proposed EP consultation meeting, confirming the new date of 22 September 2025 in Karratha. YMAC included a cost estimate for the meeting (SI Report B, reference 1.12.4).
- On 11 September 2025, Nhuwala (via YMAC) emailed Woodside to follow-up on its cost estimates budget for a proposed meeting on 22 September 2025 (SI Report B, reference 1.12.5).
- On 11 September 2025, Woodside emailed Nhuwala (via YMAC) in response to an earlier email regarding cost estimates for a proposed EP consultation meeting on 22 September 2025 (SI Report B, reference 1.12.6). Woodside advised YMAC that the proposed cost exceeded the limits set by Woodside's policies in relation to funding consultation meetings and requested YMAC submit a revised quote.
- On 11 September 2025, Nhuwala (via YMAC) emailed Woodside thanking for the feedback regarding the budget for the proposed consultation meeting (SI Report B, reference 1.12.7) and:
  - Acknowledging that Woodside has policies that may limit the funding for such meetings.
  - Stating that Nhuwala required the ability to select the venue for consultation meetings to ensure its members felt comfortable and safe.
  - Stating that Nhuwala has nominated a specific number of members for the consultation committee based on their cultural knowledge, experience, and expertise.
  - Advising that YMAC would bring Woodside's meeting proposal to the next meeting of Nhuwala members in mid-October.

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  - Stating that a legal representative is required to attend the first meeting with Woodside to support the Nhuwala group, and costs associated with this representative should be funded by Woodside.
  - Informing Woodside that the originally proposed date of 22 September was not achievable.
  - Reiterating Nhuwala's strong desire to be consulted on EPs, to build a good working relationship with Woodside, and looked forward to finding a mutually agreeable path forward.
- On 23 September 2025, Woodside emailed Nhuwala (via YMAC), and in response to Nhuwala's previous email, provided information about Woodside's position on sitting fees, cost allocations, location and date of the upcoming meeting, and Woodside's commitment to consulting on EPs (SI Report B, reference 1.12.8). Woodside proposed to reschedule the meeting date to 22 or 23 October 2025.
- Between 1 – 15 October 2025, YMAC and Woodside exchanged emails relating to a proposed EP consultation meeting (SI Report B, reference 1.12.9 – 1.12.14). The correspondence included the following:
  - Woodside's proposal for a meeting on 22 October 2025.
  - Nhuwala (via YMAC) providing a budget estimate according to the requirements outlined by Woodside on 23 September 2025.
- On 16 October 2025, Nhuwala (via YMAC) emailed Woodside and requested that the meeting on 22 October 2025 be rescheduled to 4 or 5 November 2025. YMAC also noted it was aware that the closing date for the outstanding EPs was the end of October and requested a short extension for these matters to be addressed (SI Report B, reference 1.12.15).
- On 16 October 2025, Woodside emailed Nhuwala (via YMAC) agreeing to Nhuwala's request to postpone the planned meeting to early November but explained that consultation periods for this EP and others would have closed by this time. Woodside explained that feedback received during the meeting would be assessed and any measures or controls considered as required will be applied via Woodside's Management of Change and Review process (SI Report B, reference 1.12.16).
- Between 16 – 30 October 2025, Nhuwala (via YMAC) and Woodside exchanged emails about meeting in early November. During the exchange, a new meeting date of 4 November 2025 was confirmed, and logistics including catering and budgets were discussed (SI Report B, references 1.12.17 – 1.12.28).
- On 30 October 2025, Nhuwala (via YMAC) emailed Woodside and cancelled the planned meeting for 4 November 2025. Nhuwala requested the meeting be postponed until the week of 17 November 2025 (SI Report B, reference 1.12.29).
- Between 30 October and 6 November 2025, Nhuwala (via YMAC) exchanged emails about postponing the meeting scheduled for 4 November 2025. During the exchange it was agreed that the meeting would be postponed to 20 November 2025. Woodside explained that consultation for this EP would be closed by that date and feedback received would be considered as ongoing consultation (SI Report B, references 1.12.30 – 1.12.34).
- Between 7 and 14 November 2025, Woodside and Nhuwala (via YMAC) exchanged emails about logistics relating to the rescheduled meeting on 20 November 2025 (SI Report B, references 1.12.35 – 1.12.42).
- On 20 November 2025, Woodside met in-person with Nhuwala and YMAC in Karratha to present information about the proposed activity and other unrelated EPs (SI Report B, reference 1.12.43). During the meeting:
  - Woodside provided an explanation of EPs, the role of NOPSEMA, the purpose of the meeting and EP consultation – including understanding and learning about Nhuwala's cultural values, important areas and stories.
  - Woodside explained the modelling scenarios and development of EMBAs.
  - Specific information and discussions relating to the proposed activity and EP included:
    - Woodside provided an overview of the activity including a video about offshore exploration and drilling, and explained onshore accumulation.
    - Woodside provided the distances from the Nhuwala Native Title Claim to the proposed activity's Operational Area and EMBA.

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- Woodside explained the potential impacts and controls relating to the proposed activity including the fluids associated with drilling.
- **(1)** Nhuwala asked how noise impacts differ between seismic activities and drilling operations, and how far sound travels. **(1)** Woodside explained that that noise from seismic activities is generated from the survey vessels and acoustic impulses, which are received differently by marine fauna. Drilling activities are not a significant contributor to noise impacts, with the majority of noise generated by the activity's vessels. In regard to how far sound travels, Woodside stated that there are many variables, which is why Woodside conducts modelling to measure the sound generated by the drilling vessels using ecological thresholds to determine how noise affects different marine fauna.
- **(2)** Nhuwala questioned if there have been changes to marine life pathways due to sound. **(2)** Woodside stated there have been studies that have indicated no change in marine fauna migration routes.
- **(3)** Nhuwala asked about disturbances to the ground (seabed). **(3)** Woodside stated it had conducted research and studies about the impact to sea life and continues to improve its practices. Nuhwala asked a follow-up question if Woodside shares its studies and findings with other researchers and if it is required to do so. Woodside confirmed that it shares its research with various agencies.

– Throughout the meeting, Woodside engaged with Nhuwala and YMAC, addressing questions and comments regarding the proposed activity, as well as other unrelated EPs being discussed at the meeting.

- On 21 November 2025, YMAC emailed Woodside with an invoice for a meeting with Nhuwala the previous day (SI Report B, reference 1.12.44).
- On 28 November 2025, Woodside emailed Nhuwala (via YMAC) answers to questions taken on notice during the 20 November 2025 meeting (SI Report B, reference 1.12.45). The email included:
  – Links to videos shared during the meeting.
  – Links to Consultation Information Sheets for EPs discussed during the meeting.
  – Information about Woodside's Cultural Heritage Assessment Process.
  – An explanation about "ongoing consultation".
  – A request for any further information about Nhuwala's cultural values.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim	Woodside's Response	Inclusion in Environment Plan
(1) Nhuwala asked how noise impacts differ between seismic activities and drilling operations, and how far sound travels.	**(1)** Woodside assesses potential acoustic impacts of noise in the EP. Assessments are based on a number of factors including current research, best practice and learnings from previous offshore exploration and drilling activities.	**(1)** Woodside explained that noise from seismic activities is generated from the survey vessels and acoustic impulses. Drilling activities are not a significant contributor to noise impacts, with the majority of noise generated by the activity's vessels. Woodside stated that there are many variables in determining the distance sound travels. Woodside conducts modelling to measure the sound generated by the drilling vessels using	**(1)** Woodside has assessed the potential impacts of noise/acoustic in Section 6.7.4 of the EP.

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		ecological thresholds to determine how noise affects different marine fauna.	
(2) Nhuwala questioned if there have been changes to marine life pathways due to sound.	**(2)** Woodside assesses potential acoustic impacts of noise on marine fauna in the EP. Assessments are based on a number of factors including current research, best practice and learnings from undertaking previous offshore exploration and drilling activities.	**(2)** Woodside stated there have been studies that have indicated no change in marine fauna migration routes.	**(2)** Woodside has assessed the potential impacts of noise/acoustic emissions on marine life in Section 6.7.4 of the EP.
(3) Nhuwala asked about disturbances to the ground (seabed) and if it shares its studies and findings with other researchers and if it is required to do so.	**(3)** Woodside assesses potential seabed disturbance in the EP. Assessments are based on a number of factors including current research, scientific studies, best practice and learnings from undertaking previous offshore exploration and drilling activities.	**(3)** Woodside has conducted research and studies, including environmental surveys in the Operational Area and continues to improve its practices. Woodside confirmed that it shares its research, where relevant, with various agencies.	**(3)** Woodside has assessed the potential disturbance to the seabed, supported by relevant studies in Section 6.7.3 of the EP.
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).	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 with Nhuwala (via YMAC) 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 26 August 2025, Woodside made the Consultation Information Sheet available on the Woodside website. • Woodside provided information to Nhuwala (via YMAC) on 26 August 2025 when consultation commenced. Woodside provided:			

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- A Summary Information Sheet developed specifically for Indigenous groups and reviewed by a member of the Indigenous Affairs Engagement team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, 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 Nhuwala's 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.

Reasonable Period

A reasonable period for consultation in the preparation of the EP has been provided because:

- Woodside commenced consultation on this EP with Nhuwala (via YMAC) on 26 August 2025 and requested Nhuwala (via YMAC) provide feedback by 25 September 2025 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.
- Woodside has addressed and responded to Nhuwala (via YMAC) for more than 7 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 Nhuwala's preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Indigenous groups.
- Woodside has made information on this EP publicly available for more than 7 months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (30 July 2025) and National Indigenous Times (29 July 2025) advising of the proposed activities and requesting comments or feedback.
- Woodside's initial email about this EP on 26 August 2025:
  - 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 Nhuwala members.
  - Asked Nhuwala (via YMAC) to advise how it would like Woodside to engage and whether Nhuwala required further information.
- Throughout the consultation period, Woodside and Nhuwala (via YMAC) have had direct contact lines to each other.

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 7 months, Nhuwala (via YMAC) has not raised 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).

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4.12.13 Nimanburr Aboriginal Corporation (Nimanburr)

Nimanburr is established under the *Native Title Act 1993 (Cth)* by the Nimanburr people to represent the Nimanburr 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 28 July 2025, Woodside emailed Nimanburr 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.
  - 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.
  - Information on the cultural values relating to Nimanburr that Woodside considers relevant to the activity:
    - **(1)** Valentine Island has cultural value.
  - **(1)** A request from Woodside that Nimanburr 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 how Nimanburr would like to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
  - A request for feedback by 27 August 2025 for the purposes of preparation of this 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 Nimanburr to provide information about the proposed activity to other individuals as required.
- On 19 August 2025, Woodside emailed Nimanburr 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 to Nimanburr on 28 July 2025, which included a Summary Information Sheet and a link to the Consultation Information Sheet and listed cultural values previously provided by Nimanburr to Woodside.
  - A reminder that consultation for the preparation of this EP closes on 27 August 2025.
  - A request for information on how Nimanburr would like 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.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim	Woodside's Response	Inclusion in Environment Plan

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(1) Cultural Value: • Valentine Island.	**(1)** This value has been identified through Woodside's data collection processes (publicly available literature). Although this area is not within the EP EMBA Woodside has noted this value in the EP.	**(1)** At the beginning of consultation for this EP, Woodside provided Nimanburr with 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 ROC, 6.1.36). Nimanburr did not request changes.	**(1)** Woodside has updated Section 4.9 to record these interests and cultural values. No additional measures or controls are required.
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).	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 with Nimanburr 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 28 July 2025, Woodside made the Consultation Information Sheet available on the Woodside website.
- Woodside provided information to Nimanburr on 28 July 2025 when consultation commenced. Woodside provided:
  - A Summary Information Sheet developed specifically for Indigenous groups and reviewed by a member of the Indigenous Affairs Engagement team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, the potential risks and impacts of the activity, diagrams and details about how to provide feedback.
  - A list of Nimanburr's cultural values, previously provided to Woodside during consultation of unrelated EPs.
  - 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 Nimanburr's 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.

Reasonable Period

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A reasonable period for consultation in the preparation of the EP has been provided because:

- Woodside commenced consultation on this EP with Nimanburr on 28 July 2025 and requested Nimanburr provide feedback by 27 August 2025 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.
- Woodside has addressed and responded to Nimanburr for more than 8 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 Nimanburr's preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Indigenous groups.
- Woodside has made information on this EP publicly available for more than 8 months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (30 July 2025) and National Indigenous Times (29 July 2025) advising of the proposed activities and requesting comments or feedback.
- Woodside's initial email about this EP on 28 July 2025:
  - 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 Nimanburr members as well as the Nimanburr Board.
  - Asked Nimanburr to advise how it would like Woodside to engage and whether Nimanburr required further information.
- Throughout the consultation period, Woodside and Nimanburr have had direct contact lines to each other.

Outcomes of Consultation

The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- Woodside has incorporated cultural values previously provided by Nimanburr into the EP.
- During the past 8 months, Nimanburr has not raised 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).

4.12.14 Nyangumarta Karajarri Aboriginal Corporation (NKAC)

NKAC is established under the *Native Title Act 1993 (Cth)* 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 assists NKAC with administrative matters.

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Summary of information provided and record of consultation for this EP:

- On 28 July 2025, Woodside emailed NKAC 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 how NKAC would like to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
  - A request for feedback by 27 August 2025 for the purposes of preparation of this 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 NKAC to provide information about the proposed activity to other individuals as required.
- On 19 August 2025, Woodside emailed NKAC 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 to NKAC on 28 July 2025, which included a Summary Information Sheet and a link to the Consultation Information Sheet.
  - A reminder that consultation for the preparation of this EP closes on 27 August 2025.
  - A request for information on how NKAC would like 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 19 August 2025, NKAC emailed Woodside confirming that the reminder consultation email had been forwarded to the NKAC's directors (SI Report B, reference 1.14.2).

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim	Woodside's Response	Inclusion in Environment Plan
No feedback, objection or claim 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 this 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 with NKAC 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:

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Sufficient Information

Sufficient information has been provided because:

- On 28 July 2025, Woodside made the Consultation Information Sheet available on the Woodside website.
- Woodside provided information to NKAC on 28 July 2025 when consultation commenced. Woodside provided:
  - A Summary Information Sheet developed specifically for Indigenous groups and reviewed by a member of the Indigenous Affairs Engagement team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, 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 NKAC's 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.

Reasonable Period

A reasonable period for consultation in the preparation of the EP has been provided because:

- Woodside commenced consultation on this EP with NKAC on 28 July 2025 and requested NKAC provide feedback by 27 August 2025 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.
- Woodside has addressed and responded to NKAC for more than 8 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 NKAC's preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Indigenous groups.
- Woodside has made information on this EP publicly available for more than 8 months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (30 July 2025) and National Indigenous Times (29 July 2025) advising of the proposed activities and requesting comments or feedback.
- Woodside's initial email about this EP on 28 July 2025:
  - 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 NKAC members as well as the NKAC Board.
  - Asked NKAC to advise how it would like Woodside to engage and whether NKAC required further information.
- Throughout the consultation period, Woodside and NKAC have had direct contact lines to each other.

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 8 months, NKAC has not raised objections or claims about the adverse impact of the activity to which this EP relates.

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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).

4.12.15 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 28 July 2025, Woodside emailed NWAC 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.
  - Information on the cultural values that Woodside consider relevant to the activity:
    - **(1)** Eighty Mile Beach has cultural and ecological value to the Nyangumarta Custodians.
    - **(2)** Resource collection:
      - Impacts to migrating birds, whales, turtles and vegetation.
  - **(1, 2)** A request from Woodside that NWAC 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 how NWAC would like to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
  - A request for feedback by 27 August 2025 for the purposes of preparation of this 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 NWAC to provide information about the proposed activity to other individuals as required.
- On 19 August 2025, Woodside emailed NWAC 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 to NWAC on 28 July 2025, which included a Summary Information Sheet and a link to the Consultation Information Sheet and listed cultural values previously provided by NWAC to Woodside.
  - A reminder that consultation for the preparation of this EP closes on 27 August 2025.

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– A request for information on how NWAC would like 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.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim	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). Although this area is not within the EP EMBA Woodside has noted this value in the EP.	**(1)** At the beginning of consultation for this EP, Woodside provided NWAC with 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 ROC, 6.1.38). NWAC did not request changes.	**(1)** Woodside has updated Section 4.9 to record these interests and cultural values. These receptors are only predicted to be contacted in the event of a large hydrocarbon spill. Mitigation measures have been included in Section 6.8 in this EP.
(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 NWAC with 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 ROC, 6.1.38). NWAC did not request changes.	**(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 6.7 and 6.8 of the EP.
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).	No additional measures or controls are required.
Summary Report – Consultation Complete			

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Woodside has discharged its obligations for consultation under regulation 25 of the Environmental Regulations and consultation with NWAC 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 28 July 2025, Woodside made the Consultation Information Sheet available on the Woodside website.
- Woodside provided information to NWAC on 28 July 2025 when consultation commenced. Woodside provided:
  - A Summary Information Sheet developed specifically for Indigenous groups and reviewed by a member of the Indigenous Affairs Engagement team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, the potential risks and impacts of the activity, diagrams and details about how to provide feedback.
  - A list of NWAC's cultural values, previously provided to Woodside during consultation of unrelated EPs.
  - 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 NWAC's 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.

Reasonable Period

A reasonable period for consultation in the preparation of the EP has been provided because:

- Woodside commenced consultation on this EP with NWAC on 28 July 2025 and requested NWAC provide feedback by 27 August 2025 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.
- Woodside has addressed and responded to NWAC for more than 8 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 NWAC's preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Indigenous groups.
- Woodside has made information on this EP publicly available for more than 8 months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (30 July) and National Indigenous Times (29 July 2025) advising of the proposed activities and requesting comments or feedback.
- Woodside's initial email about this EP on 28 July 2025:
  - 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 NWAC members as well as the NWAC Board.
  - Asked NWAC to advise how it would like Woodside to engage and whether NWAC required further information.
- Throughout the consultation period, Woodside and NWAC have had direct contact lines to each other.

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Outcomes of Consultation

The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- Woodside has incorporated cultural values previously provided by NWAC into the EP.
- During the past 8 months, NWAC has not raised 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).

4.12.16 Nyul Nyul PBC Aboriginal Corporation (Nyul Nyul)

Nyul Nyul is established under the *Native Title Act 1993 (Cth)* by the Nyul Nyul people to represent the Nyul Nyul 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.

Woodside consults with NNAC via KLC.

Summary of information provided and record of consultation for this EP:

- On 28 July 2025, Woodside emailed Nyul Nyul 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.
  - A request for information on how Nyul Nyul would like to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
  - A request for feedback by 27 August 2025 for the purposes of preparation of this 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 Nyul Nyul to provide information about the proposed activity to other individuals as required.
- On 28 July 2025, Woodside emailed Nyul Nyul requesting that the initial consultation email for this activity (Record of Consultation, reference 6.1.39) is forwarded to Nyul Nyul's Chairperson (SI Report B, reference 1.16.1).
- On 19 August 2025, Woodside emailed Nyul Nyul a reminder about the proposed activity (SI Report B, reference 1.16.2). The email included:

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- A reference to the original consultation email for this EP sent to Nyul Nyul on 28 July 2025, which included a Summary Information Sheet and a link to the Consultation Information Sheet.
- A reminder that consultation for the preparation of this EP closes on 27 august 2025.
- A request for information on how Nyul Nyul would like 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.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim	Woodside's Response	Inclusion in Environment Plan
No feedback, objection or claim 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 this 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 with Nyul Nyul 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 28 July 2025, Woodside made the Consultation Information Sheet available on the Woodside website.
- Woodside provided information to Nyul Nyul on 28 July 2025 when consultation commenced. Woodside provided:
  - A Summary Information Sheet developed specifically for Indigenous groups and reviewed by a member of the Indigenous Affairs Engagement team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, 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 Nyul Nyul's 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.

Reasonable Period

A reasonable period for consultation in the preparation of the EP has been provided because:

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- Woodside commenced consultation on this EP with Nyul Nyul on 28 July 2025 and requested Nyul Nyul provide feedback by 27 August 2025 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.
- Woodside has addressed and responded to Nyul Nyul for more than 8 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 Nyul Nyul's preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Indigenous groups.
- Woodside has made information on this EP publicly available for more than 8 months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (30 July 2025) and National Indigenous Times (29 July 2025) advising of the proposed activities and requesting comments or feedback.
- Woodside's initial email about this EP on 28 July 2025:
  - 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 Nyul Nyul members as well as the Nyul Nyul Board.
  - Asked Nyul Nyul to advise how it would like Woodside to engage and whether Nyul Nyul required further information.
- Throughout the consultation period, Woodside and Nyul Nyul have had direct contact lines to each other.

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 8 months, Nyul Nyul has not raised 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).

4.12.17 Robe River Kuruma Aboriginal Corporation (RRKAC)

RRKAC is established under the *Native Title Act 1993 (Cth)* by the Robe 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 28 July 2025, Woodside emailed RRKAC 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.

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- 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.
- Information on the cultural values that Woodside consider relevant to the activity:
  - **(1)** Concerns about underwater heritage – impacts at shoreline.
  - **(2)** The coastline.
- **(1, 2)** A request from Woodside that RRKAC 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 how RRKAC would like to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
- A request for feedback by 27 August 2025 for the purposes of preparation of this 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 RRKAC to provide information about the proposed activity to other individuals as required.

- On 28 July 2025, Woodside received an out of office email from RRKAC, informing that the recipient would return to the office on 8 August 2025 when emails would be addressed (SI Report B, reference 1.17.1).
- On 19 August 2025, Woodside emailed RRKAC a reminder about the proposed activity (SI Report B, reference 1.17.2). The email included:
  - A reference to the original consultation email for this EP sent to RRKAC on 28 July 2025, which included a Summary Information Sheet and a link to the Consultation Information Sheet and listed cultural values previously provided by RRKAC to Woodside.
  - A reminder that consultation for the preparation of this EP closes on 27 August 2025.
  - A request for information on how RRKAC would like 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.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim	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 RRKAC with 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 ROC, 6.1.40). RRKAC did not request changes.	**(1)** Woodside has updated Section 4.9 to record these interests and cultural values. These receptors are only predicted to be contacted in the event of a large hydrocarbon spill. Mitigation measures have been included in Section 6.8 of the EP.

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(2) Cultural Value: • The 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 RRKAC with 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 ROC, 6.1.40). RRKAC did not request changes.	**(2)** Woodside has updated Section 4.9 to record these interests and cultural values. These receptors are only predicted to be contacted in the event of a large hydrocarbon spill. Mitigation measures have been included in Section 6.8 of the EP.
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).	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 with RRKAC 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 28 July 2025, Woodside made the Consultation Information Sheet available on the Woodside website.
- Woodside provided information to RRKAC on 28 July 2025 when consultation commenced. Woodside provided:
  - A Summary Information Sheet developed specifically for Indigenous groups and reviewed by a member of the Indigenous Affairs Engagement team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, the potential risks and impacts of the activity, diagrams and details about how to provide feedback.
  - A list of RRKAC's cultural values, previously provided to Woodside during consultation of unrelated EPs.
  - 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 RRKAC's 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.

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Reasonable Period

A reasonable period for consultation in the preparation of the EP has been provided because:

- Woodside commenced consultation on this EP with RRKAC on 28 July 2025 and requested RRKAC provide feedback by 27 August 2025 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.
- Woodside has addressed and responded to RRKAC for more than 8 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 RRKAC's preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Indigenous groups.
- Woodside has made information on this EP publicly available for more than 8 months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (30 July 2025) and National Indigenous Times (29 July 2025) advising of the proposed activities and requesting comments or feedback.
- Woodside's initial email about this EP on 28 July 2025:
  - 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 RRKAC members as well as the RRKAC Board.
  - Asked RRKAC to advise how it would like Woodside to engage and whether RRKAC required further information.
- Throughout the consultation period, Woodside and RRKAC have had direct contact lines to each other.

Outcomes of Consultation

The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- Woodside has incorporated cultural values previously provided by RRKAC into the EP.
- During the past 8 months, RRKAC has not raised 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).

4.12.18 Thalanyji / Nhuwala People

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. This context and process

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demonstrates that Woodside's consultation approach with The Thalanyji / Nhuwala People is appropriate and adapted to the nature and interests of the Thalanyji / Nhuwala People.

Summary of information provided and record of consultation for this EP:

- On 26 August 2025, Woodside emailed Thalanyji / Nhuwala People (via BTAC) 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 how Thalanyji / Nhuwala People would like to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
  - A request for feedback by 25 September 2025 for the purposes of preparation of this 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 Thalanyji / Nhuwala People to provide information about the proposed activity to other individuals as required.
- On 16 September 2025, Woodside emailed Thalanyji / Nhuwala People (via BTAC) a reminder about the proposed activity (SI Report B, reference 1.18.1). The email included:
  - A reference to the original consultation email for this EP sent to Thalanyji / Nhuwala People on 26 August 2025, which included a Summary Information Sheet and a link to the Consultation Information Sheet.
  - A reminder that consultation for the preparation of this EP closes on 25 September 2025.
  - A request for information on how Thalanyji / Nhuwala People would like 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.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim	Woodside's Response	Inclusion in Environment Plan
No feedback, objection or claim 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 this EP).	No additional measures or controls are required.

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Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environmental Regulations and consultation with Thalanyji / Nhuwala People (via BTAC) 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 28 July 2025, Woodside made the Consultation Information Sheet available on the Woodside website.
- Woodside provided information to Thalanyji / Nhuwala People (via BTAC) on 26 August 2025 when consultation commenced. Woodside provided:
  - A Summary Information Sheet developed specifically for Indigenous groups and reviewed by a member of the Indigenous Affairs Engagement team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, 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 Thalanyji / Nhuwala People's 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.

Reasonable Period

A reasonable period for consultation in the preparation of the EP has been provided because:

- Woodside commenced consultation on this EP with Thalanyji / Nhuwala People (via BTAC) on 26 August 2025 and requested Thalanyji / Nhuwala People (via BTAC) provide feedback by 25 September 2025 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.
- Woodside has addressed and responded to Thalanyji / Nhuwala People (via BTAC) for more than 7 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 Thalanyji / Nhuwala People's preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Indigenous groups.
- Woodside has made information on this EP publicly available for more than 7 months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (30 July 2025) and National Indigenous Times (29 July 2025) advising of the proposed activities and requesting comments or feedback.
- Woodside's initial email about this EP on 11 August 2025:
  - 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 Thalanyji / Nhuwala People members as well as the Thalanyji / Nhuwala People Board.
  - Asked Thalanyji / Nhuwala People (via BTAC) to advise how it would like Woodside to engage and whether Thalanyji / Nhuwala People required further information.

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- Throughout the consultation period, Woodside and Thalanyji / Nhuwala People (via BTAC) have had direct contact lines to each other.

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 7 months, Thalanyji / Nhuwala People (via BTAC) has not raised 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).

4.12.19 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.

Summary of information provided and record of consultation for this EP:

- On 28 July 2025, Woodside emailed Wanparta advising of the proposed activity (Record of Consultation, reference 6.1.45). 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.
  - Information on the cultural values that Woodside consider relevant to the activity:
    - **(1)** A connection to and cultural obligation to look after Sea Country.
    - **(2)** Dreamtime stories connected to nearshore islands particularly Solitary Island / Jarrkunpungu.
    - **(3)** Sea (fresh and salt water) – dreaming stories, a responsibility to look after the ocean.
    - **(4)** Totemic species – kestrel, octopus, spiny brim, sting ray.
  - **(1, 2, 3, 4)** A request from Woodside that Wanparta 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 how Wanparta would like to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
  - A request for feedback by 27 August 2025 for the purposes of preparation of this 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.

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- Woodside's commitment to managing gender-restricted or other culturally sensitive information.
- A request for Wanparta to provide information about the proposed activity to other individuals as required.

- On 7 August 2025, Wanparta emailed Woodside confirming receipt of the Record of Consultation email sent on 28 July 2025 and circulation of the email to the Wanparta Board (SI Report B, reference 1.19.1). Wanparta advised it would provide any comment and feedback to Woodside.
- On 19 August 2025, Woodside emailed Wanparta a reminder about the proposed activity (SI Report B, reference 1.19.2). The email included:
  - A reference to the original consultation email for this EP sent to Wanparta 28 July 2025, which included a Summary Information Sheet and a link to the Consultation Information Sheet and listed cultural values previously provided by Wanparta to Woodside.
  - A reminder that consultation for the preparation of this EP closes on 27 August 2025.
  - A request for information on how Wanparta would like 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 19 August 2025, Wanparta emailed Woodside stating it had received the Record of Consultation email on 28 July 2025 and circulated the email to the Board for consideration and comment (SI Report B, reference 1.19.3). Wanparta stated it had not received any comments but will advise if there were changes before the consultation end date.
- On 20 August 2025, Woodside emailed Wanparta thanking for the response, and stating that Wanparta can contact Woodside at any time of there were questions or if the Board wished to provide feedback (SI Report B, reference 1.19.4).

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim	Woodside's Response	Inclusion in Environment Plan
(1) Cultural Value: • A connection to and cultural obligation to look after Sea Country. • A healthy Sea Country leads to healthy marine life and healthy Ngarla People.	**(1)** This value has been identified through Woodside's data collection processes (consultation).	**(1)** At the beginning of consultation for this EP, Woodside provided Wanparta with 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 ROC, 6.1.42).	**(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 6.7 and 6.8 of the EP.
(2) Cultural Value: • Dreamtime stories connected to nearshore islands particularly Solitary Island / Jarrkunpungu. • There is ethnohistorical evidence of Ngarla occupation on these islands.	**(2)** This value has been identified through Woodside's data collection processes (consultation). Although this area is not within the EP EMBA Woodside has noted this value in the EP.	**(2)** At the beginning of consultation for this EP, Woodside provided Wanparta with 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 ROC, 6.1.42). Wanparta provided further information about this value during	**(2)** Woodside has updated Section 4.9 to record these interests and cultural values. These receptors are only predicted to be contacted in the event of a large hydrocarbon spill. Mitigation measures have been included in Section 6.8 of the EP.

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		consultation for this EP. Woodside has updated relevant sections of this EP to record interests and cultural values and assessed the potential impact on these and included controls.	
(3) Cultural Value: Sea (fresh and salt water): • Dreaming stories. • A responsibility to look after the ocean.	**(3)** This value has been identified through Woodside's data collection processes (consultation).	**(3)** At the beginning of consultation for this EP, Woodside provided Wanparta with 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 ROC, 6.1.42) Wanparta did not request changes.	**(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 6.7 and 6.8 of the EP.
(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 Wanparta with 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 ROC, 6.1.41). Wanparta did not request changes.	**(4)** Woodside updated Section 4.9 to record these interests and cultural values and where appropriate assessed the potential impacts on these, included controls in in Sections 6.7 and 6.8 of the EP.
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).	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 with Wanparta 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:			

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- On 28 July 2025, Woodside made the Consultation Information Sheet available on the Woodside website.
- Woodside provided information to Wanparta on 28 July 2025 when consultation commenced. Woodside provided:
  - A Summary Information Sheet developed specifically for Indigenous groups and reviewed by a member of the Indigenous Affairs Engagement team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, the potential risks and impacts of the activity, diagrams and details about how to provide feedback.
  - A list of Wanparta's cultural values, previously provided to Woodside during consultation of unrelated EPs.
  - 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 Wanparta's 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.

Reasonable Period

A reasonable period for consultation in the preparation of the EP has been provided because:

- Woodside commenced consultation on this EP with Wanparta on 28 July 2025 and requested Wanparta provide feedback by 27 August 2025 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.
- Woodside has addressed and responded to Wanparta for more than 8 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 Wanparta's preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Indigenous groups.
- Woodside has made information on this EP publicly available for more than 8 months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (30 July 2025) and National Indigenous Times (29 July 2025) advising of the proposed activities and requesting comments or feedback.
- Woodside's initial email about this EP on 28 July 2025:
  - 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 Wanparta members as well as the Wanparta Board.
  - Asked Wanparta to advise how it would like Woodside to engage and whether Wanparta required further information.
- Throughout the consultation period, Woodside and Wanparta have had direct contact lines to each other.

Outcomes of Consultation

The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- Woodside has incorporated cultural values previously provided by Wanparta into the EP.

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- During the past 8 months, Wanparta has not raised 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).

4.12.20 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 28 July 2025, Woodside emailed WAC 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.
  - Information on the cultural values relating to WAC that Woodside considers relevant to the activity:
    - **(1)** Marine species:
      - Whales – migration and potential impact of noise on whale communication.
      - Turtles – general interest around management and monitoring.
    - **(2)** Rock art – potential impact of emissions from activities.
    - **(3)** Underwater heritage – impacts particularly given recent finding of artefacts.
    - **(4)** Onshore heritage – management of sites.
  - **(1, 2, 3, 4)** A request from Woodside that WAC 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 how WAC would like to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
  - A request for feedback by 27 August 2025 for the purposes of preparation of this 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.

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- A request for WAC to provide information about the proposed activity to other individuals as required.
- Acknowledgement that discussions relating to Woodside's consultation framework agreement has been ongoing and that these discussions will progress in parallel with consultation for the proposed activity's EP.

- On 20 August 2025, Woodside emailed WAC a reminder about the proposed activity (SI Report B, reference 1.20.1). The email included:
  - A reference to the original consultation email for this EP sent to WAC on 28 July 2025, which included a Summary Information Sheet and a link to the Consultation Information Sheet and listed cultural values previously provided by WAC to Woodside.
  - A reminder that consultation for the preparation of this EP closes on 27 August 2025.
  - A request for information on how WAC would like 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 September 2025, Wong Goo Tt Oo, WAC and NAC attended Woodside's Quarterly Heritage Meeting (SI Report B, reference 6.1). Matters discussed relating to this EP included:
  - Cultural heritage update.
  - Training and contracting opportunities.
  - Project updates.
- On 2 December 2025, Woodside emailed WAC an invitation reminder to Woodside's Quarterly Heritage Meeting on 3 December 2025, as an opportunity for Woodside to provide updates on Woodside's activities to Traditional Owner groups and to receive feedback from the community (SI Report B, reference 1.20.2)
- On 3 December 2025, WAC attended Woodside's Quarterly Heritage Meeting, at which Woodside stated that consultation for future EPs would recommence in Q1 2026 and showed an example of new animations videos used to support EP consultation (SI Report B, reference 6.2).
- On 5 February 2026, Woodside emailed NAC, WAC and Wong-Goo-Tt-Oo dates of upcoming heritage meetings (SI Report B, reference 1.20.3)
- On 6 February 2026, Woodside sent WAC a text message to follow-up on correspondence sent about the quarterly heritage meetings (SI Report B, reference 1.20.4).
- On 25 February 2026, Woodside distributed an invitation to a community luncheon to WAC, NAC and NYFL. The invitation stated that the event in Roebourne on 19 March 2026 was an opportunity for groups to share stories and receive updates from Woodside (SI Report B, reference 5.1).
- Between 5 and 6 March 2026, Woodside and WAC exchanged emails and phone calls about the Quarterly Heritage meeting held on 4 March 2026, which WAC did not attend (SI Report B, reference 1.20.5 – 1.20.9).
- On 10 March 2026, Woodside emailed WAC a copy of the Quarterly Heritage Meeting minutes from 4 March 2026 (SI Report B, reference 1.20.10).

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim	Woodside's Response	Inclusion in Environment Plan
(1) Marine species:	**(1)** This value has been identified through Woodside's data collection processes (consultation).	**(1)** At the beginning of consultation for this EP, Woodside provided WAC with a list of the cultural values known to Woodside that it believed relevant to the	**(1)** Woodside has updated Section 4.9 to record these interests and cultural values and assessed the potential impacts on these and where appropriate

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• Whales – migration and potential impact of noise on whale communication. • Turtles – general interest around management and monitoring.		group and invited it to make changes or provide additional information (See ROC, 6.1.43). WAC did not request changes.	included controls in Sections 6.7 and 6.8 of the EP.
(2) 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 WAC with 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 ROC, 6.1.43). WAC did not request changes.	**(2)** Woodside has updated Section 4.9 to record these interests and cultural values. Onshore emissions are not considered within the scope of this activity and therefore not relevant to the EP.
(3) 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 WAC with 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 ROC, 6.1.43). WAC did not request changes.	**(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 6.7 of the EP.
(4) 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 WAC with 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 ROC, 6.1.43). WAC did not request changes.	**(4)** Woodside has updated Section 4.9 to record these interests and cultural values. Impacts are not expected as an unplanned hydrocarbon release is not expected to reach higher than highest astronomical tide levels.
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. Woodside notes that further feedback may be received as part of ongoing	No additional measures or controls are required.

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	included based on consultation and / or literature review.	consultation. 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 this EP).	

Summary Report – Consultation Complete

Woodside has discharged its obligations for consultation under regulation 25 of the Environmental Regulations and consultation with WAC 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 28 July 2025, Woodside made the Consultation Information Sheet available on the Woodside website.
- Woodside provided information to WAC on 28 July 2025 when consultation commenced. Woodside provided:
  - A Summary Information Sheet developed specifically for Indigenous groups and reviewed by a member of the Indigenous Engagement team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, the potential risks and impacts of the activity, diagrams and details about how to provide feedback.
  - A list of WAC's cultural values, previously provided to Woodside during consultation of unrelated EPs.
  - 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 WAC's 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.

Reasonable Period

A reasonable period for consultation in the preparation of the EP has been provided because:

- Woodside commenced consultation on this EP with WAC on 28 July 2025 and requested WAC provide feedback by 27 August 2025 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.
- Woodside has addressed and responded to WAC for more than 8 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 WAC's preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Indigenous groups.
- Woodside has made information on this EP publicly available for more than 8 months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (30 July 2025) and National Indigenous Times (29 July 2025) advising of the proposed activities and requesting comments or feedback.

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- Woodside's initial email about this EP on 28 July 2025:
  - 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 Engagement team. Woodside also provided contact details for NOPSEMA.
  - Offered for Woodside to speak with WAC members as well as the WAC Board.
  - Asked WAC to advise how it would like Woodside to engage and whether WAC required further information.
- Throughout the consultation period, Woodside and WAC have had direct contact lines to each other.

Outcomes of Consultation

The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- Woodside has incorporated cultural values previously provided by WAC into the EP.
- During the past 8 months, WAC has not raised 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).

4.12.21 Yamatji Marlpa Barna Baba Maaja Aboriginal Corporation (Yamatji Land and Sea Council) (YMBBMAC)

In the Cape Range National Park Management Plan (2010), YMBBMAC (Yamatji Land and Sea Council) is noted as the Native Title representative Aboriginal body for the park. Correspondence to YMBBMAC (Yamatji Land and Sea Council) is via YMAC.

Summary of information provided and record of consultation for this EP:

- On 28 July 2025, Woodside emailed YMBBMAC (via YMAC) advising of the proposed activity (Record of Consultation, reference 6.1.48). 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 how YMBBMAC would like to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
  - A request for feedback by 27 August 2025 for the purposes of preparation of this 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 YMBBMAC to provide information about the proposed activity to other individuals as required.
  - Acknowledgement that discussions relating to Woodside's consultation framework agreement has been ongoing and that these discussions will progress in parallel with consultation for the proposed activity's EP.

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- On 19 August 2025, Woodside emailed YMBBMAC (via YMAC) a reminder about the proposed activity (SI Report B, reference 1.21.1). The email included:
  - A reference to the original consultation email for this EP sent to YMBBMAC on 28 July 2025, which included a Summary Information Sheet and a link to the Consultation Information Sheet.
  - A reminder that consultation for the preparation of this EP closes on 27 August 2025.
  - A request for information on how YMBBMAC would like 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.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim	Woodside's Response	Inclusion in Environment Plan
No feedback, objection or claim 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 this 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 with YMBBMAC 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 28 July 2025, Woodside made the Consultation Information Sheet available on the Woodside website.
- Woodside provided information to YMBBMAC (via YMAC) on 28 July 2025 when consultation commenced. Woodside provided:
  - A Summary Information Sheet developed specifically for Indigenous groups and reviewed by a member of the Indigenous Affairs Engagement team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, 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 YMBBMAC's 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.

Reasonable Period

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A reasonable period for consultation in the preparation of the EP has been provided because:

- Woodside commenced consultation on this EP with YMBBMAC (via YMAC) on 28 July 2025 and requested YMBBMAC provide feedback by 19 August 2025 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.
- Woodside has addressed and responded to YMBBMAC for more than 8 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 YMBBMAC's preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Indigenous groups.
- Woodside has made information on this EP publicly available for more than 8 months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (30 July 2025) and National Indigenous Times (29 July 2025) advising of the proposed activities and requesting comments or feedback.
- Woodside's initial email about this EP on 28 July 2025:
  - 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 YMBBMAC members as well as the YMBBMAC Board.
  - Asked YMBBMAC (via YMAC) to advise how it would like Woodside to engage and whether YMBBMAC required further information.
- Throughout the consultation period, Woodside and YMBBMAC (via YMAC) have had direct contact lines to each other.

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 8 months, YMBBMAC has not raised 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).

4.12.22 Yawuru Native Title Holders Aboriginal Corporation (Yawuru)

Yawuru is established under the *Native Title Act 1993 (Cth)* by the Yawuru people to represent the Yawuru 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 28 July 2025, Woodside emailed Yawuru advising of the proposed activity (Record of Consultation, reference 6.1.50). The email included:
  - A Summary Information Sheet.

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- 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 how Yawuru would like to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
- A request for feedback by 27 August 2025 for the purposes of preparation of this 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 Yawuru to provide information about the proposed activity to other individuals as required.

- On 19 August 2025, Woodside emailed Yawuru a reminder about the proposed activity (SI Report B, reference 1.22.1). The email included:
  - A reference to the original consultation email for this EP sent to Yawuru on 28 July 2025, which included a Summary Information Sheet and a link to the Consultation Information Sheet.
  - A reminder that consultation for the preparation of this EP closes on 27 August 2025.
  - A request for information on how Yawuru would like 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.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim	Woodside's Response	Inclusion in Environment Plan
No feedback, objection or claim 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 this 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 with Yawuru 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 28 July 2025, Woodside made the Consultation Information Sheet available on the Woodside website.
- Woodside provided information to Yawuru on 28 July 2025 when consultation commenced. Woodside provided:

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  - A Summary Information Sheet developed specifically for Indigenous groups and reviewed by a member of the Indigenous Affairs Engagement team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, 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 Yawuru's interests and how the activity could impact those interests.
  - A request for the 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.

Reasonable Period

A reasonable period for consultation in the preparation of the EP has been provided because:

- Woodside commenced consultation on this EP with Yawuru on 28 July 2025 and requested Yawuru provide feedback by 27 August 2025 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.
- Woodside has addressed and responded to Yawuru for more than 8 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 Yawuru's preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Indigenous groups.
- Woodside has made information on this EP publicly available for more than 8 months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (30 July 2025) and National Indigenous Times (29 July 2025) advising of the proposed activities and requesting comments or feedback.
- Woodside's initial email about this EP on 28 July 2025:
  - 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 Yawuru members as well as the Yawuru Board.
  - Asked Yawuru to advise how it would like Woodside to engage and whether Yawuru required further information.
- Throughout the consultation period, Woodside and Yawuru have had direct contact lines to each other.

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 8 months, Yawuru has not raised 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).

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4.12.23 Yindjibarndi Aboriginal Corporation (Yindjibarndi)

Yindjibarndi AC 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.

For this consultation, Woodside asked Yindjibarndi how it wished to be consulted, if it required support to participate in consultation, whether there are additional persons that Yindjibarndi believed should be consulted and requested that all information shared with Yindjibarndi be cascaded to its members.

Yindjibarndi has formally notified Woodside that all oil and gas matters/correspondence relating to Yindjibarndi are to be directed to the Ngarluma Yindjibarndi Foundation Ltd (NYFL), which is Yindjibarndi's Native Title Representative Body.

This context and process demonstrates that Woodside's consultation approach with Yindjibarndi is appropriate and adapted to the nature and interests of Yindjibarndi.

Summary of information provided and record of consultation for this EP:

- On 29 July 2025, Woodside emailed Yindjibarndi (via NYFL) advising of the proposed activity (Record of Consultation, reference 6.1.55). 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 how Yindjibarndi (via NYFL) would like to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
  - A request for feedback by 27 August 2025 for the purposes of preparation of this 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 Yindjibarndi (via NYFL) to provide information about the proposed activity to other individuals as required.
  - Acknowledgement that discussions relating to Woodside's consultation framework agreement has been ongoing and that these discussions will progress in parallel with consultation for the proposed activity's EP.
- On 20 August 2025, Woodside emailed Yindjibarndi (via NYFL) a reminder about the proposed activity (SI Report B, reference 1.23.1). The email included:
  - A reference to the original consultation email for this EP sent to Yindjibarndi (via NYFL) on 29 July 2025, which included a Summary Information Sheet and a link to the Consultation Information Sheet.
  - A reminder that consultation for the preparation of this EP closes on 27 August 2025.

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- A request for information on how Yindjibarndi (via NYFL) would like 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 19 March 2026, Traditional Owner members from MAC, NAC and Yindjibarndi attended Woodside's Monthly Community Luncheon for Traditional Owners held in Roebourne. During the lunch Woodside provided information about the EP consultation process (SI Report B, reference 5.2).

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim	Woodside's Response	Inclusion in Environment Plan
No feedback, objection or claim 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 this 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 with Yindjibarndi (via NYFL) 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 28 July 2025, Woodside made the Consultation Information Sheet available on the Woodside website.
- Woodside provided information to Yindjibarndi (via NYFL) on 29 July 2025 when consultation commenced. Woodside provided:
  - A Summary Information Sheet developed specifically for Indigenous groups and reviewed by a member of the Indigenous Affairs Engagement team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, 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 Yindjibarndi's interests and how the activity could impact those interests.
  - A request for the 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.

Reasonable Period

A reasonable period for consultation in the preparation of the EP has been provided because:

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- Woodside commenced consultation on this EP with Yindjibarndi (via NYFL) on 29 July 2025 and requested Yindjibarndi (via NYFL) provide feedback by 27 August 2025 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.
- Woodside has addressed and responded to Yindjibarndi (via NYFL) for more than 8 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 Yindjibarndi's (via NYFL) preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Indigenous groups.
- Woodside has made information on this EP publicly available for more than 8 months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (30 July 2025) and National Indigenous Times (29 July 2025) advising of the proposed activities and requesting comments or feedback.
- Woodside's initial email about this EP on 29 July 2025:
  - 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 Yindjibarndi members as well as the Yindjibarndi Board.
  - Asked Yindjibarndi (via NYFL) to advise how it would like Woodside to engage and whether Yindjibarndi (via NYFL) required further information.
- Throughout the consultation period, Woodside and Yindjibarndi (via NYFL) have had direct contact lines to each other.

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 8 months, Yindjibarndi (via NYFL) has not raised 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).

4.12.24 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.

Summary of information provided and record of consultation for this EP:

- On 29 July 2025, Woodside emailed YAC (via legal representative) advising of the proposed activity (Record of Consultation, reference 6.1.51). The email included:
  - A Summary Information Sheet.

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- 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.
- Information on the cultural values that Woodside consider relevant to the activity:
  - **(1)** Right and responsibility to speak and care for Country.
  - **(2)** Use of Country for cultural activities:
    - Fishing.
    - Camping.
    - Hunting and gathering.
  - **(3)** Health of ecosystems:
    - Plants, animals, seagrass is an important food source for dugongs.
  - **(4)** Marine mammals:
    - Dugongs.
    - Whales (potential impact to migration patterns and potential collisions with vessels).
- **(1, 2, 3, 4)** A request from Woodside that YAC confirm if there were any changes or additional information regarding cultural values that Woodside should consider in the preparation for this EP.
- Acknowledgement that discussions relating to a draft consultation agreement with YAC and ongoing, and continue to occur in parallel to EP consultation.
- A request for information on how YAC would like to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
- A request for feedback by 27 August 2025 for the purposes of preparation of this 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 YAC to provide information about the proposed activity to other individuals as required.
- Acknowledgement that discussions relating to Woodside's consultation framework agreement has been ongoing and that these discussions will progress in parallel with consultation for the proposed activity's EP

- On 20 August 2025, Woodside emailed YAC (via legal representative) a reminder about the proposed activity (SI Report B, reference 1.24.1). The email included:
  - A reference to the original consultation email for this EP sent to YAC on 29 July 2025, which included a Summary Information Sheet and a link to the Consultation Information Sheet.
  - A reminder that consultation for the preparation of this EP closes on 27 August 2025.
  - A request for information on how YAC would like 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.

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Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim	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 YAC with 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 ROC, 6.1.48). YAC did not request changes.	**(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 6.7 and 6.8.
(2) Cultural Value – use of Country for cultural activities: • Fishing • 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 YAC with 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 ROC, 6.1.48). YAC did not request changes.	**(2)** Woodside has updated Section 4.9 to record these interests and cultural values.
(3) Cultural Value – health of ecosystems • Plants and animals. • 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 YAC with 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 ROC, 6.1.48). YAC did not request changes.	**(3)** Woodside has updated Section 4.9 to record these interests and cultural values. These receptors are only predicted to be contacted in the event of a large hydrocarbon spill. Mitigation measures have been included in Section 6.8 of the EP.
(4) Cultural Value – marine mammals: • Dugongs. • Whales (potential impact to migration patterns and potential collisions with vessels).	**(4)** This value has been identified through Woodside's data collection processes (consultation).	**(4)** At the beginning of consultation for this EP, Woodside provided YAC with a list of the cultural values known to Woodside that it believed relevant to the group and invited it to make changes or	**(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 6.7 and 6.8.

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		provide additional information (See ROC, 6.1.48). YAC did not request changes.	
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. Woodside notes that further feedback may be received as part of ongoing consultation. 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 this 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 with YAC 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 28 July 2025, Woodside made the Consultation Information Sheet available on the Woodside website.
- Woodside provided information to YAC on 29 July 2025 when consultation commenced. Woodside provided:
  - A Summary Information Sheet developed specifically for Indigenous groups and reviewed by a member of the Indigenous Affairs Engagement team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, the potential risks and impacts of the activity, diagrams and details about how to provide feedback.
  - A list of YAC's cultural values, previously provided to Woodside during consultation of unrelated EPs.
  - 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 YAC's interests and how the activity could impact those interests.
  - A request for the 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.

Reasonable Period

A reasonable period for consultation in the preparation of the EP has been provided because:

- Woodside commenced consultation on this EP with YAC on 28 July 2025 and requested YAC provide feedback by 27 August 2025 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.

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- Woodside has addressed and responded to YAC for more than 8 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 YAC’s preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Indigenous groups.
- Woodside has made information on this EP publicly available for more than 8 months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (30 July 2025) and National Indigenous Times (29 July 2025) advising of the proposed activities and requesting comments or feedback.
- Woodside’s initial email about this EP on 28 July 2025:
  - 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 YAC members as well as the YAC Board.
  - Asked YAC to advise how it would like Woodside to engage and whether YAC required further information.
- Throughout the consultation period, Woodside and YAC have had direct contact lines to each other.

Outcomes of Consultation

The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- Woodside has incorporated cultural values previously provided by YAC into the EP.
- During the past 8 months, YAC has not raised 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).

4.12.25 Yued Aboriginal Corporation (Yued)

Yued is established under the *Native Title Act 1993 (Cth)* by the Yued people to represent the Yued 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. The Yued region refers to the Noongar language group north of Perth, towards the south of Yued is Whadjuk, to the east is Ballardong.

Summary of information provided and record of consultation for this EP:

- On 28 July 2025, Woodside emailed Yued advising of the proposed activity (Record of Consultation, reference 6.1.52). The email included:
  - A Summary Information Sheet.
  - A link to the Consultation Information Sheet.

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- 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 how Yued would like to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
- A request for feedback by 27 August 2025 for the purposes of preparation of this 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 Yued to provide information about the proposed activity to other individuals as required.

- On 30 July 2025, Yued emailed Woodside acknowledging receipt of the email about the proposed activity sent on 28 July 2025 (SI Report B, reference 1.25.1).
- On 19 August 2025, Woodside emailed Yued a reminder about the proposed activity (SI Report B, reference 1.25.2). The email included:
  - A reference to the original consultation email for this EP sent to Yued on 28 July 2025, which included a Summary Information Sheet and a link to the Consultation Information Sheet.
  - A reminder that consultation for the preparation of this EP closes on 27 August 2025.
  - A request for information on how Yued would like 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.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim	Woodside's Response	Inclusion in Environment Plan
No feedback, objection or claim 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 this 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 with Yued 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 28 July 2025, Woodside made the Consultation Information Sheet available on the Woodside website.
- Woodside provided information to Yued on 28 July 2025 when consultation commenced. Woodside provided:

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  - A Summary Information Sheet developed specifically for Indigenous groups and reviewed by a member of the Indigenous Affairs Engagement team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, 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 Yued's interests and how the activity could impact those interests.
  - A request for the 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.

Reasonable Period

A reasonable period for consultation in the preparation of the EP has been provided because:

- Woodside commenced consultation on this EP with Yued on 28 July 2025 and requested Yued provide feedback by 27 August 2025 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.
- Woodside has addressed and responded to Yued for more than 8 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 Yued's preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Indigenous groups.
- Woodside has made information on this EP publicly available for more than 8 months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (30 July 2025) and National Indigenous Times (29 July 2025) advising of the proposed activities and requesting comments or feedback.
- Woodside's initial email about this EP on 28 July 2025:
  - 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 Yued members as well as the Yued.
  - Asked Yued to advise how it would like Woodside to engage and whether Yued required further information.
- Throughout the consultation period, Woodside and Yued have had direct contact lines to each other.

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 8 months, Yued has not raised 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).

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4.13 Native Title representative bodies

4.13.1 Kimberley Land Council (KLC)

KLC 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.

This context and process demonstrates that Woodside's consultation approach with KLC is appropriate and adapted to the nature and interests of KLC.

Summary of information provided and record of consultation for this EP:

- On 28 July 2025, Woodside emailed KLC advising of the proposed activity (Record of Consultation, reference 6.1.53). 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 how KLC would like to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
  - A request for feedback by 27 August 2025 for the purposes of preparation of this 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 KLC to provide information about the proposed activity to other individuals as required.
- Between 28 July – 5 August 2025, Woodside and KLC exchanged emails about forwarding information to NKAC about the proposed activity (SI Report B, reference 2.1.1 – 2.1.2).
- On 19 August 2025, Woodside emailed KLC a reminder 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 KLC on 28 July 2025, which included a Summary Information Sheet and a link to the Consultation Information Sheet.
  - A reminder that consultation for the preparation of this EP closes on 27 August 2025.
  - A request for information on how KLC would like 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 19 August 2025, KLC emailed Woodside confirming it had forwarded the consultation reminder email to KLC's directors (SI Report B, reference 2.1.4).

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim	Woodside's Response	Inclusion in Environment Plan

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No feedback, objection or claim 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 this 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 with KLC 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 28 July 2025, Woodside made the Consultation Information Sheet available on the Woodside website.
- Woodside provided information to KLC on 28 July 2025 when consultation commenced. Woodside provided:
  - A Summary Information Sheet developed specifically for Indigenous groups and reviewed by a member of the Indigenous Affairs Engagement team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, 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 KLC's 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.

Reasonable Period

A reasonable period for consultation in the preparation of the EP has been provided because:

- Woodside commenced consultation on this EP with KLC on 28 July 2025 and requested KLC provide feedback by 27 August 2025 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.
- Woodside has addressed and responded to KLC for more than 8 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 KLC's preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Indigenous groups.
- Woodside has made information on this EP publicly available for more than 8 months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (30 July 2025) and National Indigenous Times (29 July 2025) advising of the proposed activities and requesting comments or feedback.

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- Woodside's initial email about this EP on 28 July 2025:
  - 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 KLC members as well as the KLC Board.
  - Asked KLC to advise how it would like Woodside to engage and whether KLC required further information.
- Throughout the consultation period, Woodside and KLC have had direct contact lines to each other.

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 8 months, KLC has not raised 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).

4.13.2 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.

YMAC is also the primary contact for the Nhuwala Claim Group.

Summary of information provided and record of consultation for this EP:

- On 28 July 2025, Woodside emailed YMAC advising of the proposed activity (Record of Consultation, reference 6.1.48). 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 how YMAC would like to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
  - A request for feedback by 27 August 2025 for the purposes of preparation of this EP.

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- 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 YMAC to provide information about the proposed activity to other individuals as required.
- Acknowledgement that discussions relating to Woodside's consultation framework agreement has been ongoing and that these discussions will progress in parallel with consultation for the proposed activity's EP.

- On 19 August 2025, 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 to YMAC on 28 July 2025, which included a Summary Information Sheet and a link to the Consultation Information Sheet.
  - A reminder that consultation for the preparation of this EP closes on 27 August 2025.
  - A request for information on how YMAC would like 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.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim	Woodside's Response	Inclusion in Environment Plan
No feedback, objection or claim 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 this 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 with YMAC 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 28 July 2025, Woodside made the Consultation Information Sheet available on the Woodside website.
- Woodside provided information to YMAC on 28 July 2025 when consultation commenced. Woodside provided:
  - A Summary Information Sheet developed specifically for Indigenous groups and reviewed by a member of the Indigenous Engagement team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, 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.

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  - Confirmation of the purpose of consultation, what was being sought by Woodside through consultation including understanding the nature of YMAC's 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.

Reasonable Period

A reasonable period for consultation in the preparation of the EP has been provided because:

- Woodside commenced consultation on this EP with YMAC on 28 July 2025 and requested YMAC provide feedback by 27 August 2025 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.
- Woodside has addressed and responded to YMAC for more than 8 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 YMAC's preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Indigenous groups.
- Woodside has made information on this EP publicly available for more than 8 months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (30 July 2025) and National Indigenous Times (29 July 2025) advising of the proposed activities and requesting comments or feedback.
- Woodside's initial email about this EP on 28 July 2025:
  - 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 YMAC members as well as the YMAC Board.
  - Asked YMAC to advise how it would like Woodside to engage and whether YMAC required further information.
- Throughout the consultation period, Woodside and YMAC have had direct contact lines to each other.

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 8 months, YMAC has not raised 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).

4.13.3 Yamatji Southern Regional Corporation (YSRC)

YSRC was established in 2020 following a settlement agreement with the Western Australian Government, and acts as a Regional Entity to manage the ILUA Agreement. The agreement provides the people of the Yamatji Nation, which includes Amangu, Badimia, Hutt River, Mullewa Wadjari, Naaguja, Nhanda,

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Nhanaghardi, Wajarri, Wattandee, Widi Mob and Wilunyu Peoples, with a range of benefits that compensates for Acts that have impaired or extinguished their Native Title.

BYAC is part of YSRC corporate structure. YSRC informed Woodside, in the preparation of this EP, that correspondence relating to EP consultation to BYAC is forwarded to YSRC office holders.

Summary of information provided and record of consultation for this EP:

- On 28 July 2025, Woodside emailed YSRC advising of the proposed activity (Record of Consultation, reference 6.1.54). 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 how YSRC would like to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
  - A request for feedback by 27 August 2025 for the purposes of preparation of this 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 YSRC to provide information about the proposed activity to other individuals as required.
- On 19 August 2025, Woodside telephone YSRC to discuss the most suitable approach and contact persons for YSRC and BYAC when regarding EP consultation (SI Report B, reference 2.3.1).
- On 19 August 2025, Woodside emailed YSRC a reminder about the proposed activity (SI Report B, reference 2.3.2). The email included:
  - A reference to the original consultation email for this EP sent to YSRC on 28 July 2025, which included a Summary Information Sheet and a link to the Consultation Information Sheet.
  - A reminder that consultation for the preparation of this EP closes on 27 August 2025.
  - A request for information on how YSRC would like 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 26 August 2025, Woodside emailed to relevant YRSC office holders the proposed activity's consultation activity reminder (originally sent on 19 August 2025) and confirmed that Woodside noted that the email had been sent to YRSC's Heritage team email address (SI Report B, reference 2.3.3).

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim	Woodside's Response	Inclusion in Environment Plan

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No feedback, objection or claim 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 this 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 with YSRC 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 28 July 2025, Woodside made the Consultation Information Sheet available on the Woodside website.
- Woodside provided information to YSRC on 28 July 2025 when consultation commenced. Woodside provided:
  - A Summary Information Sheet developed specifically for Indigenous groups and reviewed by a member of the Indigenous Affairs Engagement team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, 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 YSRC's interests and how the activity could impact those interests.
  - A request for the 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.

Reasonable Period

A reasonable period for consultation in the preparation of the EP has been provided because:

- Woodside commenced consultation on this EP with YSRC on 28 July 2025 and requested YSRC provide feedback by 27 August 2025 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.
- Woodside has addressed and responded to YSRC for more than 8 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 YSRC's preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Indigenous groups.
- Woodside has made information on this EP publicly available for more than 8 months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (30 July 2025) and National Indigenous Times (29 July 2025) advising of the proposed activities and requesting comments or feedback.

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- Woodside's initial email about this EP on 28 July 2025:
  - 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 YSRC members as well as the YSRC Board.
  - Asked YSRC to advise how it would like Woodside to engage and whether YSRC required further information.
- Throughout the consultation period, Woodside and YSRC have had direct contact lines to each other.

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 8 months, YSRC has not raised 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).

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4.14 Self-identified First Nations groups

4.14.1 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. NYFL's 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 NAC as the PBC to represent the communal interests of the Ngarluma people, and the Yindjibarndi Aboriginal Corporation (Yindjibarndi) 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 is self-identified and has advised it is relevant for this EP. Yindjibarndi has requested all correspondence about EPs be directed to NYFL.

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 29 July 2025, Woodside emailed NYFL advising of the proposed activity (Record of Consultation, reference 6.1.55). 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.
  - Acknowledgement that discussions relating to a draft consultation agreement with NYFL and ongoing, and continue to occur in parallel to EP consultation.
  - A request for information on how NYFL would like to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
  - A request for feedback by 27 August 2025 for the purposes of preparation of this 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 NYFL to provide information about the proposed activity to other individuals as required.

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- Acknowledgement that discussions relating to Woodside's consultation framework agreement has been ongoing and that these discussions will progress in parallel with consultation for the proposed activity's EP.

- On 20 August 2025, 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 to NYFL on 29 July 2025, which included a Summary Information Sheet and a link to the Consultation Information Sheet.
  - A reminder that consultation for the preparation of this EP closes on 27 August 2025.
  - A request for information on how NYFL would like 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.
- **(1)** On 23 September 2025, NYFL emailed Woodside in response to being consulted on the proposed activity, to follow-up on previous correspondence relating to unrelated EPs, to meet and discuss the draft consultation agreement (SI Report B, reference 3.1.2).
- **(1)** On 24 September 2025, Woodside emailed NYFL to confirm that an online meeting can be scheduled to discuss the draft consultation agreement. Woodside stated it would not provide further funding for NYFL's legal advice on the matter (SI Repot B, reference 3.1.3). Woodside reminded NYFL that negotiation towards a consultation agreement can and does occur in parallel with consultation about individual EPs, which NFYL may be relevant for the purposes of consultation as a result of the EMBA.
- On 25 September 2025, NYFL emailed Woodside thanking for the response the day before and seeking further advice on funding scope (SI Report B, reference 3.1.4).
- On 25 February 2026, Woodside distributed an invitation to a community luncheon to NYFL, NAC and WAC. The invitation stated that the event in Roebourne on 19 March 2026 was an opportunity for groups to share stories and receive updates from Woodside (SI Report B, reference 5.1).

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim	Woodside's Response	Inclusion in Environment Plan
(1) NYFL has acknowledged it supports an agreement to enable a process of consultation.	**(1)** Separate from consultation under Regulation 25 of the Environment Regulations, Woodside is open to engaging with a joint First Nations framework for consultation. Woodside notes that a consultation agreement is not a prerequisite for consultation and consultation for the preparation of environment plans can and does occur concurrently with agreement negotiations (if any). Sufficient information to allow informed assessment has already been provided by other means. Woodside has an	**(1)** Woodside sent a 7-page draft consultation framework to NYFL in March 2024 for its consideration. In November 2024, Woodside met with NYFL to discuss a number of matters relating to the draft consultation agreement, with NYFL agreeing to provide Woodside with feedback on 7 April 2025, NYFL notified Woodside that it would be sending the draft agreement in due course. On 15 June 2025, Woodside emailed NYFL amendments to a draft consultation agreement. In the email	**(1)** Not required.

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	existing engagement framework in place with NYFL which enables regular (quarterly) communication.	Woodside reiterated that consultation for the preparation of environment plans occurs concurrently with agreement negotiations. In September 2025, Woodside and NYFL exchanged emails to confirm meeting to progress the draft consultation agreement.	
No feedback, objection or claim 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 this 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 with NYFL 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 28 July 2025, Woodside made the Consultation Information Sheet available on the Woodside website.
- Woodside provided information to NYFL on 29 July 2025 when consultation commenced. Woodside provided:
  - A Summary Information Sheet developed specifically for Indigenous groups and reviewed by a member of the Indigenous Affairs Engagement team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, 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 NYFL's 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.

Reasonable Period

A reasonable period for consultation in the preparation of the EP has been provided because:

- Woodside commenced consultation on this EP with NYFL on 29 July 2025 and requested NYFL provide feedback by 27 August 2025 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.

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- Woodside has addressed and responded to NYFL for more than 8 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 NYFL’s preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Indigenous groups.
- Woodside has made information on this EP publicly available for more than 8 months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (30 July 2025) and National Indigenous Times (29 July 2025) advising of the proposed activities and requesting comments or feedback.
- Woodside’s initial email about this EP on 29 July 2025:
  - 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 NYFL members as well as the NYFL Board.
  - Asked NYFL to advise how it would like Woodside to engage and whether NYFL required further information.
- Throughout the consultation period, Woodside and NYFL have had direct contact lines to each other.

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 8 months, NYFL has not raised 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).

4.15 Other First Nations groups

4.15.1 Save Our Songlines (SOS)

SOS and/or [Individual 1] 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 1], who Woodside currently understands is the group’s primary spokesperson. The stated interests of [Individual 1] and SOS include the conservation of Murujuga rock art, and opposition to expansion of projects on the Burrup Peninsula. [Individual 1] and SOS are together represented by lawyers from Johnson Legal Pty Ltd. Woodside understands that the views expressed by SOS align with the views of [Individual 1]. Woodside therefore approaches communication with SOS and/or [Individual 1] as communication with SOS and has consulted them concurrently.

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Woodside understands [Individual 1] is a Mardudhunera woman and a Traditional Custodian of Murujuga. Woodside has consulted with the Kuruma and Mardudhunera people including through consultation with MAC, WAC, NAC and RRKAC. [Individual 1] and SOS have expressly stated to Woodside that their views and positions differ from that of MAC and other Elders. Woodside has observed social media statements and news articles from Traditional Owner groups with cultural authority over Murujuga expressing a view that the views held by SOS and/or [Individual 1] are not views held by community [Ref for example, 9 August 2025 - The Saturday Paper and MAC LinkedIn]. Woodside has advised SOS and/or [Individual 1] that any cultural information shared with Woodside by [Individual 1] and SOS would need to be verified with the appropriate cultural authority.

Conversations and meetings with SOS and/or [Individual 1] have been occurring since around 2021, dating back to when [Individual 1] was a Board member of MAC and when SOS was first established. During this time, SOS and/or [Individual 1] have been actively engaged in consultation on Woodside's EPs and environmental approvals. SOS and/or [Individual 1] have provided information for Woodside's consideration in various forms and forums. As evidenced by Woodside's publicly available EPs, Woodside has, and continues to, review, assess and consider SOS's and/or [Individual 1's] information when developing EPs.

Historical engagement:

During previous consultation for other activities, SOS and/or [Individual 1] has provided information relating to its cultural values which Woodside deem relevant to this EP:

- **(1)** Threats to Murujuga Rock Art and Cultural Heritage:
  - Emissions, movement and potential damage.
  - Impacts on sites of cultural and spiritual significance.
- **(1)** Woodside has noted the cultural significant of Murujuga Rock Art and assessed risks in its EPs.
- **(2)** Cultural and Environmental Significance
  - Songlines, Dreaming, and energy lines.
  - Cultural features related to marine life including whales, marine mammals, seagrass, turtles.
  - Importance of the meeting of freshwater and saltwater.
  - Connection to Sea Country and the sea.
- **(2)** Woodside has recorded matters of cultural and environmental significance in its EPs.
- **(3)** Environmental Protection and Cultural Values:
  - Caring for country, significance of eagle, kangaroo, bungarra.
  - Importance of offshore islands, including Rosemary Island.
  - Disturbance of seabed, noise, and pollution.
  - Relationship between environmental protection and cultural values.
- **(3)** Woodside has included matters of cultural and environmental significance in its EPs.

Please see Scarborough Offshore Facility and Trunkline (Operations) EP and North West Shelf Phase 1 Plug and Abandonment and TPA03 Well Intervention (Appendix F and SI Report) for further details of this correspondence.

Summary of information provided and record of consultation for this EP:

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- On 29 July 2025, Woodside emailed SOS and/or [Individual 1] advising of the proposed activity (Record of Consultation, reference 6.1.56). 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 how SOS and/or [Individual 1] would like to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
  - A request for feedback by 27 August 2025 for the purposes of preparation of this 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 SOS and or [Individual 1] to provide information about the proposed activity to other individuals as required.
- On 20 August 2025, Woodside emailed SOS and/or [Individual 1] 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 to SOS and/or [Individual 1] on 29 July 2025, which included a Summary Information Sheet and a link to the Consultation Information Sheet.
  - A reminder that consultation for the preparation of this EP closes on 27 August 2025.
  - A request for information on how SOS and/or [Individual 1] would like 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 September 2025, SOS and/or [Individual 1] (via legal representative) emailed Woodside about unrelated EPs (SI Report B, reference 4.1.2). Matters relevant to the proposed activity included:
  - **(4)** A letter in which SOS and/or [Individual 1] disputes Woodside's assertion that they are not an appropriate authority in relation to cultural information about the Murujuga area.
  - **(4)** A submission about a different EP, not related to the proposed activity, stating SOS' and [Individual 1's] view that [Individual 1] is a Mardudhunera lore woman, Elder and a traditional custodian of Murujuga and is therefore a person who is required to be consulted.
- On 24 October 2025, SOS and/or [Individual 1] (via legal representative) emailed Woodside a submission about an unrelated EP (SI Report B, reference 4.1.3). Matters relevant to the proposed activity included:
  - **(4)** That [Individual 1] asserts they are a Mardudhunera woman, Elder and Traditional Custodian and has a cultural heritage connection, responsibilities and obligations to the lands and seas of the northwest region of Australia.
  - **(2)** That there are impacts to [Individual 1's] cultural heritage arising from harm caused by seismic testing to marine animals, particularly whales, which are central to Dreaming stories, Songlines and energy lines.
- **(4)** On 28 October 2025, Woodside emailed a reply to SOS and/or [Individual 1] in response to an unrelated EP which included a response relevant to this activity (SI Report B, reference 4.1.4). In the response, Woodside stated that it understands [Individual 1] to be a Mardudhunera woman and a Traditional Custodian of Murujuga.

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Woodside also stated that it considers MAC to be the cultural authority authorised to represent the views and knowledge of the five language groups of Murujuga. MAC has also provided confirmation to Woodside that they are the relevant cultural authority over Murujuga. This is set out in previous publicly available EPs and set out in previous consultations with SOS and/or [Individual 1]. Woodside reiterated to SOS and/or [Individual 1] that any feedback provided by SOS and/or [Individual 1] is assessed and incorporated into EPs.

- On 27 November 2025, Woodside emailed SOS and/or [Individual 1] (via legal representative) a response to the submission emailed to Woodside on 24 October 2025 about an unrelated EP which included a response relevant to this activity (SI Report B, reference 4.1.5). Details of Woodside's response relating to this activity included:
  - **(4)** Woodside understands [Individual 1] as a Mardudhunera woman. As has been previously communicated to SOS and/or [Individual 1], Woodside considers MAC to be the cultural authority authorised to represent the views and knowledge of the five language groups of Murujuga. MAC has also provided confirmation to Woodside that they are the relevant cultural authority over Murujuga.
  - **(2)** Cultural values provided by SOS and/or [Individual 1] have been reviewed, assessed, and incorporated into EPs where appropriate. Woodside also provided a list of cultural values previously provided to by SOS and/or [Individual 1] which includes marine species (whales, turtles, dugongs, plankton, seagrass, pelagic fish, sharks, seabirds), totemic species (bungarra, eagle, kangaroo), caring for Sea Country and Songlines, Dreaming and energy lines.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim	Woodside's Response	Inclusion in Environment Plan
(1) Threats to Murujuga Rock Art and Cultural Heritage: • Emissions, movement and potential damage. • Impacts on sites of cultural and spiritual significance.	**(1)** This value has been identified through Woodside's data collection processes (consultation).	**(1)** Potential impacts due to onshore emissions is not considered as an activity for this EP. No rock art will be moved during this activity. Woodside acknowledges the cultural significance of Murujuga Rock Art.	**(1)** Woodside has updated Section 4.9 to record these interests and cultural values. No further action required.
(2) Cultural and Environmental Significance: • Songlines, Dreaming, and energy lines. • Cultural features related to marine life including whales, marine mammals, seagrass, turtles. • Importance of the meeting of freshwater and saltwater. • Connection to Sea Country and the sea.	**(2)** This value has been identified through Woodside's data collection processes (consultation).	**(2)** Woodside notes these cultural values in Section 4.9 of the EP. In response to an unrelated EP, Woodside stated cultural values provided by SOS and/or [Individual 1] have been reviewed, assessed, and incorporated into the EP where appropriate. Woodside has also provided a list of cultural values previously provided to by SOS and/or [Individual 1] which includes marine species (whales, turtles, dugongs, plankton, seagrass, pelagic fish, sharks,	**(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 6.7 and 6.8.

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In response to unrelated EPs, SOS and/or [Individual 1] stated that there are impacts to [Individual 1's] cultural heritage arising from harm caused by Woodside's activities to marine animals, particularly whales, which are central to Dreaming stories, Songlines and energy lines.		seabirds), totemic species (bungarra, eagle, kangaroo), caring for Sea Country and Songlines, Dreaming and energy lines.	
(3) Environmental Protection and Cultural Values: • Caring for country, significance of eagle, kangaroo, bungarra. • Importance of offshore islands, including Rosemary Island. • Disturbance of seabed, noise, and pollution. • Relationship between environmental protection and cultural values.	**(3)** This value has been identified through Woodside's data collection processes (consultation).	**(3)** Woodside has noted these cultural values in section 4.9 and assessed risks and mitigation measures in Section 6.	**(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 6.7 and 6.8.
(4) That [Individual 1] is a Mardudhunera lore woman, Elder and a Traditional Custodian of Murujuga. SOS and/or [Individual 1] disputes Woodside's assertion that they are not an appropriate authority in relation to cultural information about the Murujuga area. Furthermore, in response to unrelated EPs, SOS and/or [Individual 1] stated that [Individual 1] is a Mardudhunera woman, Elder and Traditional Custodian and has a cultural heritage connection, responsibilities and obligations to the lands and seas of the northwest region of Australia.	**(4)** Woodside understands [Individual 1] to be a Mardudhunera woman and a Traditional Custodian of Murujuga.	**(4)** Woodside has informed SOS and/or [Individual 1] on a number of occasions in response to previous EP consultations, that Woodside considers MAC to be the cultural authority authorised to represent the views and knowledge of the five language groups of Murujuga. MAC has also provided confirmation to Woodside that they are the relevant cultural authority over Murujuga. This is set out in previous publicly available EPs and set out in previous consultations with SOS and/or [Individual 1]. Woodside has reiterated to SOS and/or [Individual 1] that any feedback provided by SOS and/or	**(4)** No action required.

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		[Individual 1] is assessed and incorporated into the EP.	
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 this 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 with SOS and/ or [Individual 1] 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 28 July 2025, Woodside made the Consultation Information Sheet available on the Woodside website.
- Woodside provided information to SOS and/or [Individual 1] on 29 July 2025 when consultation commenced. Woodside provided:
  - A Summary Information Sheet developed specifically for Indigenous groups and reviewed by a member of the Indigenous Affairs Engagement team. This sheet included an overview of the proposed activity, the location of the activity, the timing of the activity, 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 SOS's and/or [Individual 1] 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.

Reasonable Period

A reasonable period for consultation in the preparation of the EP has been provided because:

- Woodside commenced consultation on this EP with SOS and/or [Individual 1] on 29 July 2025 and requested SOS and/or [Individual 1] provide feedback by 27 August 2025 for the purposes of preparation of the EP in line with Woodside's methodology of a 30-day period for consultation.
- Woodside has addressed and responded to SOS and/or [Individual 1] for more than 8 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:

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- Woodside sought direction on SOS's and/ or [Individual 1] preferred method of consultation and has consulted in a way that Woodside understands is appropriate for Indigenous groups.
- Woodside has made information on this EP publicly available for more than 8 months. This has included publishing advertisements in national, state and local newspapers including Indigenous newspapers, the Koori Mail (30 July 2025) and National Indigenous Times (29 July 2025) advising of the proposed activities and requesting comments or feedback.
- Woodside's initial email about this EP on 29 July 2025:
  - 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 SOS and/or [Individual 1].
  - Asked SOS and/or [Individual 1] to advise how it would like Woodside to engage and whether SOS and/ or [Individual 1] required further information.
- Throughout the consultation period, Woodside and SOS and/or [Individual 1] have had direct contact lines to each other.

Outcomes of Consultation

The measures (if any) that Woodside has adopted or proposes to adopt because of the consultation are appropriate because:

- Woodside has incorporated cultural values previously provided by SOS and/or [Individual 1] into the EP.
- During the past 8 months, SOS and/or [Individual 1] has not raised 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).

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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 Commonwealth commercial fisheries and peak representative bodies

5.1.1 Southern Bluefin Tuna Fishery

Summary of information provided and record of consultation for this EP:

- On 11 August 2025, following advice received by AFMA on 11 August 2025, Woodside emailed Southern Bluefin Tuna Fishery licence holders 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 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).

Summary of Feedback, Objection or Claim	Assessment of Merits of Feedback, Objection or Claim	Woodside's Statement of 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 of the EP).	No additional measures or controls are required.
Outcomes of Consultation			
While Southern Bluefin Tuna Fishery licence holders were 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 licence holders to provide feedback during the consultation process.			

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5.2 Local government and elected parliamentary representatives, community groups or organisations

5.2.1 RAC Monkey Mia Dolphin Resort

Summary of information provided and record of consultation for this EP:

- On 30 July 2025, Woodside emailed RAC Monkey Mia Dolphin Resort advising of the proposed activity (Record of Consultation, reference 6.1.8), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).

Summary of Feedback, Objection or Claim	Assessment of Merits of Feedback, Objection or Claim	Woodside's Statement of 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 of the EP).	No additional measures or controls are required.

Outcomes of Consultation

While RAC Monkey Mia Dolphin Resort 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 RAC Monkey Mia Dolphin Resort to provide feedback during the consultation process.

5.2.2 Dirk Hartog Island

Summary of information provided and record of consultation for this EP:

- On 30 July 2025, Woodside emailed Dirk Hartog Island advising of the proposed activity (Record of Consultation, reference 6.1.8), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).

Summary of Feedback, Objection or Claim	Assessment of Merits of Feedback, Objection or Claim	Woodside's Statement of 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,	No additional measures or controls are required.

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		Woodside will apply its Management of Change and Revision process (see Section 7.8 of the EP).	

Outcomes of Consultation
While Dirk Hartog Island 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 Dirk Hartog Island to provide feedback during the consultation process.

5.2.3 Shark Bay Community Resource Centre

Summary of information provided and record of consultation for this EP:

- On 30 July 2025, Woodside emailed Shark Bay Community Resource Centre advising of the proposed activity (Record of Consultation, reference 6.1.8), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).

Summary of Feedback, Objection or Claim	Assessment of Merits of Feedback, Objection or Claim	Woodside's Statement of 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 of the EP).	No additional measures or controls are required.

Outcomes of Consultation
While Shark Bay Community Resource Centre 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 Shark Bay Community Resource Centre to provide feedback during the consultation process.

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5.2.4 Shark Bay Coastal Tours

Summary of information provided and record of consultation for this EP:

- On 30 July 2025, Woodside emailed Shark Bay Coastal Tours advising of the proposed activity (Record of Consultation, reference 6.1.8), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).

Summary of Feedback, Objection or Claim	Assessment of Merits of Feedback, Objection or Claim	Woodside's Statement of 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 of the EP).	No additional measures or controls are required.
Outcomes of Consultation			
While Shark Bay Coastal Tours 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 Shark Bay Coastal Tours to provide feedback during the consultation process.			

5.2.5 Shark Bay Recreational Marine Users

Summary of information provided and record of consultation for this EP:

- On 29 July 2025, Woodside emailed to Shark Bay Recreational Marine Users advising of the proposed activity (Record of Consultation, references 6.1.60), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 30 July 2025, Woodside emailed Shark Bay Recreational Marine Users to clarify that technical issues may have affected the display of the previous consultation email, Woodside re-issued the full consultation email, outlined that the Consultation Information Sheet is available on Woodside's website, and advised that the consultation period had been extended (Record of Consultation, references 6.1.60.1).
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email or letter (Record of Consultation, references 6.2.1),

Summary of Feedback, Objection or Claim	Assessment of Merits of Feedback, Objection or Claim	Woodside's Statement of 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.	No additional measures or controls are required.

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		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).	
Outcomes of Consultation			
While Shark Bay Recreational Marine Users 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 Shark Bay Recreational Marine Users to provide feedback during the consultation process.			

5.2.6 Naturetime Tours

Summary of information provided and record of consultation for this EP:

- On 30 July 2025, Woodside emailed Naturetime Tours advising of the proposed activity (Record of Consultation, reference 6.1.8), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).

Summary of Feedback, Objection or Claim	Assessment of Merits of Feedback, Objection or Claim	Woodside's Statement of 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 of the EP).	No additional measures or controls are required.
Outcomes of Consultation			
While Naturetime Tours 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 Naturetime Tours to provide feedback during the consultation process.			

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5.2.7 Wula Gura Nyinda Eco Cultural Tours

Summary of information provided and record of consultation for this EP:

- On 30 July 2025, Woodside emailed Wula Gura Nyinda Eco Cultural Tours advising of the proposed activity (Record of Consultation, reference 6.1.8), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).

Summary of Feedback, Objection or Claim	Assessment of Merits of Feedback, Objection or Claim	Woodside's Statement of 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 of the EP).	No additional measures or controls are required.

Outcomes of Consultation

While Wula Gura Nyinda Eco Cultural Tours 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 Wula Gura Nyinda Eco Cultural Tours to provide feedback during the consultation process.

5.3 Other non-government groups or organisations (NGOs) or individuals

5.3.1 Australian Conservation Foundation (ACF)

Summary of information provided and record of consultation for this EP:

- On 30 July 2025, Woodside emailed ACF advising of the proposed activity (Record of Consultation, reference 6.1.8), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).

Summary of Feedback, Objection or Claim	Assessment of Merits of Feedback, Objection or Claim	Woodside's Statement of 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	No additional measures or controls are required.

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		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).	
Outcomes of Consultation			
While ACF 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 ACF to provide feedback during the consultation process.			

5.3.2 Australian Marine Conservation Society (AMCS)

Summary of information provided and record of consultation for this EP:

- On 30 July 2025, Woodside emailed AMCS advising of the proposed activity (Record of Consultation, reference 6.1.8), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).

Summary of Feedback, Objection or Claim	Assessment of Merits of Feedback, Objection or Claim	Woodside's Statement of 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 of the EP).	No additional measures or controls are required.
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.			

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5.3.3 Greenpeace Australia Pacific (GAP)

Summary of information provided and record of consultation for this EP:

- On 30 July 2025, Woodside emailed GAP advising of the proposed activity (Record of Consultation, reference 6.1.8), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email (Record of Consultation, reference 6.2.1).

Summary of Feedback, Objection or Claim	Assessment of Merits of Feedback, Objection or Claim	Woodside's Statement of 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 of the EP).	No additional measures or controls are required.
Outcomes of Consultation			
While GAP 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 GAP to provide feedback during the consultation process.			

5.3.4 Vocus

Summary of information provided and record of consultation for this EP:

- On 29 July 2025, Woodside emailed Vocus advising of the proposed activity (Record of Consultation, reference 6.1.9), provided a Consultation Information Sheet, a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community',* and a map of the submarine communication cables in the vicinity of the Operational Area.
- On 29 July 2025 and 30 July 2025, Woodside was copied into internal Vocus emails forwarding the information to the appropriate area in Vocus (SI Report A, reference 25.1 and 25.2).

Summary of Feedback, Objection or Claim	Assessment of Merits of Feedback, Objection or Claim	Woodside's Statement of Response	Inclusion in Environment Plan
No feedback, objections or claims received.		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.

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		assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see Section 7.8 of the EP).	

Outcomes of Consultation
While Vocus 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 Vocus to provide feedback during the consultation process.

5.4 Research institutes and local conservation groups or organisations

5.4.1 Australian Institute of Marine Science (AIMS)

Summary of information provided and record of consultation for this EP:

- On 29 July 2025, Woodside emailed to AIMS advising of the proposed activity (Record of Consultation, references 6.1.58), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 30 July 2025, Woodside emailed AIMS to clarify that technical issues may have affected the display of the previous consultation email, Woodside re-issued the full consultation email, outlined that the Consultation Information Sheet is available on Woodside's website, and advised that the consultation period had been extended (Record of Consultation, references 6.1.58.1).
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email or letter (Record of Consultation, references 6.2.1),

Summary of Feedback, Objection or Claim	Assessment of Merits of Feedback, Objection or Claim	Woodside's Statement of 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 of the EP).	No additional measures or controls are required.

Outcomes of Consultation
While AIMS 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 AIMS to provide feedback during the consultation process.

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5.4.2 Commonwealth Scientific and Industrial Research Organisation (CSIRO)

Summary of information provided and record of consultation for this EP:

- On 29 July 2025, Woodside emailed to CSIRO advising of the proposed activity (Record of Consultation, references 6.1.58), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 30 July 2025, Woodside emailed CSIRO to clarify that technical issues may have affected the display of the previous consultation email, Woodside re-issued the full consultation email, outlined that the Consultation Information Sheet is available on Woodside's website, and advised that the consultation period had been extended (Record of Consultation, references 6.1.58.1).
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email or letter (Record of Consultation, references 6.2.1).

Summary of Feedback, Objection or Claim	Assessment of Merits of Feedback, Objection or Claim	Woodside's Statement of 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 of the EP).	No additional measures or controls are required.

Outcomes of Consultation

While CSIRO 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 CSIRO to provide feedback during the consultation process.

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5.4.3 University of Western Australia (UWA)

Summary of information provided and record of consultation for this EP:

- On 29 July 2025, Woodside emailed to UWA advising of the proposed activity (Record of Consultation, references 6.1.58), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 30 July 2025, Woodside emailed UWA to clarify that technical issues may have affected the display of the previous consultation email, Woodside re-issued the full consultation email, outlined that the Consultation Information Sheet is available on Woodside's website, and advised that the consultation period had been extended (Record of Consultation, references 6.1.58.1).
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email or letter (Record of Consultation, references 6.2.1).

Summary of Feedback, Objection or Claim	Assessment of Merits of Feedback, Objection or Claim	Woodside's Statement of 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 of the EP).	No additional measures or controls are required.

Outcomes of Consultation

While UWA 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 UWA to provide feedback during the consultation process.

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5.4.4 Western Australian Marine Science Institution (WAMSI)

Summary of information provided and record of consultation for this EP:

- On 29 July 2025, Woodside emailed to WAMSI advising of the proposed activity (Record of Consultation, references 6.1.58), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 30 July 2025, Woodside emailed WAMSI to clarify that technical issues may have affected the display of the previous consultation email, Woodside re-issued the full consultation email, outlined that the Consultation Information Sheet is available on Woodside's website, and advised that the consultation period had been extended (Record of Consultation, references 6.1.58.1).
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email or letter (Record of Consultation, references 6.2.1).

Summary of Feedback, Objection or Claim	Assessment of Merits of Feedback, Objection or Claim	Woodside's Statement of 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 of the EP).	No additional measures or controls are required.

Outcomes of Consultation

While WAMSI 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 WAMSI to provide feedback during the consultation process.

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5.4.5 Curtin University

Summary of information provided and record of consultation for this EP:

- On 29 July 2025, Woodside emailed to Curtin University advising of the proposed activity (Record of Consultation, references 6.1.58), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 30 July 2025, Woodside emailed Curtin University to clarify that technical issues may have affected the display of the previous consultation email, Woodside re-issued the full consultation email, outlined that the Consultation Information Sheet is available on Woodside's website, and advised that the consultation period had been extended (Record of Consultation, references 6.1.58.1).
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email or letter (Record of Consultation, references 6.2.1).

Summary of Feedback, Objection or Claim	Assessment of Merits of Feedback, Objection or Claim	Woodside's Statement of 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 of the EP).	No additional measures or controls are required.

Outcomes of Consultation

While Curtin University 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 Curtin University to provide feedback during the consultation process.

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5.4.6 Edith Cowan University (ECU)

Summary of information provided and record of consultation for this EP:

- On 29 July 2025, Woodside emailed to ECU advising of the proposed activity (Record of Consultation, references 6.1.58), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 30 July 2025, Woodside emailed ECU to clarify that technical issues may have affected the display of the previous consultation email, Woodside re-issued the full consultation email, outlined that the Consultation Information Sheet is available on Woodside's website, and advised that the consultation period had been extended (Record of Consultation, references 6.1.58.1).
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email or letter (Record of Consultation, references 6.2.1).

Summary of Feedback, Objection or Claim	Assessment of Merits of Feedback, Objection or Claim	Woodside's Statement of 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 of the EP).	No additional measures or controls are required.

Outcomes of Consultation

While ECU 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 ECU to provide feedback during the consultation process.

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5.4.7 Murdoch University

Summary of information provided and record of consultation for this EP:

- On 29 July 2025, Woodside emailed to Murdoch University advising of the proposed activity (Record of Consultation, references 6.1.58), provided a Consultation Information Sheet, and a link to NOPSEMA's brochure '*Consultation on offshore petroleum environment plans: Information for the community*'.
- On 29 July 2025, Murdoch University responded requesting that an email be removed from Woodside's mailing list (SI Report A, reference 24.1).
- On 30 July 2025, Woodside emailed Murdoch University to clarify that technical issues may have affected the display of the previous consultation email, Woodside re-issued the full consultation email, outlined that the Consultation Information Sheet is available on Woodside's website, and advised that the consultation period had been extended.
- On 1 August 2025, Woodside replied and confirmed that the email had been removed from Woodside's mailing list (SI Report A, reference 24.2).
- On 18 August 2025, as no response had been received, Woodside proactively sent a follow-up email or letter (Record of Consultation, references 6..2.1).

Summary of Feedback, Objection or Claim	Assessment of Merits of Feedback, Objection or Claim	Woodside's Statement of 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 of the EP).	No additional measures or controls are required.

Outcomes of Consultation

While Murdoch University 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 Murdoch University to provide feedback during the consultation process.

5.5 Traditional custodians and nominated representative corporations

5.5.1 Wunambal Gaambera Aboriginal Corporation (WGAC)

Summary of information provided and record of consultation for this EP:

- On 28 July 2025, Woodside emailed WGAC advising of the proposed activity (Record of Consultation, reference 6.1.47). The email included:
  - A Summary Information Sheet.
  - A link to the Consultation Information Sheet.

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- 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 how WGAC would like to engage with Woodside about the proposed activity, including the opportunity to meet face-to-face.
- A request for feedback by 27 August 2025 for the purposes of preparation of this 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 WGAC to provide information about the proposed activity to other individuals as required.
- Acknowledgement that discussions relating to Woodside's consultation framework agreement has been ongoing and that these discussions will progress in parallel with consultation for the proposed activity's EP.

• On 19 August 2025, Woodside emailed WGAC a reminder about the proposed activity (SI Report B, reference 1.20.1). The email included:

- A reference to the original consultation email for this EP sent to WGAC on 28 July 2025, which included a Summary Information Sheet and a link to the Consultation Information Sheet.
- A reminder that consultation for the preparation of this EP closes on 27 August 2025.
- A request for information on how WGAC would like 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.

Summary of Feedback, Objection or Claim	Woodside's Assessment of Merits of Feedback, Objection or Claim	Woodside's Response	Inclusion in Environment Plan
No feedback, objection or claim 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 this EP).	No additional measures or controls are required.

Summary Report – Consultation Complete

While WGAC 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 WGAC to provide feedback during the consultation process.

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6. RECORD OF CONSULTATION

6.1 Initial consultation

6.1.1 Consultation information sheet.

Woodside Energy

Consultation Information Sheet
July 2025

Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan

Carnarvon Basin, North-West Australia

Activity Overview

The Greater Western Flank Phase 4 (GWF-4) Project intends to partially fill ullage (unused production capacity) at the existing Goodwyn Alpha (GWA) facility. The GWF-4 Drilling and Subsea Installation Environment Plan (EP) comprises drilling offshore wells in nearfields and the Wilcox Field which will be tied back to existing GWF subsea infrastructure. Woodside plans to drill up to six wells. The EP will also cover installation and pre-commissioning of subsea infrastructure.

Location

In Commonwealth waters ~140 km north-west of Karratha, WA (Figure 2)

Water depth

~70-160 m deep.

Timing

Drilling activities: Q3 2026 to Q2 2028 (~90 days per well, up to an expected total of 450 days)

- Contingency 2029

Subsea Installation:

- Nearfield Infill: Q3 2027 to Q1 2028 ~ 3 months
- Wilcox: Q4 2027 to Q2 2028 ~6 months
- Contingency 2029

Decommissioning is not planned during the next 5 years.

Duration

When activities occur, operations will run 24 hours a day, 7 days a week. Simultaneous Operations of drilling and subsea installation activities may occur. Inspection, Monitoring, Maintenance and Repair (IMMR) activities take place as required.

Joint Venture

Operator – Woodside Energy Ltd.

Joint Venture - Woodside Energy Ltd, BP Developments Australia Pty Ltd, Woodside Energy (North West Shelf) Pty Ltd, Chevron Australia Pty Ltd, Japan Australia LNG (MIMI) Pty Ltd, CNOOC NWS Private Ltd, and Shell Developments (Australia) 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 be consulted and provide feedback.

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 carried out in a manner 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 affected by the activities under this EP, we would like to hear from you by **27 August 2025**.

consultation@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: The Goodwyn Alpha (GWA) platform. The Greater Western Flank Phase 4 (GWF-4) Project intends to partially fill ullage (unused production capacity) at the existing GWA facility.

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.

1 Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan | July 2025

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Table 1 – Activity and Location Summary

Greater Western Flank 4 (GWF-4) Drilling and Subsea Installation Environment Plan	
Activity details	• Mooring installation for the MODU (including piling). • Development drilling. • Pre and post- lay survey activities. • Installation of subsea infrastructure. • IMMR. • Tie-in to existing subsea infrastructure. • Pre-commissioning testing.
Titles	Production Licence: WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6.
Infrastructure	Subsea: • Wilcox: Xmas trees and wellheads, flowlines, electro-hydraulic umbilicals (EHUs), manifolds, pipeline end terminations (PLETs), flowline end termination (FLET), umbilical termination assemblies (UTAs), electrical flying leads (EFLs), hydraulic flying leads (HFLs), flexible pipe jumpers, rigid spools, subsea intensifiers. • Nearfield Infill: flowlines, UTAs, EFLs, HFLs, flexible pipe jumpers, cooling skids, pressure protection systems, and accumulator modules. MODU: moored, hybrid (moored and DP) MODU will be used.
Vessels	• PIV for installing the subsea infrastructure • Inspection, monitoring, maintenance and repair (IMMR) vessel for Xmas tree installation, isolation testing, IMMR or contingent activities. • Support vessels including barge(s), heavy lift vessel(s) (HLVs), multi-service construction vessel(s), anchor handling vessel(s) and general supply/support vessels.
Operational area and exclusion zones	The location of infrastructure is marked on nautical charts. The Operational Area includes: • A radius of 4,000 m from each well to allow for MODU mooring. • 1.5 km radius (3,000 m corridor) around subsea installation locations in which subsea installation and pre-commissioning activities will occur, to allow for the movement and position of vessels.
Communication with mariners	Marine notices will be issued prior to activity commencement to alert vessels which may be operating in waters nearby. Commercial fishers and other marine users are permitted to use the Operational Area but are prohibited from entering a 500 m petroleum safety zone around the riser turret mooring system and wells to avoid interactions between vessels and the operations, unless authorised by Woodside.
Distance to nearest marine park/nature reserve	• Montebello Islands Marine Park (WA) overlaps south west of the Operational Area. • Montebello Marine Park – Multiple Use Zone (Cth) overlaps the south west of the Operational Area. • Dampier Marine Park – Habitat Protection Zone (Cth) ~115 km south east of the Operational Area.

Activity Location

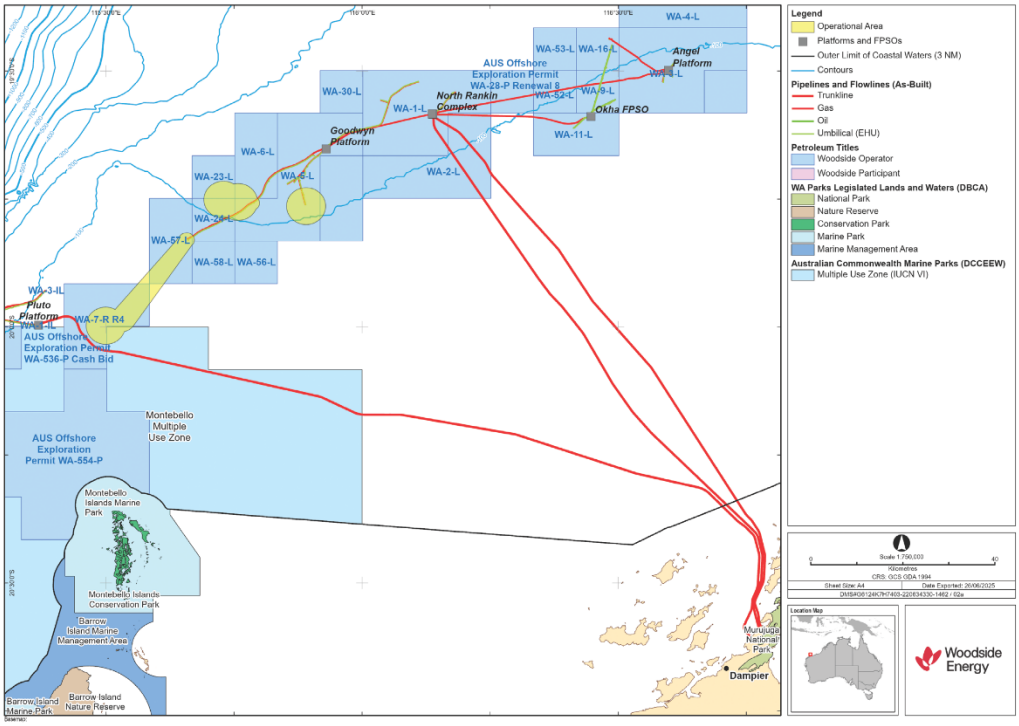


Figure 2. Location of the activity, including Operational Area and associated infrastructure.

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Table 2 – Approximate locations of key infrastructure within the scope of the GWF-4 Drilling and Subsea Installation EP

Structure	Water Depth (m)	Latitude	Longitude	Titles
New Wells and Manifolds				
WCA01	~	19° 59'51.396"S	115° 29'57.696"E	WA-7-R
WCA02	~	19° 59'49.769"S	115° 29'57.7111"E	WA-7-R
YDA01	~	19° 45'04.365"S	115° 43'44.790"E	WA-24-L
ESA01	~	19° 45'20.342"S	115° 45'27.629"E	WA-24-L
TPA04	~	19° 45'49.5400"S	115° 53'26.051"E	WA-5-L
Contingent WCA	~			WA-7-R
Wilcox manifold	~			WA-7-R
Echo Yodel manifold	~			WA-24-L
Existing Manifolds				
LPA manifold				WA-57-L
KDA manifold				WA-5-L
TPA manifold				WA-5-L
Flowlines				
Wilcox (starting point)				WA-7-R
Wilcox (end point)				WA-57-L
Flowlines and flexibles		Flowlines will connect wells to YDA and then to KDA and TPA. The exact location may vary during installation.		WA-



Figure 3: The Goodwyn Alpha (GWA) platform. The Greater Western Flank Phase 4 (GWF-4) Project intends to partially fill ullage (unused production capacity) at the existing GWA facility.

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Environment that May Be Affected (EMBA)

The EMBA is the largest geographic area where an unplanned event could potentially have an environmental consequence on the surrounding environment. 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 loss of well containment and 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**.

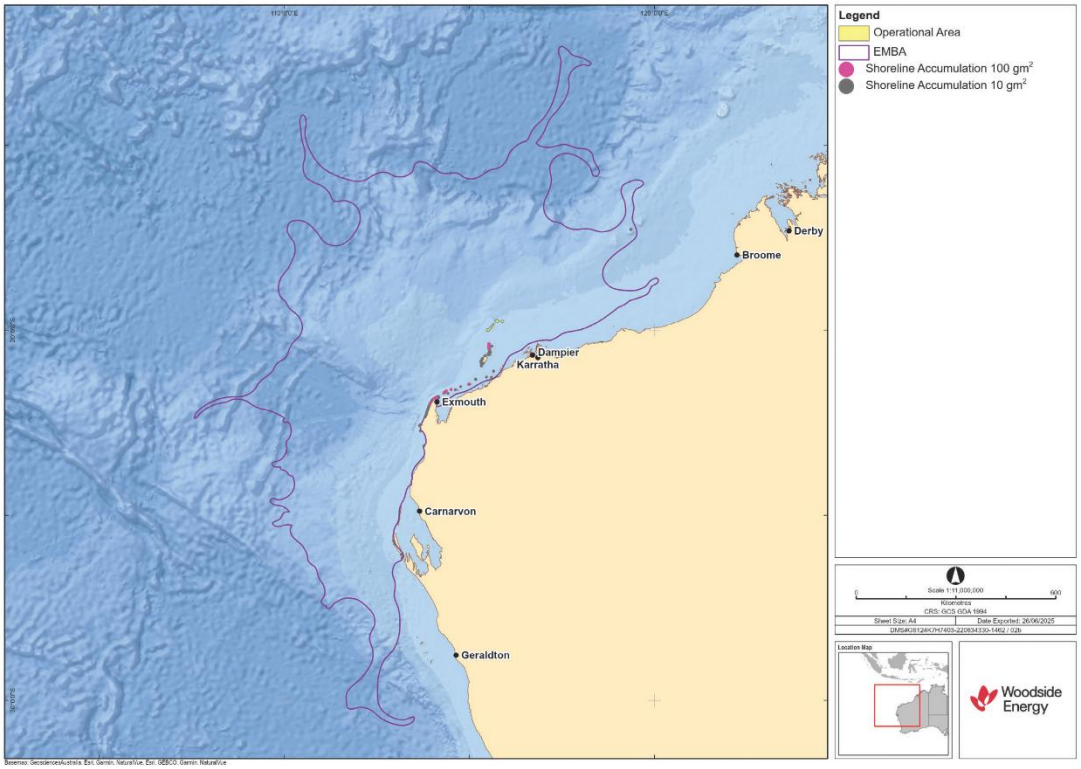


Figure 4: The Operational Area and Environment that May Be Affected (EMBA) by the GWF-4 Drilling and Subsea Installation EP.

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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 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 MODU and subsea wells/Infrastructure as well as offshore support vessels. • Activity execution may occur at any time during the project timeline.	• Localised impact with no lasting effect arising from: – Subsea wells and infrastrcture with the potential to interact with marine users such as commercial fisheries where fishing methods are at or close to the seabed. – Displacement or exclusion of other marine users when the MODU or vessels are in the field.	• Vessels adhere to regulatory requirements for navigational safety. • Notify relevant government departments, fishing industry representative bodies and licence holders of activities prior to commencement and on completion of activities. • Notify the Australian Hydrographic Service (AHS) prior to commencement of the activity to enable them to update maritime charts ensuring marine users are aware of the activity. • Where activities overlap a defence area. notify Department of Defence of activities no less than five weeks before the scheduled activity commencement date. • Consult with relevant persons so they are informed of the proposed activities.
Physical presence: ***disturbance to seabed***	Seabed disturbance may result from: • Drilling operations (including preparation activities). • Installation of subsea infrastructure. • Contingency activities (including well interventions, workovers).	• Localised impact 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 fauna.	• Assessments of seabed sensitivities will be undertaken to support subsea Infrastructure placement. • Infrastructure will be placed on the seabed within the predefined design footprint using positioning technology to limit seabed disturbance. • Infrastructure wet parked (temporarily placed) on the seabed will be tracked and removed. • MODU well site locations will consider seabed sensitivities.
Routine acoustic emissions: generation of noise during routine operations - generation continuous	Noise generated in the Operation Area from: • MODU and support vessel thruster engines, propellers. • Drilling operations. • Contingency activities. • Positioning equipment.	Localised minor impact arising from: • Behavioural changes to marine fauna around MODU, Installation vessel, and support vessels. • Behavioural changes to marine fauna during piling Installation.	• Project vessels comply with *EPBC Regulations 2000 – Part 8 Division 8.1 Interacting with cetaceans.* • Implement an adaptive management procedure prior to support vessels coming alongside the MODU and installation vessel.
Routine acoustic emissions: generation of noise during routine operations - generation impulse	Noise generated in the Operation Area from: • Geotechnical surveys (SSS, MBES, SBP). • Drilling transponders. • Piling Installation.		

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Impact/Risk	Description of Source of Impact/Risk	Description of Impact/Risk	Proposed Mitigation and/or Management Measure
Routine and non-routine discharges: project vessels	• Sewage, greywater and macerated food waste will be discharged from project vessels and the MODU. • Bilge water, deck drainage and brine and cooling water may also be discharged.	Localised impact with no lasting effect arising from: • Change in marine water quality, which may affect marine fauna.	• MODU, subsea Installation vessel and support vessels will comply with Marine Orders. • Assessment of chemicals used following Woodside's Chemical Selection and Assessment Environment Guideline.
Routine and Non-routine discharges: Drill cuttings and Drilling Fluids ***Routine and non-routine discharges: cement, cementing fluids, subsea well fluids, produced water, unused bulk product and subsea chemicals*** ***Routine and non-routine discharges: produced water.***	Routine and non-routine drilling discharges such as: NWBM, swarf, cements, cuttings, drilling chemicals, well fluids, bulk products during and produced water (if discharge from MODU required).	• Localised impact arising from: – Temporary reduction in water quality. – Sediment deposition. – Accumulation of drill cuttings resulting in minor and short term impacts to benthic communities. – Potential contamination and toxicity effects to benthic and in-water biota.	• Assessment of chemicals used following Woodside's Chemical Selection and Assessment Environment Guideline. • No top-hole locations within the Montebello Marine Park. • Options for use of excess bulk cement, bentonite and barite will be managed as per Woodside's Management process for excess bulk product. • Displacement, brine, intervention, or returned well fluids contaminated with hydrocarbons will be treated prior to discharge or contained. If discharge specification cannot be met the fluid will be returned to shore. • Maintain average OOC at <6.9% by weight on wet cuttings (for sections drilled with NWBM). • Solids Control Equipment (SCE) used to treat drill cuttings returned to the MODU prior to discharge. • During well unloading and completion activities, if produced water is not flared, it will be processed through a water filtration treatment package prior to discharge to the environment.
Routine and non-routine atmospheric and Greenhouse Gas (GHG) emissions	• Atmospheric and GHG emissions generated from flaring or venting, power generation, and fuel combustion.	• Localised impact with no lasting effect arising from: – Localised reduction in air quality in the immediate vicinity. – Contribution to global GHG emissions.	• Comply with regulatory requirements relating to GHG emissions and reporting. • Vessels comply with Marine Orders for pollution prevention to air.
Routine light emissions	• External light emissions from MODU and project vessels and submersible equipment. • Light emissions from MODU operations - flaring.	• Localised impact with no lasting effect arising from: – Change in ambient light resulting in change in fauna behaviour.	• Lighting to be limited to the minimum required for navigational and safety requirements except for emergency events. • Implementation of Woodside Offshore Seabird Management Plan. • Flaring restricted to a duration necessary to achieve the well objectives, eliminating unnecessary flared volumes and corresponding light emissions.
Unplanned events (accidents / incidents)			
Physical presence (unplanned): interaction with marine fauna and avifauna	• Accidental collision between project vessels/MODU and protected marine fauna. • potential changes to avifauna behaviour.	• Potential minor impact with high recoverability arising from: – Injury or death to marine fauna (single individual) including protected species. – Behavioural changes on seabirds utilising vessels as resting points.	• Adhere to the EPBC Regulations 2000 – Part 8 Division 8.1 Interacting with cetaceans. • Environmental induction of all relevant vessel crew.
Physical presence (unplanned): Introduction of Invasive Marine Species (IMS)	• Vessels and submersible 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.	• Potential moderate impact with moderate recoverability arising from: – Introduction and establishment of IMS in the Operational Area.	• Ballast water and biofouling will be managed according to regulatory requirements, including the Australian Ballast Water Management Requirements, and the Australian Biofouling Management Requirements (international vessels), as applicable. • Woodside's IMS risk assessment process will be applied to project vessels and immersible equipment entering the Operational Area.

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Impact/Risk	Description of Source of Impact/Risk	Description of Impact/Risk	Proposed Mitigation and/or Management Measure
Physical Presence: (unplanned) Seabed Disturbance	• Dropped objects (including wellhead). • Loss of station-keeping of MODU leading to seabed disturbance.	• Potential localised impact arising from: – Localised disturbance to benthic habitat (fish, benthic communities, Key Ecological Features). – Reduction in water and sediment quality. – Disruption to marine fauna.	• Station-keeping systems and mooring system testing implemented as per project-specific Mooring Design Analysis. • Dropped objects to be recovered where safe and practicable to do so.
Unplanned discharges: hazardous and non-hazardous solid waste/equipment	• Accidental, unplanned loss of hazardous or non-hazardous solid wastes/equipment to the marine environment may occur if dropped or blown overboard.	• Potential localised impact with no lasting effect arising from: – Reduction in water and sediment quality. – Disruption to marine fauna.	• Comply with Marine Orders for the prevention of marine pollution. • Implement waste management procedures which provide for safe handling and transportation, segregation and storage and appropriate classification of waste generated. • Lost waste or dropped objects will be recovered, where safe and practicable.
Unplanned discharges: Hydrocarbon and Chemicals	• Accidental discharge of hydrocarbons/chemicals from MODU or project vessels deck activities and equipment. • Accidental discharge of WBM or NWBM to marine environment due to failure of slip joint packers, bulk transfer hose/fitting, emergency disconnect system or from routine MODU operations.	• Potential minor level impact arising from: – Reduction in water and sediment quality. – Disruption to marine fauna. – Archaeological and intangible cultural heritage damage.	• Comply with Marine Orders for the prevention of marine pollution. • Where there is potential for loss of primary containment of oil and chemicals on the project vessels, deck drainage must be collected via a deck drainage management system. • Spill kits positioned in high-risk locations around the vessel (near potential spill points such as transfer stations). • Assessment of chemicals used following Woodside's Chemical Selection and Assessment Environment Guideline.
Unplanned Hydrocarbon Release: Gas/Condensate	• Loss of hydrocarbons to the marine environment due to loss of well control.	• Potential moderate level impact arising from: – Reduction in water and sediment quality. – Disruption to marine fauna including protected species. – Potential archaeological and intangible cultural heritage damage. – Potential disturbance to tourism, recreation, and commercial fisheries.	**Preventing loss of well control**: • OPGGS (Resource Management and Administration) Regulations 2011: accepted WOMP which describes the well integrity outcomes, control measures and performance criteria used to demonstrate how the risk of loss of well integrity is managed to ALARP including the well design and barriers to be used to prevent a loss of well integrity, which aligns with industry guidance and good practice. • An approved Source Control Emergency Response Plan will be prepared prior to drilling each well. • Subsea BOP specification, installation and testing compliant with Woodside Standards. **Spill response arrangements**: • Develop a project specific Oil Pollution Emergency Preparation document (OPEP) including first strike response plan. • Arrangements supporting the Oil Pollution Emergency Preparation document (OPEP) will be tested to ensure the OPEP can be implemented as planned.
Unplanned hydrocarbon release: Marine diesel	Loss of marine diesel to the environment during vessel and MODU operations arising from: • Bunkering/refuelling. • Vessel collision (e.g. MODU, support vessels, or other marine users).	• Potential minor level impact with high recovery arising from: – Reduction in water quality. – Disruption to marine fauna including protected species. – Interference with or displacement of other marine users including activities of other regional petroleum activities.	**Preventing loss of marine diesel**: • Project vessel comply with Marine orders for safe vessel operations. • Establishment of a temporary 500 m exclusion zone around MODU /Installation vessel and communicated to marine users. • Support vessel on standby as per the MODU safety case during the Petroleum Activity. **Spill response arrangements**: • Arrangements supporting the Oil Pollution Emergency Preparation document (OPEP) will be tested to ensure the OPEP can be implemented as planned. • Emergency response activities would be implemented in line with the OPEP.

**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.*

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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 contact Woodside before **27 August 2025** via:

consultation@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 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 EP 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



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6.1.2 Summary information sheet

Woodside Energy

Summary Consultation Information Sheet
July 2025

Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation 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 communities 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 First Nations 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 **27 August 2025**.

Email: **feedback@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: The Goodwyn Alpha (GWA) platform

Activity Overview

- The Greater Western Flank Phase 4 (GWF-4) Project intends to partially fill ullage (unused production capacity) at the existing Goodwyn Alpha (GWA) facility.
- The GWF-4 Drilling and Subsea Installation EP comprises drilling offshore wells in nearfields and the Wilcox Field, which will be tied back to existing GWF subsea infrastructure.
- Woodside plans to drill up to six wells.
- The EP will also cover installation and pre-commissioning of subsea infrastructure.

Location

- In Commonwealth waters ~140 km north-west of Karratha, WA (**Figure 2**).

Water Depth

- ~40 m – 160 m deep.

Timing

- Drilling activities: Q3 2026 to Q2 2028 (~90 days per well, up to an expected total of 450 days).
  - Contingency 2029.
- Subsea Installation:
  - Nearfield: Q3 2027 to Q1 2028, ~3 months.
  - Wilcox Field: Q4 2027 to Q2 2028, ~6 months.
  - Contingency 2029.
- Decommissioning is not planned during the next 5 years.

Duration

- When activities occur, operations will run 24 hours a day, 7 days a week. Simultaneous Operations of drilling and subsea installation activities may occur.
- Inspection, Monitoring, Maintenance and Repair (IMMR) activities take place as required.

Joint Venture

- Operator – Woodside Energy Ltd.
- Joint Venture – Woodside Energy Ltd, BP Developments Australia Pty Ltd, Woodside Energy (North-West Shelf) Pty Ltd, Chevron Australia Pty Ltd, Japan Australia LNG (MIMI) Pty Ltd, CNOOC NWS Private Ltd, and Shell Developments (Australia) Pty Ltd.

1

Greater Western Flank (GWF-4) Drilling and Subsea Installation Environment Plan | July 2025

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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.

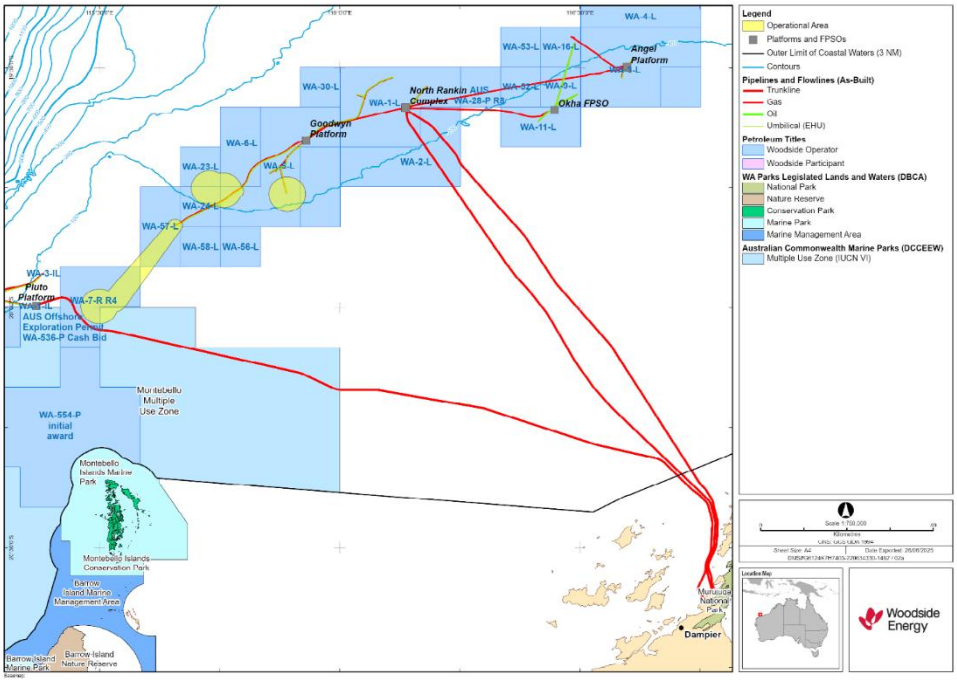


Figure 2: Location of the activity, including Operational Area and associated infrastructure

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.

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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.

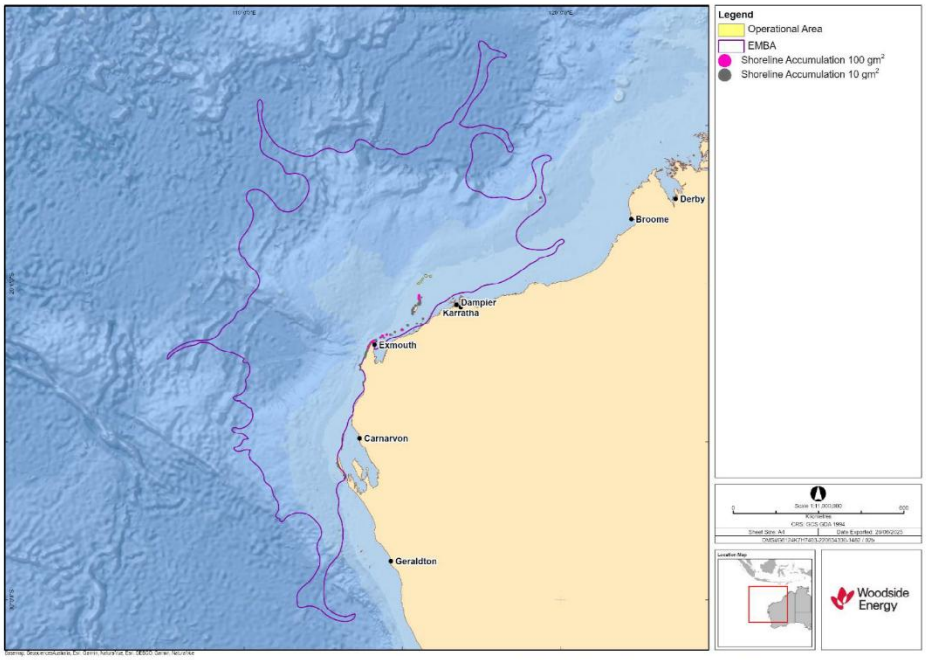


Figure 3: The Operational Area and Environment that May Be Affected (EMBA) map for the GWF-4 Drilling and Subsea Installation EP

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:

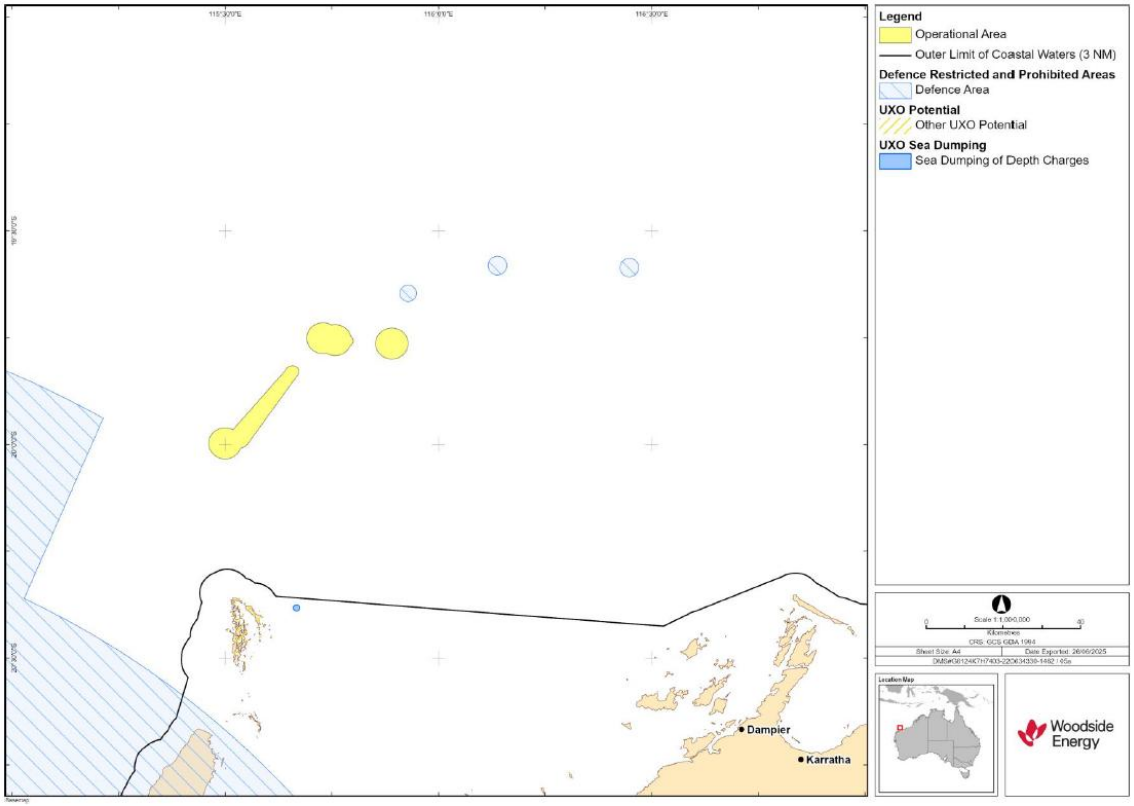
- Identifying additional possible measures to reduce environmental impacts.
- Helping us consider cultural heritage and environmental values.
- Providing information that may help improve Woodside's environmental practices.

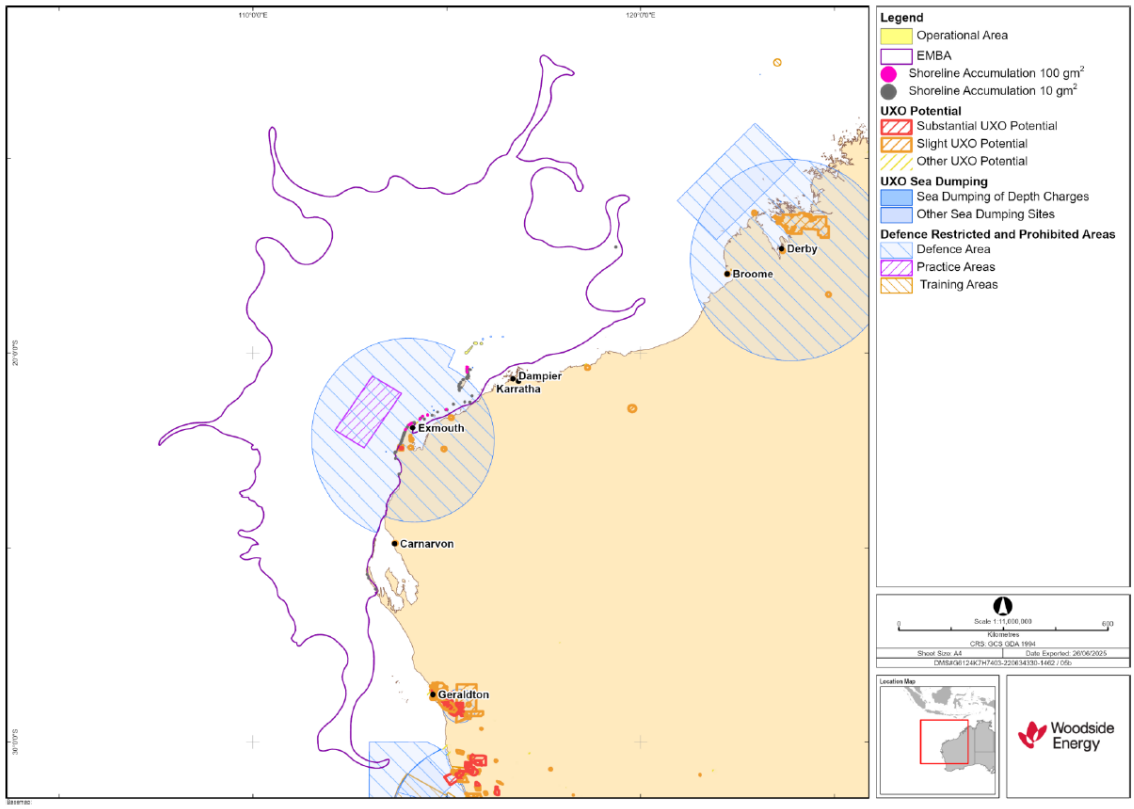
If there is particular information that you provide during consultation that you'd prefer not to be published, please let us know. We'll make your request known to NOPSEMA.

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.

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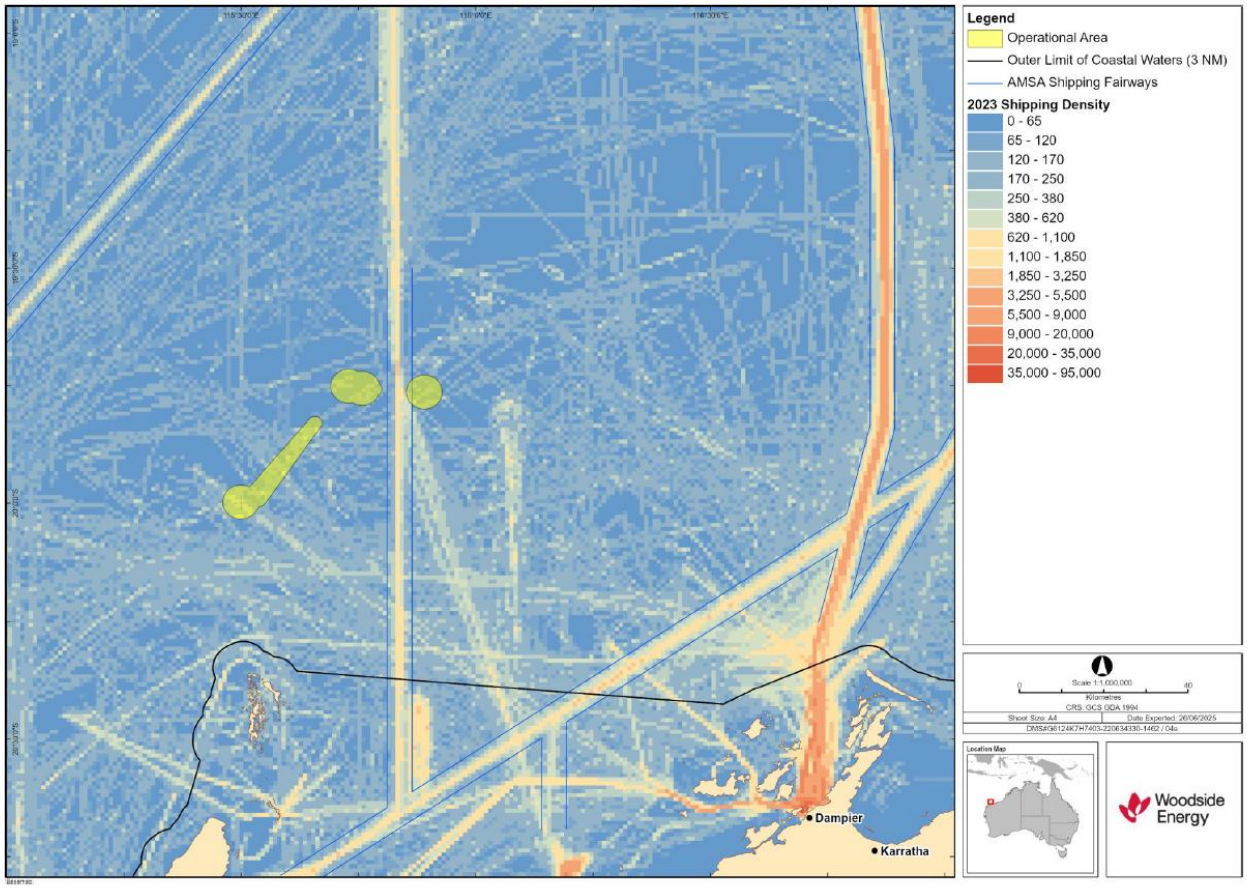
6.1.3 Defence zones maps





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6.1.4 Vessel density map



6.1.5 WA shipwrecks

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State Shipwrecks – GWF-4 Drilling and Subsea Installation Environment Plan

Vessel name	Vessel type	When lost	Where lost	Latitude	Longitude
Jane Bay One Unidentified		unknown	Jane Bay	22°43.93902	113°43.9272
Cock of the North	Ketch (Aux)	1879/05/07	20 km north of Geraldton	22°33	113°30
Correio da Azia	Ship	1816/11/25	Point Cloates	22°51.80598	113°45.04002
Chofuku Maru	Steamer screw	5/02/1931	Point Cloates	22°31.053	113°39.779
Don Joseph	Lugger	1899/04/30	5-7 NM south of Point Cloates	22°37	113°36
Emma	Schooner	1867/03	Coral Bay	23°04.953	113°44.010
Bertha	Cutter	1874/07/20	Reef off Point Cloates	22°33	113°30
Fairy Queen ex Rhio	Brigantine	1875/10/08	Northwest Cape	21°49.029	114°11.347
G.S.S.	Lugger	1883	Pt Cloates	22°33	113°30
Gem	Lugger	1893/03/25	North West Cape	21°37	113°59
Wyndham	Schooner	26/01/1910	Point Cloates	22°33	113°30
Perth	Steamship	1887/09/17	Point Cloates	22°41.548	113°38.536
Queen	Cutter	1892/01/25	Off Point Cloates	22°33	113°30
Rapid	Ship	1811/01/07	Ningaloo Reef	22°44.36628	113°41.55858
Rose	Lugger	27/04/1908	Ashburton	21°35	114°50
Iona	Barque	16/04/1923	Point Cloates, entering Black Rock Passage	22°48	113°38
See Taube		1954	North-east of Rowley Shoals	17°00	118°45
Stefano	Barque	1875/10/27	Point Cloates	22°49.613	113°43.271
Strathmore	Barque	1870	Point Cloates	22°33	113°30
Shunsei Maru		5/02/1931	Carbaddaman Passage, north of Point Cloates	22°25	113°41
Mildura	Steamer	1166	North-West Cape	21°47.04552	114°10.0641
Trial	Ship	1622/05/24	Trial Rocks	20°17.159	115°22.514
Pelsart (Pelsaert)	Cutter	15/10/1908	12 miles Northwest of Imperieuse Reef, Rowley Shoals	17°34	118°35

Sydney HMAS	Warship	19/11/1941	113 n miles W of Steep Point	26°14.6166667	111°13.05
Marietta		8/02/1905	Barrow Island	20°00	115°10
Vianen	Ship	1628/01/25	Barrow Island Area	20°00	115°10
Wild Wave (China)	Brig	1873/08/30	Monte Bello Island	20°00	115°10
McCormack	Barge	1989/10/00	N.E. tip of Eaglehawk Island West of Dampier, Dampier Archipelago	20°08.200	115°57.200
Point Cloates Unidentified/ Ningaloo Reef Unidentified		unknown	North of Correio da Azia site	22°51.768	113°44.70402
Plym HMS	Warship	17808	Trimouille Island Island	20°24.208	115°33.950
Parks Lugger		unknown	Hermite Island. Montebello Islands	20°28.62492	115°31.71108
Dampier		unknown	Enderby Island, Dampier Archipelago	20°31.4	116°14.2
Norwegian Bay Unidentified Barge		unknown	Off Norwegian Bay Whaling Station	22°35.54616	113°40.23432
Emlyn Castle		1960		21°47.0833	114°09.9
Haw Kiet		2003		18°27.49	117°15.5
Kadna		1902	1902	17°57.7	112°14.183
Maratta		1905		20°43.67	115°25.567
Marutta		1905		20°43.67	115°25.57
Perentie		8/11/1976	Barrow Island	20°43.67	115°25.57
Tropic Queen		9/04/1975		20°26	115°30.05
Mauds Landing		unknown		23°06.83664	113°46.52766
Benan		1888/12/13	Point Cloates	22°44.491	113°40.47
Curlew	Lugger	7/02/1911	At Onslow, Monte Bellos Group	20°00	115°10
Kormoran HSK		19/11/1941	150 miles of Carvarvon	26°05.823333	111°13.4583333
Veronica	Lugger	1928/07	Sunday Island, Exmouth Gulf	21°41	114°23
Lady Ann	Ship (non-sail)	18/09/1982	24 miles north of NW Cape	21°24	114°12
Fin	Steamship	15/01/1923	Point Cloates, Fraser Island	22°38.856	113°37.696
Patience	Schooner	13/07/1930	Between Red Bluff and Cape Cuvier	24°00	113°12
S.S.S.		7/02/1901	Off Point Cloates	22°39.5	113°35

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Zvir	Steamship	27/11/1902	Point Cloates	22°36.55	113°37.56
Occator	Brigantine	1856/02/09	Around 55 kilometres south of the Cape at Carbaddaman Passage	22°25	113°41
McDermott Derrick Barge No 20	Barge	20/10/1989	N.E. tip of Eaglehawk Island, Dampier Archipelago	20°08.200	115°57.200
Norwegian Bay Whaling Station boat	Boat	1990	10 m N of whaling station jetty	22°35.56475	113°40.2941
Jane Bay Two Unidentified		unknown	Jane Bay, Point Cloates	22°44.27100	113°44.39898
Tantabiddi Lagoon Admiralty anchor			Tantabiddi Lagoon	21 54.843	113 57.779
Experimental shell pool	Other		North Delta Island, Monte Bello Islands	20°25.910546	115°32.605015

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6.1.6 Commonwealth shipwrecks

Commonwealth shipwrecks – GWF-4 Drilling and Subsea Installation Environment Plan

Vessel name	Vessel type	When lost	Where lost	Latitude	Longitude
Olive	Sailing vessel	1916	Dorre Island, Carnarvon	-24.85	112.9166667
Olive	Sailing vessel	1893	Exmouth Gulf	-21.75	114.0833333
Parks Lugger	Sailing vessel		Hermite Island. Montebello Islands	-20.477082	115.528518
Patience	Trawler	1959	Geraldton	-26.66666667	112
Pearl	Sailing vessel	1896	Exmouth Gulf, Meda Creek	-21.75	114.0833333
Pearline	Sailing vessel	1893	Shark Bay	-24.5	113
Perseverant's Boat	Unknown	1841	South of Java Head	-24.25	112
The Two Friends	Sailing vessel	1925	Off Dirk Hartog Island	-25.31666667	112.7833333
Two Sons	Sailing vessel	1902	Shark Bay	-24.5	113
Vergo	Sailing vessel	1893	Shark Bay area	-24.25	112
Vianen	Sailing vessel	1628	Barrow Island Area	-20	115.1666667
Stranger	Sailing vessel	1893	Shark Bay	-24.5	113
Strathmore	Sailing vessel	1870	Point Cloates	-22.55	113.5
Sydney HMAS	Cruiser	1941	113 n miles W of Steep Point	-26.24361111	111.2175
Prince Charlie	Sailing vessel	1850	Shark Bay	-24.5	113
Puffin	Unknown	1964	Near Geraldton	-26.66666667	112
Queen	Sailing vessel	1891	Off Point Cloates	-22.55	113.5
Rapid	Sailing vessel	1811	Ningaloo Reef	-22.739438	113.692643
Rosella	Sailing vessel	1928	Near Geraldton	-26.66666667	112
Viking	Trawler	1958	Horrock's Beach	-26.66666667	112
Vittoria	Unknown	1929	Dorre Island	-24.83333333	112.9333333
Wild Wave (China)	Sailing vessel	1873	Monte Bello Island	-20	115.1666667
Zvir	Twin screw steamer	1902	Point Cloates	-22.60916667	113.626
S.S.S.	Unknown	1901	Off Point Cloates	-22.65	113.5833333
Scout	Sailing vessel	1918	Geraldton	-26.66666667	112
Seagull	Sailing vessel	1893	Shark Bay area	-24.25	112
Shunsei Maru	Unknown	1931	Carbaddaman Passage, north of Point Cloates	-22.41666667	113.6833333
Smuggler	Sailing vessel	1893	Exmouth Gulf	-21.75	114.0833333
Gift	Sailing vessel	1898	Shark Bay Area	-24.25	112
Haw Kiet	Unknown	2003		-18.45816667	117.2583333
Hawk	Sailing vessel		Around 55 kilometres south of the Cape at Carbaddaman Passage	-22.45	113.73333
Helena Mena	Sailing vessel	1898	Dirk Hartog Island	-25.31666667	112.7833333
Hildas	Sailing vessel	1893	Shark Bay	-24.5	113
Idahlia	Sailing vessel	1898	Shark Bay, Willieman	-24.25	112
Jane Bay One Unidentified	Unknown		Jane Bay	-22.732317	113.73212
Julie Dawn	Trawler	1971	Near Geraldton	-26.66666667	112
Junee	Trawler	1967	Geraldton	-26.66666667	112
Kadna	Unknown	1902	1902	-17.96166667	112.2363833
Mabel	Sailing vessel	1893	Exmouth Gulf	-21.75	114.0833333
Marietta	Unknown	1905	Barrow Island	-20	115.1666667
Marutta	Unknown	1905		-20.72783333	115.4261667
Matchless	Sailing vessel	1893	Shark Bay	-24.5	113
May	Sailing vessel	1872	Geraldton	-26.66666667	112
Koombana	Twin screw steamer	1912	Port Hedland and Broome, Bedout Island	-19.4	118.9
Kormoran HSK	Unknown	1941	150 miles of Carvarvon	-26.09705555	111.2243056

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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
Cheryl D	Trawler	1962	Eve's Passage, Geraldton	-26.66666667	112
Cock Of The North	Sailing vessel	1879	Point Cloates	-22.55	113.5
Correio da Azia	Sailing vessel	1816	Point Cloates	-22.8628	113.7450667
Agnes	Sailing vessel	1893	Exmouth Gulf	-21.75	114.0833333
Alexandra	Sailing vessel	1872	Geraldton	-26.66666667	112
Alfred	Sailing vessel	1908	Off north-west coast	-17	118.75
Amelia	Sailing vessel	1874	Shark Bay	-24.5	113
Anxiety	Sailing vessel	1898	Shark Bay area	-24.25	112
Arab	Sailing vessel	1921	Geraldton	-26.66666667	112
Barbara Gay	Trawler	1962	Near Geraldton	-26.66666667	112
Beatrice	Sailing vessel	1899	Off North-West Cape	-21.61666667	113.9833333
Bell	Sailing vessel	1893	Exmouth	-21.75	114.0833333
Benan	Sailing vessel	1888	Point Cloates	-22.74151667	113.6745
Bertha	Sailing vessel	1874	Reef off Point Cloates	-22.55	113.5
Beryl Joyce	Trawler	1957	Gap at Northampton	-26.66666667	112
Elizabeth	Sailing vessel	1893	Exmouth Gulf	-21.75	114.0833333
Eveline	Sailing vessel	1893	Shark Bay	-24.5	113
Fin	Single screw steamer	1923	Point Cloates, Fraser Island	-22.6476	113.6282667
Florence	Sailing vessel	1893	Exmouth Gulf	-21.75	114.0833333
Don Joseph	Sailing vessel	1899	6.5 Kilometres North of Point Cloates	-22.61666667	113.6
Mildura	Twin screw steamer	1907	North-West Cape	-21.784092	114.167735

Norwegian Bay Unidentified Barge	Barge		Off Norwegian Bay Whaling Station	-22.592436	113.670572
Occator	Sailing vessel	1856	Around 55 kilometres south of the Cape at Carbaddaman Passage	-22.41666667	113.6833333
Tanami	Sailing vessel		Trial Rocks	-20.28333	115.36666
Trial	Sailing vessel	1622	Trial Rocks	-20.28598333	115.3752333
Unidentified Boat (2)	Unknown	1893	Shark Bay	-24.5	113
Patience	Sailing vessel	1930	Between Red Bluff and Cape Cuvier	-24	113.2
Pelsart (Pelsaert)	Sailing vessel	1908	12 miles off Imperieuse Reef, Rowley Shoals	-17	118.75
Perentie	Unknown	1976	Barrow Island	-20.72783333	115.4261667
Perseverant's Boat	Unknown	1841		-24.25	112
Perth	Twin screw steamer	1887	Point Cloates	-22.69246667	113.6422667
Point Cloates Unidentified	Unknown		Near Correio da Azia site	-22.86343333	113.7506667
Unidentified Lugger	Unknown	1893	Exmouth Gulf	-21.75	114.0833333
Unidentified Luggers (Various)	Unknown	1883	Shark Bay and Exmouth Gulf	-26.66666667	112
Veronica	Sailing vessel	1928	Sunday Island, Exmouth Gulf	-21.68333333	114.3833333
Lily Of The Lake	Sailing vessel	1875	Exmouth Gulf	-21.75	114.0833333
Louisa	Sailing vessel	1893	Shark Bay	-24.5	113
Rose	Sailing vessel	1908	Ashburton	-21.58333333	114.8333333
Ruby	Sailing vessel	1893	Exmouth Gulf	-21.75	114.0833333
Sarah	Sailing vessel	1893	Shark Bay	-24.5	113
Sea Queen	Sailing vessel	1893	Exmouth Gulf	-21.75	114.0833333
See Taube	Unknown	1954	North-east of Rowley Shoals	-17	118.75
Sisters	Sailing vessel	1893	Shark Bay	-24.5	113
Star	Sailing vessel	1876	Shark Bay to Geraldton	-24.5	112

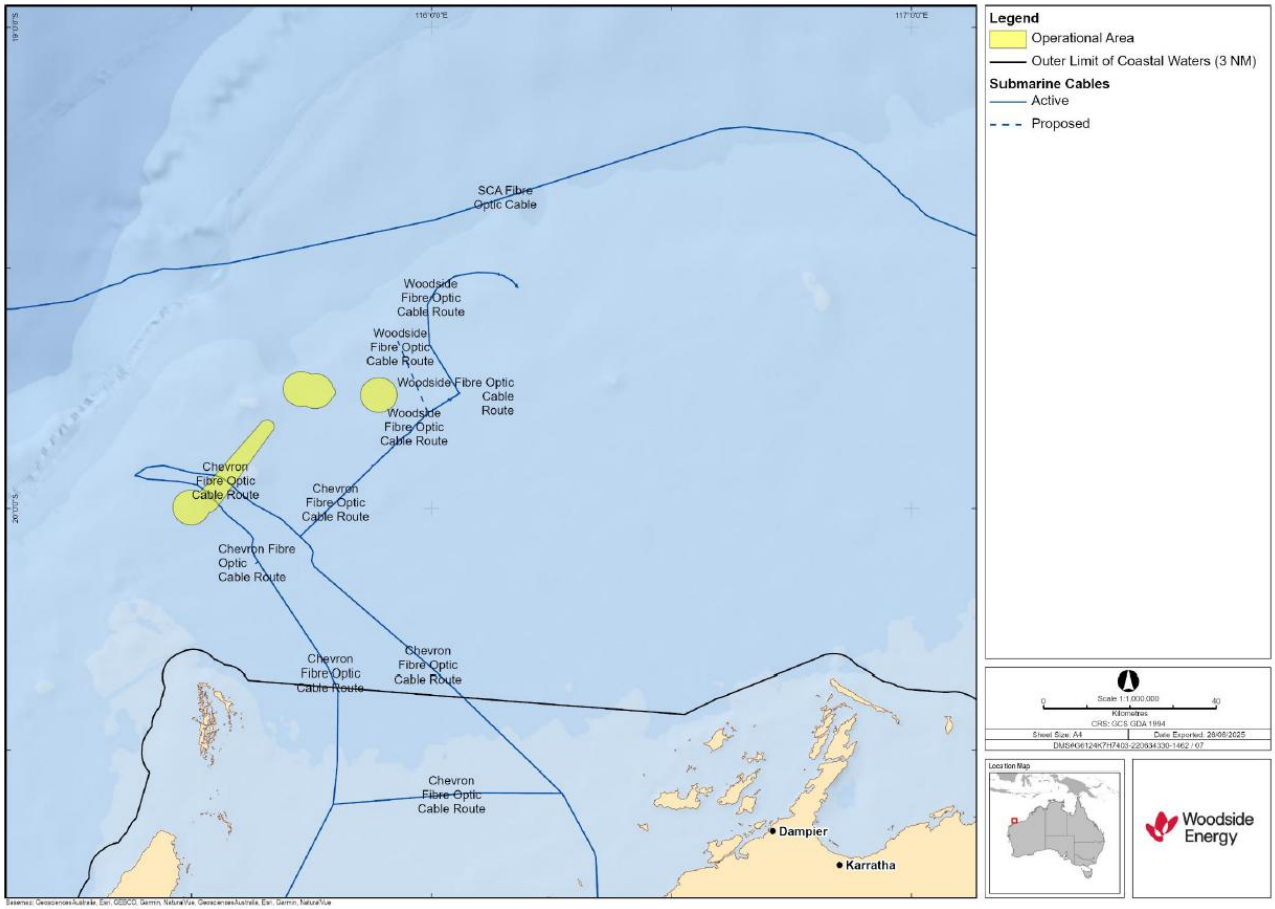
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Star Of The North	Sailing vessel	1893	Shark Bay	-24.5	113
Stefano	Sailing vessel	1875	Point Cloates	-22.82688333	113.7211833
Wild Wave	Sailing vessel	1875	Exmouth Gulf	-21.75	114.0833333
Wyndham	Sailing vessel	1910	Point Cloates	-22.55	113.5
Fairy Queen	Sailing vessel	1875	Exmouth N W Cape	-21.81715	114.1891167
G.G.S.	Sailing vessel	1883	Pt Cloates	-22.55	113.5
Gem	Sailing vessel	1893	North West Cape	-21.61666667	113.9833333
Genesta	Unknown	1909	Off Dorre Island	-24.83333333	112.9333333
Chofuku Maru	Twin screw steamer	1931	Point Cloates	-22.51755	113.6629833
Crighton	Launch	1921	Island Homestead	-24.25	112
Dot	Sailing vessel	1893	Shark Bay	-24.5	113
Ellen	Sailing vessel	1893	Exmouth Gulf	-21.75	114.0833333
Emlyn Castle	Unknown	1960		-21.78472167	114.165
Emma	Sailing vessel	1867	Coral Bay	-23.08255	113.7335
Era	Trawler	1928	Geraldton	-26.66666667	112
Iona	Sailing vessel	1923	Point Cloates, entering Black Rock Passage	-22.8	113.6333333
Judith Ann	Trawler	1972	Near Geraldton	-26.66666667	112
Just In Time	Sailing vessel	1898	Williemia	-24.25	112
Kapala	Unknown	1964	Exmouth Gulf	-21.75	114.0833333
Maratta	Unknown	1905		-20.72783333	115.4261167
Arabian	Sailing vessel	1872	Geraldton	-26.66666667	112
Moyne	Trawler	1957	Geraldton	-26.66666667	112
Curlew	Sailing vessel	1911	At Onslow, Monte Bellos Group	-20	115.1666667
Dampier	Trawler		Enderby Island, Dampier Archipelago	-20.52333333	116.2366667

Nellie	Sailing vessel	1893	Exmouth Gulf	-21.75	114.0833333
Jane Bay Two Unidentified			Jane Bay, Point Cloates	-22.73785	113.739983
Mauds Landing				-23.113944	113.775461
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
Norwegian Bay Whaling Station boat		1990	10 m N of whaling station jetty	-22.59274583	113.6715683
Plym HMS	Frigate	1952		-20.40346667	115.5658333
Tropic Queen		1975		-20.43333333	115.5008333

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6.1.7 Submarine communication cables map



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6.1.8 Email sent to Australian Border Force (ABF); Australian Maritime Safety Authority (AMSA) – Marine Pollution; Pilbara Ports Authority (PPA); Ningaloo Coast World Heritage Advisory Committee (NCWHAC); Department of Mines, Petroleum and Exploration (DMPE); Department of Industry, Science and Resources (DISR); Australian Energy Producers (AEP); Australian Conservation Foundation (ACF); Australian Marine Conservation Society (AMCS); Conservation Council of Western Australia (CCWA); Greenpeace Asia Pacific (GAP); The Wilderness Society (TWS); RAC Monkey Mia Dolphin Resort; Dirk Hartog Island; Shark Bay Community Resource Centre; Shark Bay Coastal Tours; Naturetime Tours; Wula Gura Eco Cultural Tours; Protect Ningaloo; Cape Conservation Group (CCG); Shire of Exmouth; Exmouth Community Liaison Group (CLG); Exmouth Chamber of Commerce and Industry; City of Karratha; Karratha Community Liaison Group (CLG); Karratha and Districts Chamber of Commerce and Industry; Shire of Broome; Broome Chamber of Commerce and Industry; Shire of Shark Bay; Shire of Carnarvon; Carnarvon Chamber of Commerce and Industry; Onslow Chamber of Commerce and Industry; 3D Energi; Allasso Energy; Beagle No 1; Bounty Oil and Gas; BP Developments Australia; Carbon CQ; Carnarvon Energy; Coastal Oil and Gas; Energy Resources; Exxon Mobil Australia Resources; Finder Energy; InCapture; INPEX Alpha; Jadestone; JX Nippon O&G Exploration; Longreach Capital; KATO Energy; KUFPEC; Kyushu Electric Wheatstone; OMV Australia; OPIC Australia; Pelstart Resources; PE Wheatstone; Santos; SK Earthon; Shell Australia; Skye Napoleon/Resources; Tanami Energy; Vermilion Energy; Western Gas – 30 July 2025

Woodside is planning to submit the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan. The GWF-4 Project, which covers Production Licences WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L, intends to partially fill ullage (unused production capacity) at the existing Goodwyn Alpha (GWA) facility and is located in Commonwealth waters ~140 km north-west of Karratha, Western Australia.

If you would like to comment on the proposed activity, please provide feedback to Woodside by **29 August 2025** using the details below.

Overview

The GWF-4 Drilling and Subsea Installation petroleum activities include:

Subsea tiebacks from nearfields and the Wilcox Field to existing GWF subsea infrastructure.

The drilling of up to six wells (WCA01, WCA02, YDA01, ESA01, TPA04 and contingent well WCA).

The installation and pre-commissioning of subsea infrastructure.

Consultation information

A Consultation Information Sheet is attached, which provides additional background on the proposed activities including summaries of potential key impacts and risks and associated management measures. This is also available on our website.

Activity and location summary

Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan	
Activity details	Activities include: ▪ Mooring installation for the Mobile Offshore Drilling Unit (MODU) (including piling).

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	▪ Development drilling. ▪ Pre- and post- lay survey activities. ▪ Installation of subsea infrastructure. ▪ Inspection, monitoring, maintenance and repair (IMMR). ▪ Tie-in to existing subsea infrastructure. ▪ Pre-commissioning testing.
Titles	Production Licence: WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L.
Location	In Commonwealth waters ~140 km north-west of Karratha, Western Australia.
Water depth	~ 40 m - 160 m deep
Timing	▪ Drilling activities: Q3 2026 to Q2 2028 (~90 days per well, up to an expected total of 450 days). Contingency 2029. ▪ Subsea Installation: • Nearfield: Q3 2027 to Q1 2028 ~ 3 months. • Wilcox Field: Q4 2027 to Q2 2028 ~6 months. • Contingency 2029. ▪ Decommissioning is not planned during the next 5 years.
Duration	▪ When activities occur, operations will run 24 hours a day, 7 days a week. Simultaneous Operations (SIMOPS) of drilling and subsea installation activities may occur. ▪ IMMR activities will take place as required.
Infrastructure	Key infrastructure includes, but is not limited to: ▪ Wilcox Field: Xmas trees and wellheads, flowlines, electro-hydraulic umbilicals (EHUs), manifolds, pipeline end terminations (PLETs), flowline end termination (FLET), umbilical termination assemblies (UTAs), electrical flying leads (EFLs), hydraulic flying leads (HFLs), flexible pipe jumpers, rigid spools, subsea intensifiers. ▪ Nearfield: Flowlines, UTAs, EFLs, HFLs, flexible pipe jumpers, cooling skids, pressure protection systems, and accumulator modules.
Vessels	Key vessels include, but are not limited to: ▪ Installation vessel for installing the subsea infrastructure. ▪ Inspection, monitoring, maintenance and repair (IMMR) vessel for Xmas tree installation, isolation testing, IMMR or contingent activities. ▪ Support vessels including barge(s), heavy lift vessel(s) (HLVs), multi-service construction vessel(s), anchor handling vessel(s) and general supply/support vessels. ▪ MODU: Moored, or hybrid (moored and dynamic positioning) MODU will be used.
Operational Area and exclusion zones	The location of infrastructure is marked on nautical charts. The Operational Area and exclusion zones include: ▪ A radius of 4,000 m from each well to allow for MODU mooring. ▪ 1.5 km radius (3,000 m corridor) around subsea installation locations in which subsea installation and pre-commissioning activities will occur, to allow for the movement and position of vessels. ▪ 500 m safety exclusion zone around the MODU and installation vessel.

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 loss of well integrity, and vessel collision.

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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.

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 **29 August 2025**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suit 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 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.

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 Communication Management Authority (ACMA); Telstra; Vocus – 29 July 2025

Woodside is planning to submit the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan. The GWF-4 Project, which covers Production Licences WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L, intends to partially fill ullage (unused production capacity) at the existing Goodwyn Alpha (GWA) facility and is located in Commonwealth waters ~ 140 km north-west of Karratha, Western Australia.

If you would like to comment on the proposed activity, please provide feedback to Woodside by **28 August 2025** using the details below.

Overview

The GWF-4 Drilling and Subsea Installation petroleum activities include:

- Subsea tiebacks from nearfields and the Wilcox Field to existing GWF subsea infrastructure.
- The drilling of up to six wells (WCA01, WCA02, YDA01, ESA01, TPA04 and contingent well WCA).
- The installation and pre-commissioning of subsea infrastructure.

Consultation information

A Consultation Information Sheet is attached, which provides additional background on the proposed activities including summaries of potential key impacts and risks and associated management measures. This is also available on our website.

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Please also find attached a map of the submarine communication cables in the vicinity of the Operational Area.

Activity and location summary

Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan	
Activity details	Activities include: · Mooring installation for the Mobile Offshore Drilling Unit (MODU) (including piling). · Development drilling. · Pre- and post- lay survey activities. · Installation of subsea infrastructure. · Inspection, monitoring, maintenance and repair (IMMR). · Tie-in to existing subsea infrastructure. · Pre-commissioning testing.
Titles	Production Licences: WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L.
Location	In Commonwealth waters ~140 km north-west of Karratha, Western Australia.
Water depth	~ 40 m - 160 m deep.
Timing	· Drilling activities: Q3 2026 to Q2 2028 (~90 days per well, up to an expected total of 450 days). – Contingency 2029. · Subsea Installation: – Nearfield: Q3 2027 to Q1 2028 ~ 3 months. – Wilcox Field: Q4 2027 to Q2 2028 ~6 months. – Contingency 2029. · Decommissioning is not planned during the next 5 years.
Duration	· When activities occur, operations will run 24 hours a day, 7 days a week. Simultaneous Operations (SIMOPS) of drilling and subsea installation activities may occur. · IMMR activities will take place as required.
Infrastructure	Key infrastructure includes, but is not limited to: · Wilcox Field: Xmas trees and wellheads, flowlines, electro-hydraulic umbilicals (EHUs), manifolds, pipeline end terminations (PLETs), flowline end termination (FLET), umbilical termination assemblies (UTAs), electrical flying leads (EFLs), hydraulic flying leads (HFLs), flexible pipe jumpers, rigid spools, subsea intensifiers. · Nearfield: Flowlines, UTAs, EFLs, HFLs, flexible pipe jumpers, cooling skids, pressure protection systems, and accumulator modules.

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Vessels	Key vessels include, but are not limited to: · Installation vessel for installing the subsea infrastructure. · Inspection, monitoring, maintenance and repair (IMMR) vessel for Xmas tree installation, isolation testing, IMMR or contingent activities. · Support vessels including barge(s), heavy lift vessel(s) (HLVs), multi-service construction vessel(s), anchor handling vessel(s) and general supply/support vessels. · MODU: Moored, or hybrid (moored and dynamic positioning) MODU will be used.
Operational Area and exclusion zones	The location of infrastructure is marked on nautical charts. The Operational Area and exclusion zones include: · A radius of 4,000 m from each well to allow for MODU mooring. · 1.5 km radius (3,000 m corridor) around subsea installation locations in which subsea installation and pre-commissioning activities will occur, to allow for the movement and position of vessels. · 500 m safety exclusion zone around the MODU and installation vessel.

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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 loss of well integrity, and 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 will 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 **28 August 2025**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suit 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).

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Regards

Woodside Energy Consultation

6.1.10 Email sent to Australian Hydrographic Authority (AHO) – 29 July 2025

Dear AHO

Woodside is planning to submit the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan. The GWF-4 Project, which covers Production Licences WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L, intends to partially fill ullage (unused production capacity) at the existing Goodwyn Alpha (GWA) facility and is located in Commonwealth waters ~ 140 km north-west of Karratha, Western Australia.

If you would like to comment on the proposed activity, please provide feedback to Woodside by **28 August 2025** using the details below.

Woodside would also like to propose a meeting with AHO to discuss this EP and other upcoming Woodside EPs. Please advise if this is convenient for AHO and we will make arrangements for an online meeting in the near future.

Overview

The GWF-4 Drilling and Subsea Installation petroleum activities include:

- Subsea tiebacks from nearfields and the Wilcox Field to existing GWF subsea infrastructure.
- The drilling of up to six wells (WCA01, WCA02, YDA01, ESA01, TPA04 and contingent well WCA).
- The installation and pre-commissioning of subsea infrastructure.

Consultation information

A Consultation Information Sheet is attached, which provides additional background on the proposed activities including summaries of potential key impacts and risks and associated management measures. This is also available on our website.

Please also find attached a vessel density map and GIS Shape Files.

Activity and location summary

Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan	
Activity details	Activities include: · Mooring installation for the Mobile Offshore Drilling Unit (MODU) (including piling). · Development drilling. · Pre- and post- lay survey activities. · Installation of subsea infrastructure. · Inspection, monitoring, maintenance and repair (IMMR). · Tie-in to existing subsea infrastructure. · Pre-commissioning testing.

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Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan	
Titles	Production Licence: WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L.
Location	In Commonwealth waters ~140 km north-west of Karratha, Western Australia.
Water depth	~ 40 m - 160 m deep
Timing	· Drilling activities: Q3 2026 to Q2 2028 (~90 days per well, up to an expected total of 450 days). – Contingency 2029. · Subsea Installation: – Nearfield: Q3 2027 to Q1 2028 ~ 3 months. – Wilcox Field: Q4 2027 to Q2 2028 ~6 months. – Contingency 2029. · Decommissioning is not planned during the next 5 years.
Duration	· When activities occur, operations will run 24 hours a day, 7 days a week. Simultaneous Operations (SIMOPS) of drilling and subsea installation activities may occur. · IMMR activities will take place as required.
Infrastructure	Key infrastructure includes, but is not limited to: · Wilcox Field: Xmas trees and wellheads, flowlines, electro-hydraulic umbilicals (EHUs), manifolds, pipeline end terminations (PLETs), flowline end termination (FLET), umbilical termination assemblies (UTAs), electrical flying leads (EFLs), hydraulic flying leads (HFLs), flexible pipe jumpers, rigid spools, subsea intensifiers. · Nearfield: Flowlines, UTAs, EFLs, HFLs, flexible pipe jumpers, cooling skids, pressure protection systems, and accumulator modules.
Vessels	Key vessels include, but are not limited to: · Installation vessel for installing the subsea infrastructure. · Inspection, monitoring, maintenance and repair (IMMR) vessel for Xmas tree installation, isolation testing, IMMR or contingent activities. · Support vessels including barge(s), heavy lift vessel(s) (HLVs), multi-service construction vessel(s), anchor handling vessel(s) and general supply/support vessels. · MODU: Moored, or hybrid (moored and dynamic positioning) MODU will be used.
Operational Area and exclusion zones	The location of infrastructure is marked on nautical charts. The Operational Area and exclusion zones include: · A radius of 4,000 m from each well to allow for MODU mooring. · 1.5 km radius (3,000 m corridor) around subsea installation locations in which subsea installation and pre-commissioning activities will occur, to allow for the movement and position of vessels. · 500 m safety exclusion zone around the MODU and installation vessel.

Environment that May Be Affected (EMBA)

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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 **28 August 2025**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suit 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 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.

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

6.1.11 Email sent to Western Australian Fishing Industry Council – 29 July 2025

Dear [Individual 3]

Please see below consultation information for the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan. The consultation period is due to close on **28 August 2025**.

A Consultation Information Sheet is also attached.

Under the fee-for-service agreement, can WAFIC please provide the consultation information to the following fisheries based on active fishing (Fishcube data) in the Operational Area:

- Mackerel Managed Fishery (Area 2)
- Marine Aquarium Fish Managed Fishery
- Onslow Prawn Managed Fishery
- Pilbara Trap Managed Fishery
- Pilbara Line Fishery (Condition)

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Draft email for WAFIC to send to Individual Licence Holders

Dear Licence Holders

Woodside is planning to submit the Greater Western Flank 4 (GWF-4) Drilling and Subsea Installation Environment Plan. The GWF-4 Project, which covers Production Licences WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L, intends to partially fill ullage (unused production capacity) at the existing Goodwyn Alpha (GWA) facility and is located in Commonwealth waters ~ 140 km north-west of Karratha, Western Australia.

If you would like to comment on the proposed activity, please provide feedback to Woodside by **28 August 2025** using the details below.

Overview

The GWF-4 Drilling and Subsea Installation petroleum activities include:

- Subsea tiebacks from nearfields and the Wilcox Field to existing GWF subsea infrastructure.
- The drilling of up to six wells (WCA01, WCA02, YDA01, ESA01, TPA04 and contingent well WCA).
- The installation and pre-commissioning of subsea infrastructure.

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. This is also available on Woodside's website.

Activity and location summary

Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan	
Activity details	Activities include: · Mooring installation for the Mobile Offshore Drilling Unit (MODU) (including piling). · Development drilling. · Pre- and post- lay survey activities. · Installation of subsea infrastructure. · Inspection, monitoring, maintenance and repair (IMMR). · Tie-in to existing subsea infrastructure. · Pre-commissioning testing.
Titles	Production Licences: WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L.
Location	In Commonwealth waters ~140 km north-west of Karratha, Western Australia.
Water depth	~ 40 m - 160 m deep
Timing	· Drilling activities: Q3 2026 to Q2 2028 (~90 days per well, up to an expected total of 450 days). – Contingency 2029.

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Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan	
	· Subsea Installation: – Nearfield: Q3 2027 to Q1 2028 ~ 3 months. – Wilcox Field: Q4 2027 to Q2 2028 ~ 6 months. – Contingency 2029. · Decommissioning is not planned during the next 5 years.
Duration	· When activities occur, operations will run 24 hours a day, 7 days a week. Simultaneous Operations (SIMOPS) of drilling and subsea installation activities may occur. · IMMR activities will take place as required.
Infrastructure	Key infrastructure includes, but is not limited to: · Wilcox Field: Xmas trees and wellheads, flowlines, electro-hydraulic umbilicals (EHUs), manifolds, pipeline end terminations (PLETs), flowline end termination (FLET), umbilical termination assemblies (UTAs), electrical flying leads (EFLs), hydraulic flying leads (HFLs), flexible pipe jumpers, rigid spools, subsea intensifiers. · Nearfield: Flowlines, UTAs, EFLs, HFLs, flexible pipe jumpers, cooling skids, pressure protection systems, and accumulator modules.
Vessels	Key vessels include, but are not limited to: · Installation vessel for installing the subsea infrastructure. · Inspection, monitoring, maintenance and repair (IMMR) vessel for Xmas tree installation, isolation testing, IMMR or contingent activities. · Support vessels including barge(s), heavy lift vessel(s) (HLVs), multi-service construction vessel(s), anchor handling vessel(s) and general supply/support vessels. · MODU: Moored, or hybrid (moored and dynamic positioning) MODU will be used.
Operational Area and exclusion zones	The location of infrastructure is marked on nautical charts. The Operational Area and exclusion zones include: · A radius of 4,000 m from each well to allow for MODU mooring. · 1.5 km radius (3,000 m corridor) around subsea installation locations in which subsea installation and pre-commissioning activities will occur, to allow for the movement and position of vessels. · 500 m safety exclusion zone around the MODU and installation vessel.

Notifications

Please let WAFIC know if you require notification prior to and on completion of the proposed activities.

Feedback

Please provide feedback specific to the proposed activities described to [Individual 3]@wafic.org.au by **28 August 2025**.

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

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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 if so, Woodside 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 Woodside's website.

Kind regards,

Woodside Energy Consultation

6.1.12 Email sent to Shire of Ashburton – 29 July 2025

Woodside is planning to submit the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan. The GWF-4 Project, which covers Production Licences WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L, intends to partially fill ullage (unused production capacity) at the existing Goodwyn Alpha (GWA) facility and is located in Commonwealth waters ~140 km north-west of Karratha, Western Australia.

If you would like to comment on the proposed activity, please provide feedback to Woodside by **28 August 2025** using the details below.

Woodside would also like to propose a meeting with Shire of Ashburton to discuss this EP and other upcoming Woodside EPs. Please advise if this is convenient for Shire of Ashburton and we will make arrangements for an online meeting in the near future.

Overview

The GWF-4 Drilling and Subsea Installation petroleum activities include:

- Subsea tiebacks from nearfields and the Wilcox Field to existing GWF subsea infrastructure.
- The drilling of up to six wells (WCA01, WCA02, YDA01, ESA01, TPA04 and contingent well WCA).
- The installation and pre-commissioning of subsea infrastructure.

Consultation information

A Consultation Information Sheet is attached, which provides additional background on the proposed activities including summaries of potential key impacts and risks and associated management measures. This is also available on our website.

Activity and location summary

Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan	
Activity details	Activities include: · Mooring installation for the Mobile Offshore Drilling Unit (MODU) (including piling). · Development drilling. · Pre- and post- lay survey activities. · Installation of subsea infrastructure. · Inspection, monitoring, maintenance and repair (IMMR).

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Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan	
	· Tie-in to existing subsea infrastructure. · Pre-commissioning testing.
Titles	Production Licences: WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L.
Location	In Commonwealth waters ~140 km north-west of Karratha, Western Australia.
Water depth	~ 40 m - 160 m deep
Timing	· Drilling activities: Q3 2026 to Q2 2028 (~90 days per well, up to an expected total of 450 days). – Contingency 2029. · Subsea Installation: – Nearfield: Q3 2027 to Q1 2028 ~ 3 months. – Wilcox Field: Q4 2027 to Q2 2028 ~6 months. – Contingency 2029. · Decommissioning is not planned during the next 5 years.
Duration	· When activities occur, operations will run 24 hours a day, 7 days a week. Simultaneous Operations (SIMOPS) of drilling and subsea installation activities may occur. · IMMR activities will take place as required.
Infrastructure	Key infrastructure includes, but is not limited to: · Wilcox Field: Xmas trees and wellheads, flowlines, electro-hydraulic umbilicals (EHUs), manifolds, pipeline end terminations (PLETs), flowline end termination (FLET), umbilical termination assemblies (UTAs), electrical flying leads (EFLs), hydraulic flying leads (HFLs), flexible pipe jumpers, rigid spools, subsea intensifiers. · Nearfield: Flowlines, UTAs, EFLs, HFLs, flexible pipe jumpers, cooling skids, pressure protection systems, and accumulator modules.
Vessels	Key vessels include, but are not limited to: · Installation vessel for installing the subsea infrastructure. · Inspection, monitoring, maintenance and repair (IMMR) vessel for Xmas tree installation, isolation testing, IMMR or contingent activities. · Support vessels including barge(s), heavy lift vessel(s) (HLVs), multi-service construction vessel(s), anchor handling vessel(s) and general supply/support vessels. · MODU: Moored, or hybrid (moored and dynamic positioning) MODU will be used.
Operational Area and exclusion zones	The location of infrastructure is marked on nautical charts. The Operational Area and exclusion zones include: · A radius of 4,000 m from each well to allow for MODU mooring. · 1.5 km radius (3,000 m corridor) around subsea installation locations in which subsea installation and pre-commissioning activities will occur, to allow for the movement and position of vessels.

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Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan	
	· 500 m safety exclusion zone around the MODU and installation vessel.

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 loss of well integrity, and 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 will 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

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 **28 August 2025**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suit 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).

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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.

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

6.1.13 Email sent to Australian Maritime Safety Authority (AMSA) – Marine Safety – 29 July 2025

Woodside is planning to submit the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan. The GWF-4 Project, which covers Production Licences WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L, intends to partially fill ullage (unused production capacity) at the existing Goodwyn Alpha (GWA) facility and is located in Commonwealth waters ~140 km north-west of Karratha, Western Australia.

If you would like to comment on the proposed activity, please provide feedback to Woodside by **28 August 2025** using the details below.

Woodside would also like to propose a meeting with AMSA to discuss this EP and other upcoming Woodside EPs. Please advise if this is convenient for AMSA and we will make arrangements for an online meeting in the near future.

Overview

The GWF-4 Drilling and Subsea Installation petroleum activities include:

- Subsea tiebacks from nearfields and the Wilcox Field to existing GWF subsea infrastructure.
- The drilling of up to six wells (WCA01, WCA02, YDA01, ESA01, TPA04 and contingent well WCA).
- The installation and pre-commissioning of subsea infrastructure.

Consultation information

A Consultation Information Sheet is attached, which provides additional background on the proposed activities including summaries of potential key impacts and risks and associated management measures. This is also available on our website.

Activity and location summary

Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan	
Activity details	Activities include: ▪ Mooring installation for the Mobile Offshore Drilling Unit (MODU) (including piling). ▪ Development drilling. ▪ Pre- and post- lay survey activities. ▪ Installation of subsea infrastructure. ▪ Inspection, monitoring, maintenance and repair (IMMR). ▪ Tie-in to existing subsea infrastructure.

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	▪ Pre-commissioning testing.
Titles	Production Licence: WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L.
Location	In Commonwealth waters ~140 km north-west of Karratha, Western Australia.
Water depth	~ 40 m - 160 m deep
Timing	▪ Drilling activities: Q3 2026 to Q2 2028 (~90 days per well, up to an expected total of 450 days). Contingency 2029. ▪ Subsea Installation: • Nearfield: Q3 2027 to Q1 2028 ~ 3 months. • Wilcox Field: Q4 2027 to Q2 2028 ~6 months. • Contingency 2029. ▪ Decommissioning is not planned during the next 5 years.
Duration	▪ When activities occur, operations will run 24 hours a day, 7 days a week. Simultaneous Operations (SIMOPS) of drilling and subsea installation activities may occur. ▪ IMMR activities will take place as required.
Infrastructure	Key infrastructure includes, but is not limited to: ▪ Wilcox Field: Xmas trees and wellheads, flowlines, electro-hydraulic umbilicals (EHUs), manifolds, pipeline end terminations (PLETs), flowline end termination (FLET), umbilical termination assemblies (UTAs), electrical flying leads (EFLs), hydraulic flying leads (HFLs), flexible pipe jumpers, rigid spools, subsea intensifiers. ▪ Nearfield: Flowlines, UTAs, EFLs, HFLs, flexible pipe jumpers, cooling skids, pressure protection systems, and accumulator modules.
Vessels	Key vessels include, but are not limited to: ▪ Installation vessel for installing the subsea infrastructure. ▪ Inspection, monitoring, maintenance and repair (IMMR) vessel for Xmas tree installation, isolation testing, IMMR or contingent activities. ▪ Support vessels including barge(s), heavy lift vessel(s) (HLVs), multi-service construction vessel(s), anchor handling vessel(s) and general supply/support vessels. ▪ MODU: Moored, or hybrid (moored and dynamic positioning) MODU will be used.
Operational Area and exclusion zones	The location of infrastructure is marked on nautical charts. The Operational Area and exclusion zones include: ▪ A radius of 4,000 m from each well to allow for MODU mooring. ▪ 1.5 km radius (3,000 m corridor) around subsea installation locations in which subsea installation and pre-commissioning activities will occur, to allow for the movement and position of vessels. ▪ 500 m safety exclusion zone around the MODU and installation vessel.

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 loss of well integrity, and 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

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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.

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 **28 August 2025**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suit 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 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.

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.

6.1.13.1 Email sent to Australian Maritime Safety Authority (AMSA) – Maritime Safety – 30 July 2025

Due to technical issues, you may have experienced some display errors in the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan consultation email we sent you yesterday. We apologise for this.

Please see below for the full text of the email. The Consultation Information Sheet, a vessel density map and GIS Shape Files were also attached to yesterday's email. A copy of the Consultation Information Sheet is available here on our website.

We have extended the consultation period until **29 August 2025**.

Kind regards,
Woodside Energy Consultation

[Initial email content attached]

6.1.14 Email sent to Recfishwest – 29 July 2025

Woodside is planning to submit the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan. The GWF-4 Project, which covers Production Licences WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L, intends to partially fill ullage (unused production capacity) at the existing Goodwyn Alpha (GWA) facility and is located in Commonwealth waters ~140 km north-west of Karratha, Western Australia.

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If you would like to comment on the proposed activity, please provide feedback to Woodside by **28 August 2025** using the details below.

Woodside would also like to propose a meeting with Recfishwest to discuss this EP and other upcoming Woodside EPs. Please advise if this is convenient for Recfishwest and we will make arrangements for a meeting in the near future.

Overview

The GWF-4 Drilling and Subsea Installation petroleum activities include:

- Subsea tiebacks from nearfields and the Wilcox Field to existing GWF subsea infrastructure.
- The drilling of up to six wells (WCA01, WCA02, YDA01, ESA01, TPA04 and contingent well WCA).
- The installation and pre-commissioning of subsea infrastructure.

Consultation information

The Consultation Information Sheet provides additional background on the proposed activities including summaries of potential key impacts and risks and associated management measures. This is available on our website.

Activity and location summary

Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan	
Activity details	Activities include: • Mooring installation for the Mobile Offshore Drilling Unit (MODU) (including piling). • Development drilling. • Pre- and post- lay survey activities. • Installation of subsea infrastructure. • Inspection, monitoring, maintenance and repair (IMMR). • Tie-in to existing subsea infrastructure. • Pre-commissioning testing.
Titles	Production Licence: WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L.
Location	In Commonwealth waters ~140 km north-west of Karratha, Western Australia.
Water depth	~ 40 m - 160 m deep
Timing	• Drilling activities: Q3 2026 to Q2 2028 (~90 days per well, up to an expected total of 450 days). Contingency 2029. • Subsea Installation: • Nearfield: Q3 2027 to Q1 2028 ~ 3 months. • Wilcox Field: Q4 2027 to Q2 2028 ~6 months. • Contingency 2029. • Decommissioning is not planned during the next 5 years.
Duration	• When activities occur, operations will run 24 hours a day, 7 days a week. Simultaneous Operations (SIMOPS) of drilling and subsea installation activities may occur. • IMMR activities will take place as required.
Infrastructure	Key infrastructure includes, but is not limited to:

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	• Wilcox Field: Xmas trees and wellheads, flowlines, electro-hydraulic umbilicals (EHUs), manifolds, pipeline end terminations (PLETs), flowline end termination (FLET), umbilical termination assemblies (UTAs), electrical flying leads (EFLs), hydraulic flying leads (HFLs), flexible pipe jumpers, rigid spools, subsea intensifiers. • Nearfield: flowlines, UTAs, EFLs, HFLs, flexible pipe jumpers, cooling skids, pressure protection systems, and accumulator modules.
Vessels	Key vessels include, but are not limited to: • Installation vessel for installing the subsea infrastructure. • Inspection, monitoring, maintenance and repair (IMMR) vessel for Xmas tree installation, isolation testing, IMMR or contingent activities. • Support vessels including barge(s), heavy lift vessel(s) (HLVs), multi-service construction vessel(s), anchor handling vessel(s) and general supply/support vessels. • MODU: Moored, or hybrid (moored and dynamic positioning) MODU will be used.
Operational Area and exclusion zones	The location of infrastructure is marked on nautical charts. The Operational Area and exclusion zones include: • A radius of 4,000 m from each well to allow for MODU mooring. • 1.5 km radius (3,000 m corridor) around subsea installation locations in which subsea installation and pre-commissioning activities will occur, to allow for the movement and position of vessels. • 500 m safety exclusion zone around the MODU and installation vessel.

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 loss of well integrity, and 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 will 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 **28 August 2025**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suit 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).

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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.

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.

6.1.14.1 Email sent to Recfishwest – 30 July 2025

Due to technical issues, you may have experienced some display errors in the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan consultation email we sent you yesterday. We apologise for this.

Please see below for the full text of the email. The Consultation Information Sheet, which was attached to yesterday's email, is also here on our website. We have extended the consultation period until 29 August 2025.

Kind regards,
Woodside Energy Consultation

[Initial email content attached]

6.1.15 Email sent to Aquaculture Council of Western Australia – 29 July 2025

Woodside is planning to submit the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan. The GWF-4 Project, which covers Production Licences WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L, intends to partially fill ullage (unused production capacity) at the existing Goodwyn Alpha (GWA) facility and is located in Commonwealth waters ~140 km north-west of Karratha, Western Australia.

If you would like to comment on the proposed activity, please provide feedback to Woodside by **28 August 2025** using the details below.

Overview

The GWF-4 Drilling and Subsea Installation petroleum activities include:

- Subsea tiebacks from nearfields and the Wilcox Field to existing GWF subsea infrastructure.
- The drilling of up to six wells (WCA01, WCA02, YDA01, ESA01, TPA04 and contingent well WCA).
- The installation and pre-commissioning of subsea infrastructure.

Consultation information

The Consultation Information Sheet provides additional background on the proposed activities including summaries of potential key impacts and risks and associated management measures. This is available on our website.

Activity and location summary

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Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan	
Activity details	Activities include: • Mooring installation for the Mobile Offshore Drilling Unit (MODU) (including piling). • Development drilling. • Pre- and post- lay survey activities. • Installation of subsea infrastructure. • Inspection, monitoring, maintenance and repair (IMMR). • Tie-in to existing subsea infrastructure. • Pre-commissioning testing.
Titles	Production Licence: WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L.
Location	In Commonwealth waters ~140 km north-west of Karratha, Western Australia.
Water depth	~ 40 m - 160 m deep
Timing	• Drilling activities: Q3 2026 to Q2 2028 (~90 days per well, up to an expected total of 450 days). Contingency 2029. • Subsea Installation: • Nearfield: Q3 2027 to Q1 2028 ~ 3 months. • Wilcox Field: Q4 2027 to Q2 2028 ~6 months. • Contingency 2029. • Decommissioning is not planned during the next 5 years.
Duration	• When activities occur, operations will run 24 hours a day, 7 days a week. Simultaneous Operations (SIMOPS) of drilling and subsea installation activities may occur. • IMMR activities will take place as required.
Infrastructure	Key infrastructure includes, but is not limited to: • Wilcox Field: Xmas trees and wellheads, flowlines, electro-hydraulic umbilicals (EHUs), manifolds, pipeline end terminations (PLETs), flowline end termination (FLET), umbilical termination assemblies (UTAs), electrical flying leads (EFLs), hydraulic flying leads (HFLs), flexible pipe jumpers, rigid spools, subsea intensifiers. • Nearfield: flowlines, UTAs, EFLs, HFLs, flexible pipe jumpers, cooling skids, pressure protection systems, and accumulator modules.
Vessels	Key vessels include, but are not limited to: • Installation vessel for installing the subsea infrastructure. • Inspection, monitoring, maintenance and repair (IMMR) vessel for Xmas tree installation, isolation testing, IMMR or contingent activities. • Support vessels including barge(s), heavy lift vessel(s) (HLVs), multi-service construction vessel(s), anchor handling vessel(s) and general supply/support vessels.

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	• MODU: Moored, or hybrid (moored and dynamic positioning) MODU will be used.
Operational Area and exclusion zones	The location of infrastructure is marked on nautical charts. The Operational Area and exclusion zones include: • A radius of 4,000 m from each well to allow for MODU mooring. • 1.5 km radius (3,000 m corridor) around subsea installation locations in which subsea installation and pre-commissioning activities will occur, to allow for the movement and position of vessels. • 500 m safety exclusion zone around the MODU and installation vessel.

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 loss of well integrity, and 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 will 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

Woodside is providing this information to the Aquaculture Council of Western Australia as our mapping data shows the EMBA for this EP overlaps with pearl farm leases in the Montebello Islands and 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 **28 August 2025**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suit 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 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.

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.

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6.1.15.1 Email to Aquaculture Council of Western Australia – 30 July 2025

Due to technical issues, you may have experienced some display errors in the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan consultation email we sent you yesterday. We apologise for this.

Please see below for the full text of the email. The Consultation Information Sheet, which was attached to yesterday's email, is also here on our website. We have extended the consultation period until 29 August 2025.

Kind regards,
Woodside Energy Consultation

[Initial email content attached]

6.1.16 Email sent to Department of Agriculture, Fisheries and Forestry (DAFF) – Fisheries; Department of Agriculture, Fisheries and Forestry (DAFF) - Biosecurity – 29 July 2025

Woodside is planning to submit the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan. The GWF-4 Project, which covers Production Licences WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L, intends to partially fill ullage (unused production capacity) at the existing Goodwyn Alpha (GWA) facility and is located in Commonwealth waters ~140 km north-west of Karratha, Western Australia.

If you would like to comment on the proposed activity, please provide feedback to Woodside by **28 August 2025** using the details below.

Overview

The GWF-4 Drilling and Subsea Installation petroleum activities include:

- Subsea tiebacks from nearfields and the Wilcox Field to existing GWF subsea infrastructure.
- The drilling of up to six wells (WCA01, WCA02, YDA01, ESA01, TPA04 and contingent well WCA).
- The installation and pre-commissioning of subsea infrastructure.

Consultation information

A Consultation Information Sheet is attached, which provides additional background on the proposed activities including summaries of potential key impacts and risks and associated management measures. This is also available on our website.

Activity and location summary

Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan	
Activity details	Activities include:

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	• Mooring installation for the Mobile Offshore Drilling Unit (MODU) (including piling). • Development drilling. • Pre- and post- lay survey activities. • Installation of subsea infrastructure. • Inspection, monitoring, maintenance and repair (IMMR). • Tie-in to existing subsea infrastructure. • Pre-commissioning testing.
Titles	Production Licence: WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L.
Location	In Commonwealth waters ~140 km north-west of Karratha, Western Australia.
Water depth	~ 40 m - 160 m deep
Timing	• Drilling activities: Q3 2026 to Q2 2028 (~90 days per well, up to an expected total of 450 days). Contingency 2029. • Subsea Installation: • Nearfield: Q3 2027 to Q1 2028 ~ 3 months. • Wilcox Field: Q4 2027 to Q2 2028 ~6 months. • Contingency 2029. • Decommissioning is not planned during the next 5 years.
Duration	• When activities occur, operations will run 24 hours a day, 7 days a week. Simultaneous Operations (SIMOPS) of drilling and subsea installation activities may occur. • IMMR activities will take place as required.
Infrastructure	Key infrastructure includes, but is not limited to: • Wilcox Field: Xmas trees and wellheads, flowlines, electro-hydraulic umbilicals (EHUs), manifolds, pipeline end terminations (PLETs), flowline end termination (FLET), umbilical termination assemblies (UTAs), electrical flying leads (EFLs), hydraulic flying leads (HFLs), flexible pipe jumpers, rigid spools, subsea intensifiers. • Nearfield: flowlines, UTAs, EFLs, HFLs, flexible pipe jumpers, cooling skids, pressure protection systems, and accumulator modules.
Vessels	Key vessels include, but are not limited to: • Installation vessel for installing the subsea infrastructure. • Inspection, monitoring, maintenance and repair (IMMR) vessel for Xmas tree installation, isolation testing, IMMR or contingent activities. • Support vessels including barge(s), heavy lift vessel(s) (HLVs), multi-service construction vessel(s), anchor handling vessel(s) and general supply/support vessels. • MODU: Moored, or hybrid (moored and dynamic positioning) MODU will be used.

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Operational Area and exclusion zones	The location of infrastructure is marked on nautical charts. The Operational Area and exclusion zones include: • A radius of 4,000 m from each well to allow for MODU mooring. • 1.5 km radius (3,000 m corridor) around subsea installation locations in which subsea installation and pre-commissioning activities will occur, to allow for the movement and position of vessels. • 500 m safety exclusion zone around the MODU and installation vessel.

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 loss of well integrity, and 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 will 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.

Biosecurity

With respect to the biosecurity matters, please note the following information below:

Environment description	
• Vessels transiting to the Operational Area may be subject to marine fouling whereby organisms attach to the vessel hull. • Organisms may also be drawn into ballast tanks during onboarding of ballast water. • Submersible equipment may be subject to marine fouling.	
Potential IMS risk	**IMS mitigation management**
The offshore open waters of the Operational Areas more than 35 km from a shoreline and in waters ranging from 40 to 160 m deep, these areas are not typically conducive to the settlement and establishment of IMS. Noting that the shallower areas of the Operational Area (~40 m) have a slightly increased risk	• Ballast water and biofouling will be managed according to regulatory requirements, including the Australian Ballast Water Management Requirements, and the Australian Biofouling Management Requirements (international vessels), as applicable.

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however the majority of the Operational Area has water depths greater than 70 m.	• Woodside's IMS risk assessment process will be applied to project vessels and immersible equipment entering the Operational Area.

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 **28 August 2025**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suit 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 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.

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.

6.1.16.1 Email sent to Department of Agriculture, Fisheries and Forestry (DAFF) – Fisheries; Department of Agriculture, Fisheries and Forestry (DAFF) - Biosecurity – 30 July 2025

Dear DAFF

Due to technical issues, you may have experienced some display errors in the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan consultation email we sent you yesterday. We apologise for this.

Please see below for the full text of the email. The Consultation Information Sheet provides additional background on the proposed activities including summaries of potential key impacts and risks and associated management measures. This is available on our website.

We have extended the consultation period until **29 August 2025.**

Kind regards,
Woodside Energy Consultation

[Initial email content attached]

6.1.17 Email sent to Director of National Parks (DNP) – 29 July 2025

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Woodside is planning to submit the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan. The GWF-4 Project, which covers Production Licences WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L, intends to partially fill ullage (unused production capacity) at the existing Goodwyn Alpha (GWA) facility and is located in Commonwealth waters ~140 km north-west of Karratha, Western Australia.

If you would like to comment on the proposed activity, please provide feedback to Woodside by **28 August 2025** using the details below.

Woodside would also like to propose a meeting with DNP to discuss this EP and other upcoming Woodside EPs. Please advise if this is convenient for DNP and we will make arrangements for an online meeting in the near future.

Overview

The GWF-4 Drilling and Subsea Installation petroleum activities include:

- Subsea tiebacks from nearfields and the Wilcox Field to existing GWF subsea infrastructure.
- The drilling of up to six wells (WCA01, WCA02, YDA01, ESA01, TPA04 and contingent well WCA).
- The installation and pre-commissioning of subsea infrastructure.

Consultation information

A Consultation Information Sheet is attached, which provides additional background on the proposed activities including summaries of potential key impacts and risks and associated management measures. This is also available on our website.

Activity and location summary

Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan	
Activity details	Activities include: • Mooring installation for the Mobile Offshore Drilling Unit (MODU) (including piling). • Development drilling. • Pre- and post- lay survey activities. • Installation of subsea infrastructure. • Inspection, monitoring, maintenance and repair (IMMR). • Tie-in to existing subsea infrastructure. • Pre-commissioning testing.
Titles	Production Licence: WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L.
Location	In Commonwealth waters ~140 km north-west of Karratha, Western Australia.
Water depth	~ 40 m - 160 m deep
Timing	• Drilling activities: Q3 2026 to Q2 2028 (~90 days per well, up to an expected total of 450 days). Contingency 2029. • Subsea Installation: • Nearfield: Q3 2027 to Q1 2028 ~ 3 months. • Wilcox Field: Q4 2027 to Q2 2028 ~6 months. • Contingency 2029. • Decommissioning is not planned during the next 5 years.

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Duration	• When activities occur, operations will run 24 hours a day, 7 days a week. Simultaneous Operations (SIMOPS) of drilling and subsea installation activities may occur. • IMMR activities will take place as required.
Infrastructure	Key infrastructure includes, but is not limited to: • Wilcox Field: Xmas trees and wellheads, flowlines, electro-hydraulic umbilicals (EHUs), manifolds, pipeline end terminations (PLETs), flowline end termination (FLET), umbilical termination assemblies (UTAs), electrical flying leads (EFLs), hydraulic flying leads (HFLs), flexible pipe jumpers, rigid spools, subsea intensifiers. • Nearfield: flowlines, UTAs, EFLs, HFLs, flexible pipe jumpers, cooling skids, pressure protection systems, and accumulator modules.
Vessels	Key vessels include, but are not limited to: • Installation vessel for installing the subsea infrastructure. • Inspection, monitoring, maintenance and repair (IMMR) vessel for Xmas tree installation, isolation testing, IMMR or contingent activities. • Support vessels including barge(s), heavy lift vessel(s) (HLVs), multi-service construction vessel(s), anchor handling vessel(s) and general supply/support vessels. • MODU: Moored, or hybrid (moored and dynamic positioning) MODU will be used.
Operational Area and exclusion zones	The location of infrastructure is marked on nautical charts. The Operational Area and exclusion zones include: • A radius of 4,000 m from each well to allow for MODU mooring. • 1.5 km radius (3,000 m corridor) around subsea installation locations in which subsea installation and pre-commissioning activities will occur, to allow for the movement and position of vessels. • 500 m safety exclusion zone around the MODU and installation vessel.

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 loss of well integrity, and 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 will 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

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our website by **28 August 2025**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suit 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).

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6.1.17.1 Email to Director of National Parks (DNP) – 30 July

Due to technical issues, you may have experienced some display errors in the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan consultation email we sent you yesterday. We apologise for this.

Please see below for the full text of the email. The Consultation Information Sheet provides additional background on the proposed activities including summaries of potential key impacts and risks and associated management measures. This is available on our website.

We have extended the consultation period until **29 August 2025.**

Kind regards,
Woodside Energy Consultation

[Initial email content attached]

6.1.18 Email sent to Western Rock Lobster Council – 29 July 2025

Woodside is planning to submit the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan. The GWF-4 Project, which covers Production Licences WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L, intends to partially fill ullage (unused production capacity) at the existing Goodwyn Alpha (GWA) facility and is located in Commonwealth waters ~140 km north-west of Karratha, Western Australia.

If you would like to comment on the proposed activity, please provide feedback to Woodside by **28 August 2025** using the details below.

Overview

The GWF-4 Drilling and Subsea Installation petroleum activities include:

- Subsea tiebacks from nearfields and the Wilcox Field to existing GWF subsea infrastructure.

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- The drilling of up to six wells (WCA01, WCA02, YDA01, ESA01, TPA04 and contingent well WCA).
- The installation and pre-commissioning of subsea infrastructure.

Consultation information

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Activity and location summary

Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan	
Activity details	Activities include: • Mooring installation for the Mobile Offshore Drilling Unit (MODU) (including piling). • Development drilling. • Pre- and post- lay survey activities. • Installation of subsea infrastructure. • Inspection, monitoring, maintenance and repair (IMMR). • Tie-in to existing subsea infrastructure. • Pre-commissioning testing.
Titles	Production Licence: WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L.
Location	In Commonwealth waters ~140 km north-west of Karratha, Western Australia.
Water depth	~ 40 m - 160 m deep
Timing	• Drilling activities: Q3 2026 to Q2 2028 (~90 days per well, up to an expected total of 450 days). Contingency 2029. • Subsea Installation: • Nearfield: Q3 2027 to Q1 2028 ~ 3 months. • Wilcox Field: Q4 2027 to Q2 2028 ~6 months. • Contingency 2029. • Decommissioning is not planned during the next 5 years.
Duration	• When activities occur, operations will run 24 hours a day, 7 days a week. Simultaneous Operations (SIMOPS) of drilling and subsea installation activities may occur. • IMMR activities will take place as required.
Infrastructure	Key infrastructure includes, but is not limited to: • Wilcox Field: Xmas trees and wellheads, flowlines, electro-hydraulic umbilicals (EHUs), manifolds, pipeline end terminations (PLETs), flowline end termination (FLET), umbilical termination assemblies (UTAs), electrical flying leads (EFLs), hydraulic flying leads (HFLs), flexible pipe jumpers, rigid spools, subsea intensifiers.

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	• Nearfield: flowlines, UTAs, EFLs, HFLs, flexible pipe jumpers, cooling skids, pressure protection systems, and accumulator modules.
Vessels	Key vessels include, but are not limited to: • Installation vessel for installing the subsea infrastructure. • Inspection, monitoring, maintenance and repair (IMMR) vessel for Xmas tree installation, isolation testing, IMMR or contingent activities. • Support vessels including barge(s), heavy lift vessel(s) (HLVs), multi-service construction vessel(s), anchor handling vessel(s) and general supply/support vessels. • MODU: Moored, or hybrid (moored and dynamic positioning) MODU will be used.
Operational Area and exclusion zones	The location of infrastructure is marked on nautical charts. The Operational Area and exclusion zones include: • A radius of 4,000 m from each well to allow for MODU mooring. • 1.5 km radius (3,000 m corridor) around subsea installation locations in which subsea installation and pre-commissioning activities will occur, to allow for the movement and position of vessels. • 500 m safety exclusion zone around the MODU and installation vessel.

Environment that May Be Affected (EMBA)

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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.

EMBA Overlap

Woodside is providing this information to the Western Rock Lobster Council as our mapping data shows the EMBA for this EP overlaps the Western Rock Lobster Managed Fishery. Woodside has also consulted individual licence holders of the Western Rock Lobster Managed Fishery..

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 **28 August 2025**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suit you.

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6.1.18.1 Email sent to Western Rock Lobster Council – 30 July 2025

Due to technical issues, you may have experienced some display errors in the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan consultation email we sent you yesterday. We apologise for this.

Please see below for the full text of the email. The Consultation Information Sheet, which was attached to yesterday's email, is also here on our website. We have extended the consultation period until 29 August 2025.

Kind regards,
Woodside Energy Consultation

[Initial email content attached]

6.1.19 Email sent to Department of Planning, Lands and Heritage – 29 July 2025

Woodside is planning to submit the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan. The GWF-4 Project, which covers Production Licences WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L, intends to partially fill ullage (unused production capacity) at the existing Goodwyn Alpha (GWA) facility and is located in Commonwealth waters ~140 km north-west of Karratha, Western Australia.

If you would like to comment on the proposed activity, please provide feedback to Woodside by **28 August 2025** using the details below.

Overview

The GWF-4 Drilling and Subsea Installation petroleum activities include:

- Subsea tiebacks from nearfields and the Wilcox Field to existing GWF subsea infrastructure.
- The drilling of up to six wells (WCA01, WCA02, YDA01, ESA01, TPA04 and contingent well WCA).
- The installation and pre-commissioning of subsea infrastructure.

Consultation information

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A Consultation Information Sheet is attached, which provides additional background on the proposed activities including summaries of potential 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

Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan	
Activity details	Activities include: • Mooring installation for the Mobile Offshore Drilling Unit (MODU) (including piling). • Development drilling. • Pre- and post- lay survey activities. • Installation of subsea infrastructure. • Inspection, monitoring, maintenance and repair (IMMR). • Tie-in to existing subsea infrastructure. • Pre-commissioning testing.
Titles	Production Licence: WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L.
Location	In Commonwealth waters ~140 km north-west of Karratha, Western Australia.
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Infrastructure	Key infrastructure includes, but is not limited to: • Wilcox Field: Xmas trees and wellheads, flowlines, electro-hydraulic umbilicals (EHUs), manifolds, pipeline end terminations (PLETs), flowline end termination (FLET), umbilical termination assemblies (UTAs), electrical flying leads (EFLs), hydraulic flying leads (HFLs), flexible pipe jumpers, rigid spools, subsea intensifiers. • Nearfield: flowlines, UTAs, EFLs, HFLs, flexible pipe jumpers, cooling skids, pressure protection systems, and accumulator modules.

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Vessels	Key vessels include, but are not limited to: • Installation vessel for installing the subsea infrastructure. • Inspection, monitoring, maintenance and repair (IMMR) vessel for Xmas tree installation, isolation testing, IMMR or contingent activities. • Support vessels including barge(s), heavy lift vessel(s) (HLVs), multi-service construction vessel(s), anchor handling vessel(s) and general supply/support vessels. • MODU: Moored, or hybrid (moored and dynamic positioning) MODU will be used.
Operational Area and exclusion zones	The location of infrastructure is marked on nautical charts. The Operational Area and exclusion zones include: • A radius of 4,000 m from each well to allow for MODU mooring. • 1.5 km radius (3,000 m corridor) around subsea installation locations in which subsea installation and pre-commissioning activities will occur, to allow for the movement and position of vessels. • 500 m safety exclusion zone around the MODU and installation vessel.

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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).

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6.1.19.1 **Email sent to** Department of Planning, Lands and Heritage – 30 July 2025

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Please see below for the full text of the email. The Consultation Information Sheet provides additional background on the proposed activities including summaries of potential key impacts and risks and associated management measures. This is available on our website. A list of relevant WA Shipwrecks was attached to yesterday's email.

We have extended the consultation period until **29 August 2025.**

Kind regards,
Woodside Energy Consultation

[Initial email content attached]

6.1.20 Email sent to Department of Transport and Major Infrastructure (DTMI)– 29 July 2025

Woodside is planning to submit the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan. The GWF-4 Project, which covers Production Licences WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L, intends to partially fill ullage (unused production capacity) at the existing Goodwyn Alpha (GWA) facility and is located in Commonwealth waters ~140 km north-west of Karratha, Western Australia.

If you would like to comment on the proposed activity, please provide feedback to Woodside by **28 August 2025** using the details below.

Overview

The GWF-4 Drilling and Subsea Installation petroleum activities include:

- Subsea tiebacks from nearfields and the Wilcox Field to existing GWF subsea infrastructure.
- The drilling of up to six wells (WCA01, WCA02, YDA01, ESA01, TPA04 and contingent well WCA).
- The installation and pre-commissioning of subsea infrastructure.

Consultation information

The Consultation Information Sheet provides additional background on the proposed activities including summaries of potential key impacts and risks and associated management measures. This is available on our website.

Activity and location summary

Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan

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Activity details	Activities include: • Mooring installation for the Mobile Offshore Drilling Unit (MODU) (including piling). • Development drilling. • Pre- and post- lay survey activities. • Installation of subsea infrastructure. • Inspection, monitoring, maintenance and repair (IMMR). • Tie-in to existing subsea infrastructure. • Pre-commissioning testing.
Titles	Production Licence: WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L.
Location	In Commonwealth waters ~140 km north-west of Karratha, Western Australia.
Water depth	~ 40 m - 160 m deep
Timing	• Drilling activities: Q3 2026 to Q2 2028 (~90 days per well, up to an expected total of 450 days). Contingency 2029. • Subsea Installation: • Nearfield: Q3 2027 to Q1 2028 ~ 3 months. • Wilcox Field: Q4 2027 to Q2 2028 ~6 months. • Contingency 2029. • Decommissioning is not planned during the next 5 years.
Duration	• When activities occur, operations will run 24 hours a day, 7 days a week. Simultaneous Operations (SIMOPS) of drilling and subsea installation activities may occur. • IMMR activities will take place as required.
Infrastructure	Key infrastructure includes, but is not limited to: • Wilcox Field: Xmas trees and wellheads, flowlines, electro-hydraulic umbilicals (EHUs), manifolds, pipeline end terminations (PLETs), flowline end termination (FLET), umbilical termination assemblies (UTAs), electrical flying leads (EFLs), hydraulic flying leads (HFLs), flexible pipe jumpers, rigid spools, subsea intensifiers. • Nearfield: flowlines, UTAs, EFLs, HFLs, flexible pipe jumpers, cooling skids, pressure protection systems, and accumulator modules.
Vessels	Key vessels include, but are not limited to: • Installation vessel for installing the subsea infrastructure. • Inspection, monitoring, maintenance and repair (IMMR) vessel for Xmas tree installation, isolation testing, IMMR or contingent activities. • Support vessels including barge(s), heavy lift vessel(s) (HLVs), multi-service construction vessel(s), anchor handling vessel(s) and general supply/support vessels. • MODU: Moored, or hybrid (moored and dynamic positioning) MODU will be used.

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Operational Area and exclusion zones	The location of infrastructure is marked on nautical charts. The Operational Area and exclusion zones include: • A radius of 4,000 m from each well to allow for MODU mooring. • 1.5 km radius (3,000 m corridor) around subsea installation locations in which subsea installation and pre-commissioning activities will occur, to allow for the movement and position of vessels. • 500 m safety exclusion zone around the MODU and installation vessel.

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 loss of well integrity, and 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 will not be affected. The specific and minimal part of the EMBA that is affected will only be known if there is a release.

If there is a risk of a spill impacting State waters, Woodside will further consult the Department of Transport and Major Infrastructure as outlined in the Department's Offshore Petroleum Guidance Note - *Marine Oil Pollution: Response and Consultation Arrangements (July 2020)*.

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 **28 August 2025**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suit 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 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.

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.

6.1.20.1 Email sent to Department of Transport and Major Infrastructure – 29 July 2025

Due to technical issues, you may have experienced some display errors in the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan consultation email we sent you yesterday. We apologise for this.

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Please see below for the full text of the email. The Consultation Information Sheet, which was attached to yesterday's email, is also available here on our website.

We have extended the consultation period until 29 August 2025.

Kind regards,
Woodside Energy Consultation

[Initial email content attached]

6.1.21 Email sent to Department of Biodiversity, Conservation and Attraction (DBCA) – 30 July 2025

Woodside is planning to submit the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan. The GWF-4 Project, which covers Production Licences WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L, intends to partially fill ullage (unused production capacity) at the existing Goodwyn Alpha (GWA) facility and is located in Commonwealth waters ~140 km north-west of Karratha, Western Australia.

If you would like to comment on the proposed activity, please provide feedback to Woodside by **28 August 2025** using the details below.

Woodside would also like to propose a meeting with DBCA to discuss this EP and other upcoming Woodside EPs. Please advise if this is convenient for DBCA and we will make arrangements for a meeting in the near future.

Overview

The GWF-4 Drilling and Subsea Installation petroleum activities include:

- Subsea tiebacks from nearfields and the Wilcox Field to existing GWF subsea infrastructure.
- The drilling of up to six wells (WCA01, WCA02, YDA01, ESA01, TPA04 and contingent well WCA).
- The installation and pre-commissioning of subsea infrastructure.

Consultation information

A Consultation Information Sheet is attached, which provides additional background on the proposed activities including summaries of potential key impacts and risks and associated management measures. This is also available on our website.

Activity and location summary

Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan	
Activity details	Activities include: • Mooring installation for the Mobile Offshore Drilling Unit (MODU) (including piling). • Development drilling. • Pre- and post- lay survey activities. • Installation of subsea infrastructure. • Inspection, monitoring, maintenance and repair (IMMR). • Tie-in to existing subsea infrastructure.

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	• Pre-commissioning testing.
Titles	Production Licence: WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L.
Location	In Commonwealth waters ~140 km north-west of Karratha, Western Australia.
Water depth	~ 40 m - 160 m deep
Timing	• Drilling activities: Q3 2026 to Q2 2028 (~90 days per well, up to an expected total of 450 days). Contingency 2029. • Subsea Installation: • Nearfield: Q3 2027 to Q1 2028 ~ 3 months. • Wilcox Field: Q4 2027 to Q2 2028 ~6 months. • Contingency 2029. • Decommissioning is not planned during the next 5 years.
Duration	• When activities occur, operations will run 24 hours a day, 7 days a week. Simultaneous Operations (SIMOPS) of drilling and subsea installation activities may occur. • IMMR activities will take place as required.
Infrastructure	Key infrastructure includes, but is not limited to: • Wilcox Field: Xmas trees and wellheads, flowlines, electro-hydraulic umbilicals (EHUs), manifolds, pipeline end terminations (PLETs), flowline end termination (FLET), umbilical termination assemblies (UTAs), electrical flying leads (EFLs), hydraulic flying leads (HFLs), flexible pipe jumpers, rigid spools, subsea intensifiers. • Nearfield: flowlines, UTAs, EFLs, HFLs, flexible pipe jumpers, cooling skids, pressure protection systems, and accumulator modules.
Vessels	Key vessels include, but are not limited to: • Installation vessel for installing the subsea infrastructure. • Inspection, monitoring, maintenance and repair (IMMR) vessel for Xmas tree installation, isolation testing, IMMR or contingent activities. • Support vessels including barge(s), heavy lift vessel(s) (HLVs), multi-service construction vessel(s), anchor handling vessel(s) and general supply/support vessels. • MODU: Moored, or hybrid (moored and dynamic positioning) MODU will be used.
Operational Area and exclusion zones	The location of infrastructure is marked on nautical charts. The Operational Area and exclusion zones include: • A radius of 4,000 m from each well to allow for MODU mooring. • 1.5 km radius (3,000 m corridor) around subsea installation locations in which subsea installation and pre-commissioning activities will occur, to allow for the movement and position of vessels. • 500 m safety exclusion zone around the MODU and installation vessel.

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

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highly unlikely releases of hydrocarbons to the environment. The modelling scenarios that inform the EMBA are loss of well integrity, and 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 will not be affected. The specific and minimal part of the EMBA that is affected will only be known if there is a release.

Environmental knowledge

Woodside maintains knowledge and an understanding of the environment within and adjacent to the Operational Area. 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 GWF-4 Drilling and Subsea Installation EP activity 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

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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

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 **28 August 2025**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suit 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).

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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.

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6.1.21.1 **Email sent to** Department of Biodiversity, Conservation and Attraction – 30 July 2025

Due to technical issues, you may have experienced some display errors in the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan consultation email we sent you yesterday. We apologise for this.

Please see below for the full text of the email. The Consultation Information Sheet provides additional background on the proposed activities including summaries of potential key impacts and risks and associated management measures. This is available on our website.

We have extended the consultation period until **29 August 2025.**

Kind regards,
Woodside Energy Consultation

[Initial email content attached]

6.1.22 Email sent to Western Australian Museum – 29 July 2025

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Woodside is planning to submit the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan. The GWF-4 Project, which covers Production Licences WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L, intends to partially fill ullage (unused production capacity) at the existing Goodwyn Alpha (GWA) facility and is located in Commonwealth waters ~140 km north-west of Karratha, Western Australia.

If you would like to comment on the proposed activity, please provide feedback to Woodside by **28 August 2025** using the details below.

Overview

The GWF-4 Drilling and Subsea Installation petroleum activities include:

- Subsea tiebacks from nearfields and the Wilcox Field to existing GWF subsea infrastructure.
- The drilling of up to six wells (WCA01, WCA02, YDA01, ESA01, TPA04 and contingent well WCA).
- The installation and pre-commissioning of subsea infrastructure.

Consultation information

The Consultation Information Sheet provides additional background on the proposed activities including summaries of potential key impacts and risks and associated management measures. This is available on our website.

As per the *Underwater Cultural Heritage Act 2018 (Cwth),* Woodside will contact the Commonwealth regulator, the Department of Climate Change, Energy, the Environment and Water (DCCEEW), regarding this EP.

Woodside also refers to the Commonwealth Government's Underwater Cultural Heritage (UCH) Guidance document regarding assessments and the draft Guidelines for Working in Near and Offshore Environment to Protect Underwater Cultural Heritage.

Activity and location summary

Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan	
Activity details	Activities include: • Mooring installation for the Mobile Offshore Drilling Unit (MODU) (including piling). • Development drilling. • Pre- and post- lay survey activities. • Installation of subsea infrastructure. • Inspection, monitoring, maintenance and repair (IMMR). • Tie-in to existing subsea infrastructure. • Pre-commissioning testing.
Titles	Production Licence: WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L.
Location	In Commonwealth waters ~140 km north-west of Karratha, Western Australia.
Water depth	~ 40 m - 160 m deep
Timing	• Drilling activities: Q3 2026 to Q2 2028 (~90 days per well, up to an expected total of 450 days). Contingency 2029. • Subsea Installation: • Nearfield: Q3 2027 to Q1 2028 ~ 3 months.

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	• Wilcox Field: Q4 2027 to Q2 2028 ~6 months. • Contingency 2029. • Decommissioning is not planned during the next 5 years.
Duration	• When activities occur, operations will run 24 hours a day, 7 days a week. Simultaneous Operations (SIMOPS) of drilling and subsea installation activities may occur. • IMMR activities will take place as required.
Infrastructure	Key infrastructure includes, but is not limited to: • Wilcox Field: Xmas trees and wellheads, flowlines, electro-hydraulic umbilicals (EHUs), manifolds, pipeline end terminations (PLETs), flowline end termination (FLET), umbilical termination assemblies (UTAs), electrical flying leads (EFLs), hydraulic flying leads (HFLs), flexible pipe jumpers, rigid spools, subsea intensifiers. • Nearfield: flowlines, UTAs, EFLs, HFLs, flexible pipe jumpers, cooling skids, pressure protection systems, and accumulator modules.
Vessels	Key vessels include, but are not limited to: • Installation vessel for installing the subsea infrastructure. • Inspection, monitoring, maintenance and repair (IMMR) vessel for Xmas tree installation, isolation testing, IMMR or contingent activities. • Support vessels including barge(s), heavy lift vessel(s) (HLVs), multi-service construction vessel(s), anchor handling vessel(s) and general supply/support vessels. • MODU: Moored, or hybrid (moored and dynamic positioning) MODU will be used.
Operational Area and exclusion zones	The location of infrastructure is marked on nautical charts. The Operational Area and exclusion zones include: • A radius of 4,000 m from each well to allow for MODU mooring. • 1.5 km radius (3,000 m corridor) around subsea installation locations in which subsea installation and pre-commissioning activities will occur, to allow for the movement and position of vessels. • 500 m safety exclusion zone around the MODU and installation vessel.

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 loss of well integrity, and vessel collision.

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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 **28 August 2025**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suit 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).

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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.

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6.1.22.1 Email sent to Western Australian Museum – 30 July 2025

Due to technical issues, you may have experienced some display errors in the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan consultation email we sent you yesterday. We apologise for this.

Please see below for the full text of the email. The Consultation Information Sheet, which was attached to yesterday's email, is also available here on our website. A list of relevant WA Shipwrecks was also attached to yesterday's email.

We have extended the consultation period until **29 August 2025.**

Kind regards,
Woodside Energy Consultation

[Initial email content attached]

6.1.23 Email sent to Chevron – 29 July 2025

Woodside is planning to submit the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan. The GWF-4 Project, which covers Production Licences WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L, intends to partially fill ullage (unused production capacity) at the existing Goodwyn Alpha (GWA) facility and is located in Commonwealth waters ~140 km north-west of Karratha, Western Australia.

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If you would like to comment on the proposed activity, please provide feedback to Woodside by **28 August 2025** using the details below.

Overview

The GWF-4 Drilling and Subsea Installation petroleum activities include:

- Subsea tiebacks from nearfields and the Wilcox Field to existing GWF subsea infrastructure.
- The drilling of up to six wells (WCA01, WCA02, YDA01, ESA01, TPA04 and contingent well WCA).
- The installation and pre-commissioning of subsea infrastructure.

Consultation information

The Consultation Information Sheet provides additional background on the proposed activities including summaries of potential key impacts and risks and associated management measures. This is available on our website.

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.

Activity and location summary

Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan	
Activity details	Activities include: • Mooring installation for the Mobile Offshore Drilling Unit (MODU) (including piling). • Development drilling. • Pre- and post- lay survey activities. • Installation of subsea infrastructure. • Inspection, monitoring, maintenance and repair (IMMR). • Tie-in to existing subsea infrastructure. • Pre-commissioning testing.
Titles	Production Licence: WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L.
Location	In Commonwealth waters ~140 km north-west of Karratha, Western Australia.
Water depth	~ 40 m - 160 m deep
Timing	• Drilling activities: Q3 2026 to Q2 2028 (~90 days per well, up to an expected total of 450 days). Contingency 2029. • Subsea Installation: • Nearfield: Q3 2027 to Q1 2028 ~ 3 months. • Wilcox Field: Q4 2027 to Q2 2028 ~6 months. • Contingency 2029. • Decommissioning is not planned during the next 5 years.
Duration	• When activities occur, operations will run 24 hours a day, 7 days a week. Simultaneous Operations (SIMOPS) of drilling and subsea installation activities may occur. • IMMR activities will take place as required.

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Infrastructure	Key infrastructure includes, but is not limited to: • Wilcox Field: Xmas trees and wellheads, flowlines, electro-hydraulic umbilicals (EHUs), manifolds, pipeline end terminations (PLETs), flowline end termination (FLET), umbilical termination assemblies (UTAs), electrical flying leads (EFLs), hydraulic flying leads (HFLs), flexible pipe jumpers, rigid spools, subsea intensifiers. • Nearfield: flowlines, UTAs, EFLs, HFLs, flexible pipe jumpers, cooling skids, pressure protection systems, and accumulator modules.
Vessels	Key vessels include, but are not limited to: • Installation vessel for installing the subsea infrastructure. • Inspection, monitoring, maintenance and repair (IMMR) vessel for Xmas tree installation, isolation testing, IMMR or contingent activities. • Support vessels including barge(s), heavy lift vessel(s) (HLVs), multi-service construction vessel(s), anchor handling vessel(s) and general supply/support vessels. • MODU: Moored, or hybrid (moored and dynamic positioning) MODU will be used.
Operational Area and exclusion zones	The location of infrastructure is marked on nautical charts. The Operational Area and exclusion zones include: • A radius of 4,000 m from each well to allow for MODU mooring. • 1.5 km radius (3,000 m corridor) around subsea installation locations in which subsea installation and pre-commissioning activities will occur, to allow for the movement and position of vessels. • 500 m safety exclusion zone around the MODU and installation vessel.

Environment that May Be Affected (EMBA)

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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 **28 August 2025**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suit 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

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may also be used to support other regulatory processes associated with the planned activities (which may or may not be confidential).

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6.1.23.1 Email sent to Chevron – 30 July 2025

Due to technical issues, you may have experienced some display errors in the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan consultation email we sent you yesterday. We apologise for this.

Please see below for the full text of the email. The Consultation Information Sheet, which was attached to yesterday's email, is available here on our website. GIS Shape Files were also included with yesterday's email.

We have extended the consultation period until 29 August 2025.

Kind regards,
Woodside Energy Consultation

[Initial email content attached]

6.1.24 Email sent to Department of Defence – 29 July 2025

Woodside is planning to submit the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan. The GWF-4 Project, which covers Production Licences WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L, intends to partially fill ullage (unused production capacity) at the existing Goodwyn Alpha (GWA) facility and is located in Commonwealth waters ~140 km north-west of Karratha, Western Australia.

If you would like to comment on the proposed activity, please provide feedback to Woodside by **28 August 2025** using the details below.

Overview

The GWF-4 Drilling and Subsea Installation petroleum activities include:

- Subsea tiebacks from nearfields and the Wilcox Field to existing GWF subsea infrastructure.
- The drilling of up to six wells (WCA01, WCA02, YDA01, ESA01, TPA04 and contingent well WCA).
- The installation and pre-commissioning of subsea infrastructure.

Consultation information

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The Consultation Information Sheet provides additional background on the proposed activities including summaries of potential key impacts and risks and associated management measures. This is available on our website.

Please also find attached a defence area map in the areas surrounding the Operational Area and EMBA.

Activity and location summary

Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan	
Activity details	Activities include: • Mooring installation for the Mobile Offshore Drilling Unit (MODU) (including piling). • Development drilling. • Pre- and post- lay survey activities. • Installation of subsea infrastructure. • Inspection, monitoring, maintenance and repair (IMMR). • Tie-in to existing subsea infrastructure. • Pre-commissioning testing.
Titles	Production Licence: WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L.
Location	In Commonwealth waters ~140 km north-west of Karratha, Western Australia.
Water depth	~ 40 m - 160 m deep
Timing	• Drilling activities: Q3 2026 to Q2 2028 (~90 days per well, up to an expected total of 450 days). Contingency 2029. • Subsea Installation: • Nearfield: Q3 2027 to Q1 2028 ~ 3 months. • Wilcox Field: Q4 2027 to Q2 2028 ~6 months. • Contingency 2029. • Decommissioning is not planned during the next 5 years.
Duration	• When activities occur, operations will run 24 hours a day, 7 days a week. Simultaneous Operations (SIMOPS) of drilling and subsea installation activities may occur. • IMMR activities will take place as required.
Infrastructure	Key infrastructure includes, but is not limited to: • Wilcox Field: Xmas trees and wellheads, flowlines, electro-hydraulic umbilicals (EHUs), manifolds, pipeline end terminations (PLETs), flowline end termination (FLET), umbilical termination assemblies (UTAs), electrical flying leads (EFLs), hydraulic flying leads (HFLs), flexible pipe jumpers, rigid spools, subsea intensifiers. • Nearfield: flowlines, UTAs, EFLs, HFLs, flexible pipe jumpers, cooling skids, pressure protection systems, and accumulator modules.
Vessels	Key vessels include, but are not limited to: • Installation vessel for installing the subsea infrastructure.

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	• Inspection, monitoring, maintenance and repair (IMMR) vessel for Xmas tree installation, isolation testing, IMMR or contingent activities. • Support vessels including barge(s), heavy lift vessel(s) (HLVs), multi-service construction vessel(s), anchor handling vessel(s) and general supply/support vessels. • MODU: Moored, or hybrid (moored and dynamic positioning) MODU will be used.
Operational Area and exclusion zones	The location of infrastructure is marked on nautical charts. The Operational Area and exclusion zones include: • A radius of 4,000 m from each well to allow for MODU mooring. • 1.5 km radius (3,000 m corridor) around subsea installation locations in which subsea installation and pre-commissioning activities will occur, to allow for the movement and position of vessels. • 500 m safety exclusion zone around the MODU and installation vessel.

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 loss of well integrity, and 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 will 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 **28 August 2025**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suit 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 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.

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.

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6.1.24.1 Email sent to Department of Defence – 30 July 2025

Due to technical issues, you may have experienced some display errors in the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan consultation email we sent you yesterday. We apologise for this.

Please see below for the full text of the email. The Consultation Information Sheet, which was attached to yesterday's email, is also here on our website. We have extended the consultation period until 29 August 2025.

Kind regards,
Woodside Energy Consultation

[Initial email content attached]

6.1.25 Email sent to Department of Primary Industries and Regional Development – 29 July 2025

Woodside is planning to submit the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan. The GWF-4 Project, which covers Production Licences WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L, intends to partially fill ullage (unused production capacity) at the existing Goodwyn Alpha (GWA) facility and is located in Commonwealth waters ~140 km north-west of Karratha, Western Australia.

If you would like to comment on the proposed activity, please provide feedback to Woodside by **28 August 2025** using the details below.

Following our meeting on 18 June 2025, Woodside would like to meet again with DPIRD to discuss this EP and other upcoming Woodside EPs. Please advise if this is still convenient for DPIRD and we will make arrangements for an online meeting in the near future.

Overview

The GWF-4 Drilling and Subsea Installation petroleum activities include:

- Subsea tiebacks from nearfields and the Wilcox Field to existing GWF subsea infrastructure.
- The drilling of up to six wells (WCA01, WCA02, YDA01, ESA01, TPA04 and contingent well WCA).
- The installation and pre-commissioning of subsea infrastructure.

Consultation information

The Consultation Information Sheet provides additional background on the proposed activities including summaries of potential key impacts and risks and associated management measures. This is available on our website.

Activity and location summary

Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan	
Activity details	Activities include:

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	• Mooring installation for the Mobile Offshore Drilling Unit (MODU) (including piling). • Development drilling. • Pre- and post- lay survey activities. • Installation of subsea infrastructure. • Inspection, monitoring, maintenance and repair (IMMR). • Tie-in to existing subsea infrastructure. • Pre-commissioning testing.
Titles	Production Licence: WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L.
Location	In Commonwealth waters ~140 km north-west of Karratha, Western Australia.
Water depth	~ 40 m - 160 m deep
Timing	• Drilling activities: Q3 2026 to Q2 2028 (~90 days per well, up to an expected total of 450 days). Contingency 2029. • Subsea Installation: • Nearfield: Q3 2027 to Q1 2028 ~ 3 months. • Wilcox Field: Q4 2027 to Q2 2028 ~6 months. • Contingency 2029. • Decommissioning is not planned during the next 5 years.
Duration	• When activities occur, operations will run 24 hours a day, 7 days a week. Simultaneous Operations (SIMOPS) of drilling and subsea installation activities may occur. • IMMR activities will take place as required.
Infrastructure	Key infrastructure includes, but is not limited to: • Wilcox Field: Xmas trees and wellheads, flowlines, electro-hydraulic umbilicals (EHUs), manifolds, pipeline end terminations (PLETs), flowline end termination (FLET), umbilical termination assemblies (UTAs), electrical flying leads (EFLs), hydraulic flying leads (HFLs), flexible pipe jumpers, rigid spools, subsea intensifiers. • Nearfield: flowlines, UTAs, EFLs, HFLs, flexible pipe jumpers, cooling skids, pressure protection systems, and accumulator modules.
Vessels	Key vessels include, but are not limited to: • Installation vessel for installing the subsea infrastructure. • Inspection, monitoring, maintenance and repair (IMMR) vessel for Xmas tree installation, isolation testing, IMMR or contingent activities. • Support vessels including barge(s), heavy lift vessel(s) (HLVs), multi-service construction vessel(s), anchor handling vessel(s) and general supply/support vessels. • MODU: Moored, or hybrid (moored and dynamic positioning) MODU will be used.

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Operational Area and exclusion zones	The location of infrastructure is marked on nautical charts. The Operational Area and exclusion zones include: • A radius of 4,000 m from each well to allow for MODU mooring. • 1.5 km radius (3,000 m corridor) around subsea installation locations in which subsea installation and pre-commissioning activities will occur, to allow for the movement and position of vessels. • 500 m safety exclusion zone around the MODU and installation vessel.

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 loss of well integrity, and 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 will 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

State fisheries active in the Operational Area

- Mackerel Managed Fishery (Area 2)
- Marine Aquarium Fish Managed Fishery
- Onslow Prawn Managed Fishery
- Pilbara Trap Managed Fishery
- Pilbara Line Fishery

State fisheries active in the EMBA

- Mackerel Managed Fishery (Area 2)
- Marine Aquarium Fish Managed Fishery
- Onslow Prawn Managed Fishery
- Pilbara Trap Managed Fishery
- Pilbara Line Fishery
- West Coast Demersal Scalefish (Interim) Managed Fishery
- West Australian Sea Cucumber Fishery
- Exmouth Gulf Prawn Managed Fishery
- Gascoyne Demersal Scalefish Managed Fishery
- Nickol Bay Prawn Managed Fishery
- Northern Demersal Scalefish Managed Fishery
- Octopus Interim Managed Fishery
- West Coast Rock Lobster Managed Fishery
- Pilbara Crab Managed Fishery

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- Pilbara Fish Trawl (Interim) Managed Fishery
- Shark Bay Beach Seine and Mesh Net Managed Fishery
- Shark Bay Crab Managed Fishery
- Shark Bay Prawn Managed Fishery
- Shark Bay Scallop Managed Fishery
- Specimen Shell Managed Fishery
- West Coast Deep Sea Crustacean Managed Fishery
- Exmouth Gulf Beach Seine and Mesh Net Managed Fishery
- Open Access in the North Coast and Gascoyne Coast
- Pearl farm leases in the Montebello Islands and Dailey Shoal
- Aquaculture site in the Mackerel Islands.

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.

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 damage. 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.

Feedback

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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 **28 August 2025**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suit 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 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.

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.

6.1.25.1 Email sent to Department of Primary Industries and Regional Development – 30 July 2025

Due to technical issues, you may have experienced some display errors in the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan consultation email we sent you yesterday. We apologise for this.

Please see below for the full text of the email. The Consultation Information Sheet, which was attached to yesterday's email, is also available here on our website.

We have extended the consultation period until 29 August 2025.

Kind regards,
Woodside Energy Consultation

[Initial email content attached]

6.1.26 Email sent to Australian Southern Bluefin Tuna Industry Association (ASBTIA); Southern Bluefin Tuna Fishery license holders – 11 August 2025

Woodside is planning to submit the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan. The GWF-4 Project, which covers Production Licences WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L, intends to partially fill ullage (unused production capacity) at the existing Goodwyn Alpha (GWA) facility and is located in Commonwealth waters ~140 km north-west of Karratha, Western Australia.

If you would like to comment on the proposed activity, please provide feedback to Woodside by **10 September 2025** using the details below.

Overview

The GWF-4 Drilling and Subsea Installation petroleum activities include:

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- Subsea tiebacks from nearfields and the Wilcox Field to existing GWF subsea infrastructure.
- The drilling of up to six wells (WCA01, WCA02, YDA01, ESA01, TPA04 and contingent well WCA).
- The installation and pre-commissioning of subsea infrastructure.

Consultation information

A Consultation Information Sheet is attached, which provides additional background on the proposed activities including summaries of potential key impacts and risks and associated management measures. This is also available on our website.

Activity and location summary

Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan	
Activity details	Activities include: • Mooring installation for the Mobile Offshore Drilling Unit (MODU) (including piling). • Development drilling. • Pre- and post- lay survey activities. • Installation of subsea infrastructure. • Inspection, monitoring, maintenance and repair (IMMR). • Tie-in to existing subsea infrastructure. • Pre-commissioning testing.
Titles	Production Licence: WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L.
Location	In Commonwealth waters ~140 km north-west of Karratha, Western Australia.
Water depth	~ 40 m - 160 m deep
Timing	• Drilling activities: Q3 2026 to Q2 2028 (~90 days per well, up to an expected total of 450 days). Contingency 2029. • Subsea Installation: • Nearfield: Q3 2027 to Q1 2028 ~ 3 months. • Wilcox Field: Q4 2027 to Q2 2028 ~6 months. • Contingency 2029. • Decommissioning is not planned during the next 5 years.
Duration	• When activities occur, operations will run 24 hours a day, 7 days a week. Simultaneous Operations (SIMOPS) of drilling and subsea installation activities may occur. • IMMR activities will take place as required.
Infrastructure	Key infrastructure includes, but is not limited to: • Wilcox Field: Xmas trees and wellheads, flowlines, electro-hydraulic umbilicals (EHUs), manifolds, pipeline end terminations (PLETs), flowline end termination (FLET), umbilical termination assemblies (UTAs), electrical flying leads (EFLs), hydraulic flying leads (HFLs), flexible pipe jumpers, rigid spools, subsea intensifiers.

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	• Nearfield: flowlines, UTAs, EFLs, HFLs, flexible pipe jumpers, cooling skids, pressure protection systems, and accumulator modules.
Vessels	Key vessels include, but are not limited to: • Installation vessel for installing the subsea infrastructure. • Inspection, monitoring, maintenance and repair (IMMR) vessel for Xmas tree installation, isolation testing, IMMR or contingent activities. • Support vessels including barge(s), heavy lift vessel(s) (HLVs), multi-service construction vessel(s), anchor handling vessel(s) and general supply/support vessels. • MODU: Moored, or hybrid (moored and dynamic positioning) MODU will be used.
Operational Area and exclusion zones	The location of infrastructure is marked on nautical charts. The Operational Area and exclusion zones include: • A radius of 4,000 m from each well to allow for MODU mooring. • 1.5 km radius (3,000 m corridor) around subsea installation locations in which subsea installation and pre-commissioning activities will occur, to allow for the movement and position of vessels. • 500 m safety exclusion zone around the MODU and installation vessel.

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 loss of well integrity, and 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 will 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

Notifications

Please let us know if you require notification prior to and on completion of the proposed activities.

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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 **10 September 2025**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suit 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 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.

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.

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Kind regards,
Woodside Energy Consultation

6.1.27 Email sent to Bardi and Jawi Niimidiman Aboriginal Corporation – 28 July 2025

I hope you are well mate.

We are contacting you as the delegated representative for Bardi and Jawi Niimidiman Aboriginal Corporation.

Woodside would like to consult with Bardi and Jawi Niimidiman Aboriginal Corporation as a 'relevant person' that may be affected by Greater Western Flank 4 (GWF-4) Drilling and Subsea Installation (the activity) Environment Plan (EP).

Consultation for this activity opens on Monday 28 July 2025 and closes on Wednesday 27 August 2025.

Your feedback, opinions and comments provided by the consultation closing 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 about the activity.
- Provide an opportunity to discuss the activity.
- Discuss further ways to consult and engage with you about the activity.

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Overview of the activity

The GWF-4 Project intends to partially fill the unused production capacity at the existing Goodwyn Alpha (GWA) facility.

GWF-4 EP comprises drilling offshore wells in nearfields and the Wilcox Field, which will be tied back to existing GWF subsea infrastructure. Woodside plans to drill up to six wells.

The EP will also cover installation and pre-commissioning of subsea infrastructure.

The attached Summary Consultation 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 also linked the 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.

· Your concerns about the proposed activity.

· Other elements we should consider in the Environment Plan.

· Any other individuals, groups, or organisations we should talk to about this activity.

Consultation preferences

Please let us know your preferred method of consultation including whether you would like to meet face-to-face. We welcome the opportunity to meet and speak with Board members, 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 EP consultation. If you would like us to meet with you as part of Woodside's consultation on this activity, please contact me to discuss and confirm details.

How to contact us and further information

Information can be sent to feedback@woodside.com, via telephone on 1800 442 977 or directly to me.

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 at communications@nopsema.gov.au.

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.pdf (nopsema.gov.au)

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· Guideline: Guideline: Consultation in the course of preparing an environment plan (nopsema.gov.au)

· Policy: Draft policy for managing gender-restricted information PL2098.pdf (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 of Bardi and Jawi Niimidiman Aboriginal Corporation, Traditional Owners and other people and organisations who may be interested.

We also acknowledge our discussions relating to the consultation 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,

6.1.28 Email sent to Bundi Yamatji Aboriginal Corporation – 28 July 2025

I hope you are well and had an enjoyable weekend.

We are contacting you as the delegated representative for Bundi Yamatji Aboriginal Corporation (BYAC).

Woodside would like to consult with BYAC as a ‘relevant person’ that may be affected by Greater Western Flank 4 (GWF-4) Drilling and Subsea Installation (the activity) Environment Plan (EP).

Consultation for this activity opens on Monday 28 July 2025 and closes on Wednesday 27 August 2025.

Your feedback, opinions and comments provided by the consultation closing 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 about the activity.
· Provide an opportunity to discuss the activity.
· Discuss further ways to consult and engage with you about the activity.

Overview of the activity

The GWF-4 Project intends to partially fill the unused production capacity at the existing Goodwyn Alpha (GWA) facility.

GWF-4 EP comprises drilling offshore wells in nearfields and the Wilcox Field, which will be tied back to existing GWF subsea infrastructure. Woodside plans to drill up to six wells.

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The EP will also cover installation and pre-commissioning of subsea infrastructure.

The attached Summary Consultation 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 also linked the 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.
- Your concerns about the proposed activity.
- Other elements we should consider in the Environment Plan.
- Any other individuals, groups, or organisations we should talk to about this activity.

Cultural values

We have collated information in relation to cultural values that have either been provided to Woodside during previous EP consultation or via publicly available literature. These are outlined in Appendix A.

If there are any changes or additional information about BYAC's cultural values that you would like Woodside to consider in the preparation of this EP, please let us know by Wednesday 27 August 2025. Please also get in touch if you'd like to know more about how we have collected this information.

Consultation preferences

Please let us know your preferred method of consultation including whether you would like to meet face-to-face. We welcome the opportunity to meet and speak with Board members, 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 EP consultation. If you would like us to meet with you as part of Woodside's consultation on this activity, please contact me to discuss and confirm details.

How to contact us and further information

Information can be sent to feedback@woodside.com, via telephone on 1800 442 977 or directly to me.

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Further information about NOPSEMA

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Ongoing Feedback

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Please feel free to forward this email and the attached document to members of BYAC, 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,

Appendix A

Cultural Value	Source	
	Consultation	Literature review (publicly available)
Migratory marine animals	x	
Sea Country management: Yamatji sea connections and impacts to heritage values.	x	

6.1.29 Email sent to Buurabalayji Thalanyji Aboriginal Corporation (via legal representative) – 29 July 2025

We are contacting you as the delegated representative for Buurabalayji Thalanyji Aboriginal Corporation (BTAC).

Woodside would like to consult with BTAC as a ‘relevant person’ that may be affected by Greater Western Flank 4 (GWF-4) Drilling and Subsea Installation (the activity) Environment Plan (EP).

Consultation for this activity closes on Wednesday 27 August 2025.

Your feedback, opinions and comments provided by the consultation closing 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 about the activity.

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* Provide an opportunity to discuss the activity.

* Discuss further ways to consult and engage with you about the activity.

Overview of the activity

The GWF-4 Project intends to partially fill the unused production capacity at the existing Goodwyn Alpha (GWA) facility.

GWF-4 EP comprises drilling offshore wells in nearfields and the Wilcox Field, which will be tied back to existing GWF subsea infrastructure. Woodside plans to drill up to six wells.

The EP will also cover installation and pre-commissioning of subsea infrastructure.

The attached Summary Consultation 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 also linked the 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.

* Your concerns about the proposed activity.

* Other elements we should consider in the Environment Plan.

* Any other individuals, groups, or organisations we should talk to about this activity.

Cultural values

We have collated information in relation to cultural values that have either been provided to Woodside during previous EP consultation or via publicly available literature. These are outlined in Appendix A.

If there are any changes or additional information about BTAC's cultural values that you would like Woodside to consider in the preparation of this EP, please let us know by Wednesday 27 August 2025. Please also get in touch if you'd like to know more about how we have collected this information.

Consultation preferences

Please let us know your preferred method of consultation including whether you would like to meet face-to-face. We welcome the opportunity to meet and speak with Board members, Elders, office holders and other interested parties about this activity.

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Please feel free to forward this email and the attached document to members of BTAC, Traditional Owners and other people and organisations who may be interested.

We also acknowledge our discussions relating to the consultation 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

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Appendix A

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

6.1.30 Email sent to Gogolanyngor Aboriginal Corporation – 28 July 2025

I hope all is well with the you and the Board.

We are contacting you as the delegated representative for Gogolanyngor Aboriginal Corporation (GAC).

Woodside would like to consult with GAC as a ‘relevant person’ that may be affected by Greater Western Flank 4 (GWF-4) Drilling and Subsea Installation (the activity) Environment Plan (EP).

Consultation for this activity opens on Monday 28 July 2025 and closes on Wednesday 27 August 2025.

Your feedback, opinions and comments provided by the consultation closing 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.

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- Invite you to submit feedback about the activity.
- Provide an opportunity to discuss the activity.
- Discuss further ways to consult and engage with you about the activity.

Overview of the activity

The GWF-4 Project intends to partially fill the unused production capacity at the existing Goodwyn Alpha (GWA) facility.

GWF-4 EP comprises drilling offshore wells in nearfields and the Wilcox Field, which will be tied back to existing GWF subsea infrastructure. Woodside plans to drill up to six wells.

The EP will also cover installation and pre-commissioning of subsea infrastructure.

The attached Summary Consultation 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 also linked the 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.
- Your concerns about the proposed activity.
- Other elements we should consider in the Environment Plan.
- Any other individuals, groups, or organisations we should talk to about this activity.

Consultation preferences

Please let us know your preferred method of consultation including whether you would like to meet face-to-face. We welcome the opportunity to meet and speak with Board members, 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 EP consultation. If you would like us to meet with you as part of Woodside's consultation on this activity, please contact me to discuss and confirm details.

How to contact us and further information

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Ongoing Feedback

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Please feel free to forward this email and the attached document to members of GAC, 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,

6.1.31 Email sent to Karajarri Traditional Lands Association (Aboriginal Corporation) – 28 July 2025

I am sending the environment information on behalf of Dewayne Ball who is currently on leave.

We are contacting you as the delegated representative for Karajarri Traditional Lands Association (KTLA).

Woodside would like to consult with KTLA as a ‘relevant person’ that may be affected by Greater Western Flank 4 (GWF-4) Drilling and Subsea Installation (the activity) Environment Plan (EP).

Consultation for this activity opens on Monday 28 July 2025 and closes on Wednesday 27 August 2025.

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Overview of the activity

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The attached Summary Consultation 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.

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Consultation preferences

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Please feel free to forward this email and the attached document to members of KTLA, 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,

6.1.32 Email sent to Kariyarra Aboriginal Corporation – 28 July 2025

I Hope you are both well and had time to relax over the weekend.

We are contacting you as the delegated representative for Kariyarra Aboriginal Corporation (KAC).

Woodside would like to consult with KAC as a ‘relevant person’ that may be affected by Greater Western Flank 4 (GWF-4) Drilling and Subsea Installation (the activity) Environment Plan (EP).

Consultation for this activity opens on Monday 28 July 2025 and closes on Wednesday 27 August 2025.

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Overview of the activity

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provides a high-level overview of the activity, including the Environment that May Be Affected (EMBA) map.

We have also linked the 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.
- Your concerns about the proposed activity.
- Other elements we should consider in the Environment Plan.
- Any other individuals, groups, or organisations we should talk to about this activity.

Cultural values

We have collated information in relation to cultural values that have either been provided to Woodside during previous EP consultation or via publicly available literature. These are outlined in Appendix A.

If there are any changes or additional information about KAC's cultural values that you would like Woodside to consider in the preparation of this EP, please let us know by Wednesday 27 August 2025. Please also get in touch if you'd like to know more about how we have collected this information.

Consultation preferences

Please let us know your preferred method of consultation including whether you would like to meet face-to-face. We welcome the opportunity to meet and speak with Board members, Elders, office holders and other interested parties about this activity.

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Please feel free to forward this email and the attached document to members of KAC, Traditional Owners and other people and organisations who may be interested.

We also acknowledge our discussions relating to the consultation 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.

Sincerely,

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Appendix A

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.	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 • Fish • Molluscs including bivalves, gastropods and cephalopods.	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	

6.1.33 Email sent to Malgana Aboriginal Corporation (via YMAC) – 28 July 2025

I hope you are well and had time to relax over the weekend.

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We are contacting you as the delegated representative for Malgana Aboriginal Corporation.

Woodside would like to consult with Malgana Aboriginal Corporation as a 'relevant person' that may be affected by Greater Western Flank 4 (GWF-4) Drilling and Subsea Installation (the activity) Environment Plan (EP).

Consultation for this activity opens on Monday 28 July 2025 and closes on Wednesday 27 August 2025.

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- Invite you to submit feedback about the activity.
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Overview of the activity

The GWF-4 Project intends to partially fill the unused production capacity at the existing Goodwyn Alpha (GWA) facility.

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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.
- Your concerns about the proposed activity.
- Other elements we should consider in the Environment Plan.
- Any other individuals, groups, or organisations we should talk to about this activity.

Cultural values

We have collated information in relation to cultural values that have either been provided to Woodside during previous EP consultation or via publicly available literature. These are outlined in Appendix A.

If there are any changes or additional information about Malgana Aboriginal Corporation's cultural values that you would like Woodside to consider in the preparation of this EP, please let us know by Wednesday 27 August 2025. Please also get in touch if you'd like to know more about how we have collected this information.

Consultation preferences

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Please feel free to forward this email and the attached document to members of the Malgana Aboriginal Corporation, 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.

Sincerely,

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Appendix A

Cultural Value	Source	
	Consultation	Literature review (publicly available)
Interest in Shark Bay: • Unique environment • Stromatolites and microbial mats	x	
Access to Country for resources: • Bird and turtle eggs • Dugongs • Turtle • Fish including sharks • Shellfish • Crabs		x
Traditional knowledge of freshwater seeps in the submerged landscape.		x
Cultural significant species: • Green sea turtles • Dugongs • Shags • Bottlenose dolphins		x
Sharing and controlling of knowledge – knowledge owners must maintain control.		x
Transfer of knowledge to younger generations – Older people pass on knowledge about Country to younger people.		x

6.1.34 Email sent to Murujuga Aboriginal Corporation – 28 July 2025

I hope you are well.

We are contacting you as the delegated representative for Murujuga Aboriginal Corporation (MAC).

Woodside would like to consult with MAC as a ‘relevant person’ that may be affected by Greater Western Flank 4 (GWF-4) Drilling and Subsea Installation (the activity) Environment Plan (EP).

Consultation for this activity opens on Monday 28 July 2025 and closes on Wednesday 27 August 2025.

Your feedback, opinions and comments provided by the consultation closing 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 about the activity.
· Provide an opportunity to discuss the activity.
· Discuss further ways to consult and engage with you about the activity.

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Overview of the activity

The GWF-4 Project intends to partially fill the unused production capacity at the existing Goodwyn Alpha (GWA) facility.

GWF-4 EP comprises drilling offshore wells in nearfields and the Wilcox Field, which will be tied back to existing GWF subsea infrastructure. Woodside plans to drill up to six wells.

The EP will also cover installation and pre-commissioning of subsea infrastructure.

The attached Summary Consultation 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 also linked the 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.
- Your concerns about the proposed activity.
- Other elements we should consider in the Environment Plan.
- Any other individuals, groups, or organisations we should talk to about this activity.

Cultural values

We have collated information in relation to cultural values that have either been provided to Woodside during previous EP consultation or via publicly available literature. These are outlined in Appendix A.

If there are any changes or additional information about MAC's cultural values that you would like Woodside to consider in the preparation of this EP, please let us know by Wednesday 27 August 2025. Please also get in touch if you'd like to know more about how we have collected this information.

Consultation preferences

Please let us know your preferred method of consultation including whether you would like to meet face-to-face. We welcome the opportunity to meet and speak with Board members, 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 EP consultation. If you would like us to meet with you as part of Woodside's consultation on this activity, please contact me to discuss and confirm details.

How to contact us and further information

Information can be sent to feedback@woodside.com, via telephone on 1800 442 977 or directly to me.

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Ongoing Feedback

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Please feel free to forward this email and the attached document to members of MAC, 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,

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Appendix A

Cultural Value	Source	
	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.	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
Harvesting squid around Conzinc Bay.		x
MAC is the appropriate cultural authority for Murujuga.	x	
Potential impact on Jinna (Songlines) on the submerged landscape.	x	

6.1.35 Email sent to Nanda Aboriginal Corporation (via YMAC) – 28 July 2025

I hope you are well and had time to relax over the weekend.

We are contacting you as the delegated representative for Nanda Aboriginal Corporation.

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Woodside would like to consult with Nanda Aboriginal Corporation as a ‘relevant person’ that may be affected by Greater Western Flank 4 (GWF-4) Drilling and Subsea Installation (the activity) Environment Plan (EP).

Consultation for this activity opens on Monday 28 July 2025 and closes on Wednesday 27 August 2025.

Your feedback, opinions and comments provided by the consultation closing 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 about the activity.
* Provide an opportunity to discuss the activity.
* Discuss further ways to consult and engage with you about the activity.

Overview of the activity

The GWF-4 Project intends to partially fill the unused production capacity at the existing Goodwyn Alpha (GWA) facility.

GWF-4 EP comprises drilling offshore wells in nearfields and the Wilcox Field, which will be tied back to existing GWF subsea infrastructure. Woodside plans to drill up to six wells.

The EP will also cover installation and pre-commissioning of subsea infrastructure.

The attached Summary Consultation 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 also linked the 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.
* Your concerns about the proposed activity.
* Other elements we should consider in the Environment Plan.
* Any other individuals, groups, or organisations we should talk to about this activity.

Cultural values

We have collated information in relation to cultural values that have either been provided to Woodside during previous EP consultation or via publicly available literature. These are outlined in Appendix A.

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If there are any changes or additional information about Nanda Aboriginal Corporation's cultural values that you would like Woodside to consider in the preparation of this EP, please let us know by Wednesday 27 August 2025. Please also get in touch if you'd like to know more about how we have collected this information.

Consultation preferences

Please let us know your preferred method of consultation including whether you would like to meet face-to-face. We welcome the opportunity to meet and speak with Board members, 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 EP consultation. If you would like us to meet with you as part of Woodside's consultation on this activity, please contact me to discuss and confirm details.

How to contact us and further information

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Ongoing Feedback

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Please feel free to forward this email and the attached document to members of Nanda Aboriginal Corporation, Traditional Owners and other people and organisations who may be interested.

We also acknowledge our discussions relating to the consultation 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.

Sincerely,

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Appendix A

Cultural Value	Source	
	Consultation	Literature review (publicly available)
Connection to Country: • Kalbarri Coastal Cliffs: Dreamtime, mythological/creation stories. • Archaeological sites. • Red sandstone outcrops. • Fresh water springs. • Artefacts abundant on islands adjacent to the state marine park.		x
Shorelines are culturally significant.	x	
Whales – migration patterns	x	

6.1.36 Email sent to Nganhurra Thanardi Garrbu Aboriginal Corporation – 28 July 2025

We are contacting you as the delegated representative for Nganhurra Thanardi Garrbu Aboriginal Corporation (NTGAC).

Woodside would like to consult with NTGAC as a 'relevant person' that may be affected by Greater Western Flank 4 (GWF-4) Drilling and Subsea Installation (the activity) Environment Plan (EP).

Consultation for this activity opens on Monday 28 July 2025 and closes on Wednesday 27 August 2025.

Your feedback, opinions and comments provided by the consultation closing 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 about the activity.
· Provide an opportunity to discuss the activity.
· Discuss further ways to consult and engage with you about the activity.

Overview of the activity

The GWF-4 Project intends to partially fill the unused production capacity at the existing Goodwyn Alpha (GWA) facility.

GWF-4 EP comprises drilling offshore wells in nearfields and the Wilcox Field, which will be tied back to existing GWF subsea infrastructure. Woodside plans to drill up to six wells.

The EP will also cover installation and pre-commissioning of subsea infrastructure.

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The attached Summary Consultation 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 also linked the 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.
- Your concerns about the proposed activity.
- Other elements we should consider in the Environment Plan.
- Any other individuals, groups, or organisations we should talk to about this activity.

Cultural values

We have collated information in relation to cultural values that have either been provided to Woodside during previous EP consultation or via publicly available literature. These are outlined in Appendix A.

If there are any changes or additional information about NTGAC's cultural values that you would like Woodside to consider in the preparation of this EP, please let us know by Wednesday 27 August 2025. Please also get in touch if you'd like to know more about how we have collected this information.

Consultation preferences

Please let us know your preferred method of consultation including whether you would like to meet face-to-face. We welcome the opportunity to meet and speak with Board members, 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 EP consultation. If you would like us to meet with you as part of Woodside's consultation on this activity, please contact me to discuss and confirm details.

How to contact us and further information

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Ongoing Feedback

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Please feel free to forward this email and the attached document to members of NTGAC, Traditional Owners and other people and organisations who may be interested.

We also acknowledge our discussions relating to the consultation 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.

Sincerely,

Appendix A

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	x	

6.1.37 Email sent to Ngarluma Aboriginal Corporation – 28 July 2025

I hope you are well and had time to enjoy the weekend.

Can you please let me know if you would like me to include the NAC CEO in any future correspondence relating to Woodside and its activities.

We are contacting you as the delegated representative for Ngarluma Aboriginal Corporation (NAC).

Woodside would like to consult with NAC as a ‘relevant person’ that may be affected by Greater Western Flank 4 (GWF-4) Drilling and Subsea Installation (the activity) Environment Plan (EP).

Consultation for this activity opens on Monday 28 July 2025 and closes on Wednesday 27 August 2025.

Your feedback, opinions and comments provided by the consultation closing 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:

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* Inform you about our plans for the activity.
* Invite you to submit feedback about the activity.
* Provide an opportunity to discuss the activity.
* Discuss further ways to consult and engage with you about the activity.

Overview of the activity

The GWF-4 Project intends to partially fill the unused production capacity at the existing Goodwyn Alpha (GWA) facility.

GWF-4 EP comprises drilling offshore wells in nearfields and the Wilcox Field, which will be tied back to existing GWF subsea infrastructure. Woodside plans to drill up to six wells.

The EP will also cover installation and pre-commissioning of subsea infrastructure.

The attached Summary Consultation 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 also linked the 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.
* Your concerns about the proposed activity.
* Other elements we should consider in the Environment Plan.
* Any other individuals, groups, or organisations we should talk to about this activity.

Cultural values

We have collated information in relation to cultural values that have either been provided to Woodside during previous EP consultation or via publicly available literature. These are outlined in Appendix A.

If there are any changes or additional information about NAC's cultural values that you would like Woodside to consider in the preparation of this EP, please let us know by Wednesday 27 August 2025. Please also get in touch if you'd like to know more about how we have collected this information.

Consultation preferences

Please let us know your preferred method of consultation including whether you would like to meet face-to-face. We welcome the opportunity to meet and speak with Board members, 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 EP consultation. If you would like us to meet with you as part of

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Woodside's consultation on this activity, please contact me to discuss and confirm details.

How to contact us and further information

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Ongoing Feedback

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Please feel free to forward this email and the attached document to members of NAC, Traditional Owners and other people and organisations who may be interested.

We also acknowledge our discussions relating to the consultation 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.

Sincerely,

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Appendix A

Cultural Value	Source	
	Consultation	Literature review (publicly available)
Onshore heritage: interest in management of heritage sites.	x	
Potential submerged heritage.	x	

6.1.38 Email sent to Nhuwala Claim Group (via YMAC) – 26 August 2025

We can include this on the agenda for our upcoming meeting in Karratha, if the Nhuwala Claimants would like to discuss this activity further.

We are contacting you as the delegated representative for the Nhuwala Claim Group.

Woodside would like to consult with the Nhuwala Claim Group as a 'relevant person' that may be affected by **Greater Western Flank 4 (GWF-4) Drilling and Subsea Installation** (the activity) Environment Plan (EP).

Consultation with the Nhuwala Claim Group for this activity closes on **Thursday 25 September 2025**.

Your feedback, opinions and comments provided by the consultation closing 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 about the activity.
- Provide an opportunity to discuss the activity.
- Discuss further ways to consult and engage with you about the activity.

Overview of the activity

The GWF-4 Project intends to partially fill the unused production capacity at the existing Goodwyn Alpha (GWA) facility.

GWF-4 EP comprises drilling offshore wells in nearfields and the Wilcox Field, which will be tied back to existing GWF subsea infrastructure. Woodside plans to drill up to six wells.

The EP will also cover installation and pre-commissioning of subsea infrastructure.

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The attached Summary Consultation 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 also linked the 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.
- Your concerns about the proposed activity.
- Other elements we should consider in the Environment Plan.
- Any other individuals, groups, or organisations we should talk to about this activity.

Consultation preferences

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Ongoing Feedback

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Please feel free to forward this email and the attached document to members of the Nhuwala Claim Group, 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

6.1.39 Email sent to Nimanburr Aboriginal Corporation (La-Djardarr Bay) – 28 July 2025

I hope this email finds you all well. [Individual 2], I will phone over the next day or so.

We are contacting you as the delegated representative for Nimanburr Aboriginal Corporation.

Woodside would like to consult with Nimanburr Aboriginal Corporation as a ‘relevant person’ that may be affected by Greater Western Flank 4 (GWF-4) Drilling and Subsea Installation (the activity) Environment Plan (EP).

Consultation for this activity opens on Monday 28 July 2025 and closes on Wednesday 27 August 2025.

Your feedback, opinions and comments provided by the consultation closing 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:
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Overview of the activity

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Consultation with Woodside
We'd like to gather your feedback about:
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- Your concerns about the proposed activity.
- Other elements we should consider in the Environment Plan.
- Any other individuals, groups, or organisations we should talk to about this activity.

Cultural values

We have collated information in relation to cultural values that have either been provided to Woodside during previous EP consultation or via publicly available literature. These are outlined in Appendix A.

If there are any changes or additional information about Nimanburr Aboriginal Corporation, cultural values that you would like Woodside to consider in the preparation of this EP, please let us know by Wednesday 27 August 2025. Please also get in touch if you'd like to know more about how we have collected this information.

Consultation preferences

Please let us know your preferred method of consultation including whether you would like to meet face-to-face. We welcome the opportunity to meet and speak with Board members, Elders, office holders and other interested parties about this activity.

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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 of Nimanburr Aboriginal Corporation, 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,

Appendix A

Cultural Value	Source	
	Consultation	Literature review (publicly available)
Valentine Island		x

6.1.40 Email sent to Nyangumarta Karajarri Aboriginal Corporation (via KLC) – 28 July 2025

We are contacting you as the delegated representative for Nyangumarta Karajarri Aboriginal Corporation (NKAC).

Woodside would like to consult with NKAC as a ‘relevant person’ that may be affected by Greater Western Flank 4 (GWF-4) Drilling and Subsea Installation (the activity) Environment Plan (EP).

Consultation for this activity opens on Monday 28 July 2025 and closes on Wednesday 27 August 2025.

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existing GWF subsea infrastructure. Woodside plans to drill up to six wells.

The EP will also cover installation and pre-commissioning of subsea infrastructure.

The attached Summary Consultation 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 also linked the 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.
- Your concerns about the proposed activity.
- Other elements we should consider in the Environment Plan.
- Any other individuals, groups, or organisations we should talk to about this activity.

Consultation preferences

Please let us know your preferred method of consultation including whether you would like to meet face-to-face. We welcome the opportunity to meet and speak with Board members, Elders, office holders and other interested parties about this activity.

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Ongoing Feedback

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Please feel free to forward this email and the attached document to members of NKAC, 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,

6.1.41 Email sent to Nyangumarta Warrarn Aboriginal Corporation – 28 July 2025

We are contacting you as the delegated representative for Nyangumarta Warrarn Aboriginal Corporation (NWAC).

Woodside would like to consult with NWAC as a ‘relevant person’ that may be affected by Greater Western Flank 4 (GWF-4) Drilling and Subsea Installation (the activity) Environment Plan (EP).

Consultation for this activity opens on Monday 28 July 2025 and closes on Wednesday 27 August 2025.

Your feedback, opinions and comments provided by the consultation closing 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 about the activity.
- Provide an opportunity to discuss the activity.
- Discuss further ways to consult and engage with you about the activity.

Overview of the activity

The GWF-4 Project intends to partially fill the unused production capacity at the existing Goodwyn Alpha (GWA) facility.

GWF-4 EP comprises drilling offshore wells in nearfields and the Wilcox Field, which will be tied back to existing GWF subsea infrastructure. Woodside plans to drill up to six wells.

The EP will also cover installation and pre-commissioning of subsea infrastructure.

The attached Summary Consultation 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 also linked the Consultation Information Sheet here with further details including an assessment of

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the potential impacts and risks relevant to the activity, as well as mitigation and management measures.

Consultation with Woodside
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- Your concerns about the proposed activity.
- Other elements we should consider in the Environment Plan.
- Any other individuals, groups, or organisations we should talk to about this activity.

Cultural values

We have collated information in relation to cultural values that have either been provided to Woodside during previous EP consultation or via publicly available literature. These are outlined in Appendix A.

If there are any changes or additional information about NWAC's cultural values that you would like Woodside to consider in the preparation of this EP, please let us know by Wednesday 27 August 2025. Please also get in touch if you'd like to know more about how we have collected this information.

Consultation preferences

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Please feel free to forward this email and the attached document to members of NWAC, 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,

Appendix A

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	

6.1.42 Email sent to Nyul Nyul PBC Aboriginal Corporation – 28 July 2025

We are contacting you as the delegated representative for Nyul Nyul Aboriginal Corporation.

Woodside would like to consult with Nyul Nyul Aboriginal Corporation as a 'relevant person' that may be affected by Greater Western Flank 4 (GWF-4) Drilling and Subsea Installation (the activity) Environment Plan (EP).

Consultation for this activity opens on Monday 28 July 2025 and closes on Wednesday 27 August 2025.

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· Invite you to submit feedback about the activity.

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· Discuss further ways to consult and engage with you about the activity.

Overview of the activity

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GWF-4 EP comprises drilling offshore wells in nearfields and the Wilcox Field, which will be tied back to existing GWF subsea infrastructure. Woodside plans to drill up to six wells.

The EP will also cover installation and pre-commissioning of subsea infrastructure.

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Consultation with Woodside

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· Any other individuals, groups, or organisations we should talk to about this activity.

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Ongoing Feedback

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Please feel free to forward this email and the attached document to members of Nyul Nyul Aboriginal Corporation, 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,

6.1.43 Email sent to Robe River Kuruma Aboriginal Corporation – 28 July 2025

I hope you are well and had time to relax over the weekend.

We are contacting you as the delegated representative for Robe River Kuruma Aboriginal Corporation (RRKAC).

Woodside would like to consult with RRKAC as a ‘relevant person’ that may be affected by Greater Western Flank 4 (GWF-4) Drilling and Subsea Installation (the activity) Environment Plan (EP).

Consultation for this activity opens on Monday 28 July 2025 and closes on Wednesday 27 August 2025.

Your feedback, opinions and comments provided by the consultation closing 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 about the activity.
* Provide an opportunity to discuss the activity.
* Discuss further ways to consult and engage with you about the activity.

Overview of the activity

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The attached Summary Consultation 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.

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Consultation with Woodside

We'd like to gather your feedback about:

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* Protection of the environment and its relationship to your cultural values.
* Your concerns about the proposed activity.
* Other elements we should consider in the Environment Plan.
* Any other individuals, groups, or organisations we should talk to about this activity.

Cultural values

We have collated information in relation to cultural values that have either been provided to Woodside during previous EP consultation or via publicly available literature. These are outlined in Appendix A.

If there are any changes or additional information about RRKAC's cultural values that you would like Woodside to consider in the preparation of this EP, please let us know by Wednesday 27 August 2025. Please also get in touch if you'd like to know more about how we have collected this information.

Consultation preferences

Please let us know your preferred method of consultation including whether you would like to meet face-to-face. We welcome the opportunity to meet and speak with Board members, 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 EP consultation. If you would like us to meet with you as part of Woodside's consultation on this activity, please contact me to discuss and confirm details.

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Please feel free to forward this email and the attached document to members of RRKAC, Traditional Owners and other people and organisations who may be interested.

We also acknowledge our discussions relating to the consultation 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.

Sincerely,

Appendix A

Cultural Value	Source	
	Consultation	Literature review (publicly available)
Underwater heritage – concerns about impacts to heritage at shoreline.	x	
Coastline	x	

6.1.44 Email sent to Thalanyji / Nhuwala People (via BTAC) – 26 August 2028

We are contacting Buurabalayji Thalanyji Aboriginal Corporation (BTAC) as the delegated representative for the Thalanyji/Nhuwala People Native Title Claim.

We note that Blackshield Legal is listed as the representative for the Thalanyji/Nhuwala People and that communications are to be directed via BTAC. Please let me know if this email should be sent to any additional representatives.

Woodside would like to consult with the Thalanyji/Nhuwala People as a ‘relevant person’ that may be affected by **Greater Western Flank 4 (GWF-4) Drilling and Subsea Installation** (the activity) Environment Plan (EP).

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Consultation with the Thalanyji/Nhuwala People for this activity closes on **Thursday 25 September 2025**.

Your feedback, opinions and comments provided by the consultation closing 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 about the activity.
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Overview of the activity

The GWF-4 Project intends to partially fill the unused production capacity at the existing Goodwyn Alpha (GWA) facility.

GWF-4 EP comprises drilling offshore wells in nearfields and the Wilcox Field, which will be tied back to existing GWF subsea infrastructure. Woodside plans to drill up to six wells.

The EP will also cover installation and pre-commissioning of subsea infrastructure.

The attached Summary Consultation 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 also linked the 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

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- Your concerns about the proposed activity.
- Other elements we should consider in the Environment Plan.
- Any other individuals, groups, or organisations we should talk to about this activity.

Consultation preferences

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Please feel free to forward this email and the attached document to members of Thalanyji/Nhuwala People, 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.

6.1.45 Email sent to Wanparta Aboriginal Corporation – 28 July 2025

I hope you and the Wanparta Community are well.

We are contacting you as the delegated representative for Wanparta Aboriginal Corporation.

Woodside would like to consult with Wanparta Aboriginal Corporation as a ‘relevant person’ that may be affected by Greater Western Flank 4 (GWF-4) Drilling and Subsea Installation (the activity) Environment Plan (EP).

Consultation for this activity opens on Monday 28 July 2025 and closes on Wednesday 27 August 2025.

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* Inform you about our plans for the activity.
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Overview of the activity

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Cultural values

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If there are any changes or additional information about Wanparta Aboriginal Corporation's cultural values that you would like Woodside to consider in the preparation of this EP, please let us know by Wednesday 27 August 2025. Please also get in touch if you'd like to know more about how we have collected this information.

Consultation preferences

Please let us know your preferred method of consultation including whether you would like to meet face-to-face. We welcome the opportunity to meet and speak with Board members, Elders, office holders and other interested parties about this activity.

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Please feel free to forward this email and the attached document to members of Wanparta Aboriginal Corporation, 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.

Sincerely,

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Appendix A

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	

6.1.46 Email sent to Wirrawandi Aboriginal Corporation – 28 July 2025

Dewayne is currently on days off, so sending environment plan information on his behalf.

We are contacting you as the delegated representative for Wirrawandi Aboriginal Corporation (WAC).

Woodside would like to consult with WAC as a ‘relevant person’ that may be affected by Greater Western Flank 4 (GWF-4) Drilling and Subsea Installation (the activity) Environment Plan (EP).

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Consultation with Woodside

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- Your concerns about the proposed activity.
- Other elements we should consider in the Environment Plan.
- Any other individuals, groups, or organisations we should talk to about this activity.

Cultural values

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If there are any changes or additional information about WAC's cultural values that you would like Woodside to consider in the preparation of this EP, please let us know by Wednesday 27 August 2025. Please also get in touch if you'd like to know more about how we have collected this information.

Consultation preferences

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communications@nopsema.gov.au.

Further information about NOPSEMA

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- Brochure: Consultation on offshore petroleum environment plans brochure.pdf (nopsema.gov.au)
- Guideline: Guideline: Consultation in the course of preparing an environment plan (nopsema.gov.au)
- Policy: Draft policy for managing gender-restricted information PL2098.pdf (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 of WAC, Traditional Owners and other people and organisations who may be interested.

We also acknowledge our discussions relating to the consultation 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,

Appendix A

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	

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6.1.47 Email sent to Wunambal Gaambera Aboriginal Corporation – 28 July 2025

I hope this finds you well.

We are contacting you as the delegated representative for Wunambal Gaambera Aboriginal Corporation.

Woodside would like to consult with Wunambal Gaambera Aboriginal Corporation as a ‘relevant person’ that may be affected by Greater Western Flank 4 (GWF-4) Drilling and Subsea Installation (the activity) Environment Plan (EP).

Consultation for this activity opens on Monday 28 July 2025 and closes on Wednesday 27 August 2025.

Your feedback, opinions and comments provided by the consultation closing 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 about the activity.

· Provide an opportunity to discuss the activity.

· Discuss further ways to consult and engage with you about the activity.

Overview of the activity

The GWF-4 Project intends to partially fill the unused production capacity at the existing Goodwyn Alpha (GWA) facility.

GWF-4 EP comprises drilling offshore wells in nearfields and the Wilcox Field, which will be tied back to existing GWF subsea infrastructure. Woodside plans to drill up to six wells.

The EP will also cover installation and pre-commissioning of subsea infrastructure.

The attached Summary Consultation 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 also linked the 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.

· Your concerns about the proposed activity.

· Other elements we should consider in the Environment Plan.

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· Any other individuals, groups, or organisations we should talk to about this activity.

Consultation preferences

Please let us know your preferred method of consultation including whether you would like to meet face-to-face. We welcome the opportunity to meet and speak with Board members, 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 EP consultation. If you would like us to meet with you as part of Woodside's consultation on this activity, please contact me to discuss and confirm details.

How to contact us and further information

Information can be sent to feedback@woodside.com, via telephone on 1800 442 977 or directly to me.

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 at communications@nopsema.gov.au.

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:

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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 of Wunambal Gaambera Aboriginal Corporation, 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,

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6.1.48 Email sent to Yamatji Marlpa Aboriginal Corporation and Yamatji Marlpa Barna Baba Maaja Aboriginal Corporation (via YMAC) – 28 July 2025

We are contacting you as the delegated representative for Yamatji Marlpa Aboriginal Corporation (YMAC) and Yamatji Marlpa Barna Baba Maaja Aboriginal Corporation (Yamatji Land and Sea Council).

Woodside would like to consult with YMAC and Yamatji Marlpa Barna Baba Maaja Aboriginal Corporation (Yamatji Land and Sea Council) as a 'relevant person' that may be affected by Greater Western Flank 4 (GWF-4) Drilling and Subsea Installation (the activity) Environment Plan (EP).

Consultation for this activity opens on Monday 28 July 2025 and closes on Wednesday 27 August 2025.

Your feedback, opinions and comments provided by the consultation closing 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 about the activity.
* Provide an opportunity to discuss the activity.
* Discuss further ways to consult and engage with you about the activity.

Overview of the activity

The GWF-4 Project intends to partially fill the unused production capacity at the existing Goodwyn Alpha (GWA) facility.

GWF-4 EP comprises drilling offshore wells in nearfields and the Wilcox Field, which will be tied back to existing GWF subsea infrastructure. Woodside plans to drill up to six wells.

The EP will also cover installation and pre-commissioning of subsea infrastructure.

The attached Summary Consultation 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 also linked the 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.
* Your concerns about the proposed activity.
* Other elements we should consider in the Environment Plan.

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* Any other individuals, groups, or organisations we should talk to about this activity.

Consultation preferences

Please let us know your preferred method of consultation including whether you would like to meet face-to-face. We welcome the opportunity to meet and speak with Board members, 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 EP consultation. If you would like us to meet with you as part of Woodside's consultation on this activity, please contact me to discuss and confirm details.

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Ongoing Feedback

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Please feel free to forward this email and the attached document to members of YMAC, Yamatji Marlpa Barna Baba Maaja Aboriginal Corporation (Yamatji Land and Sea Council), 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

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6.1.49 Email sent to Yamatji Southern Regional Corporation – 28 July 2025

I hope this email finds you well. Please let me know if you would like this information shared with a direct representative of your Corporation.

We are contacting you as the delegated representative for Yamatji Southern Regional Corporation.

Woodside would like to consult with Yamatji Southern Regional Corporation as a 'relevant person' that may be affected by **Greater Western Flank 4 (GWF-4) Drilling and Subsea Installation** (the activity) Environment Plan (EP).

Consultation for this activity opens on **Monday 28 July 2025** and closes on **Wednesday 27 August 2025**.

Your feedback, opinions and comments provided by the consultation closing 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 about the activity.

Provide an opportunity to discuss the activity.

Discuss further ways to consult and engage with you about the activity.

Overview of the activity

The GWF-4 Project intends to partially fill the unused production capacity at the existing Goodwyn Alpha (GWA) facility.

GWF-4 EP comprises drilling offshore wells in nearfields and the Wilcox Field, which will be tied back to existing GWF subsea infrastructure. Woodside plans to drill up to six wells.

The EP will also cover installation and pre-commissioning of subsea infrastructure.

The attached Summary Consultation 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 also linked the 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

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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.

Your concerns about the proposed activity.

Other elements we should consider in the Environment Plan.

Any other individuals, groups, or organisations we should talk to about this activity.

Consultation preferences

Please let us know your preferred method of consultation including whether you would like to meet face-to-face. We welcome the opportunity to meet and speak with Board members, 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 EP consultation. If you would like us to meet with you as part of Woodside's consultation on this activity, please contact me to discuss and confirm details.

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Further information about NOPSEMA

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Policy: Draft policy for managing gender-restricted information PL2098.pdf (nopsema.gov.au).

Ongoing Feedback

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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 of the Yamatji Southern Regional Corporation, 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

6.1.50 Email sent to Yawuru Native Title Holders Aboriginal Corporation – 28 July 2025

I hope this finds you well.

I will reach out again soon, to see if you have time to meet when I am next in Broome.

We are contacting you as the delegated representative for Yawuru Native Title Holders Aboriginal Corporation.

Woodside would like to consult with Yawuru Native Title Holders Aboriginal Corporation as a ‘relevant person’ that may be affected by Greater Western Flank 4 (GWF-4) Drilling and Subsea Installation (the activity) Environment Plan (EP).

Consultation for this activity opens on Monday 28 July 2025 and closes on Wednesday 27 August 2025.

Your feedback, opinions and comments provided by the consultation closing 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 about the activity.

· Provide an opportunity to discuss the activity.

· Discuss further ways to consult and engage with you about the activity.

Overview of the activity

The GWF-4 Project intends to partially fill the unused production capacity at the existing Goodwyn Alpha (GWA) facility.

GWF-4 EP comprises drilling offshore wells in nearfields and the Wilcox Field, which will be tied back to existing GWF subsea infrastructure. Woodside plans to drill up to six wells.

The EP will also cover installation and pre-commissioning of subsea infrastructure.

The attached Summary Consultation Information Sheet has been developed for a First Nations audience and

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provides a high-level overview of the activity, including the Environment that May Be Affected (EMBA) map.

We have also linked the 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.
- Your concerns about the proposed activity.
- Other elements we should consider in the Environment Plan.
- Any other individuals, groups, or organisations we should talk to about this activity.

Consultation preferences

Please let us know your preferred method of consultation including whether you would like to meet face-to-face. We welcome the opportunity to meet and speak with Board members, 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 EP consultation. If you would like us to meet with you as part of Woodside's consultation on this activity, please contact me to discuss and confirm details.

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Ongoing Feedback

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as appropriate.

Please feel free to forward this email and the attached document to members of the Yawuru Native Title Holders Aboriginal Corporation, 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,

6.1.51 Email sent to Yinggarda Aboriginal Corporation (via legal representative) – 29 July 2025

We are contacting you as the delegated representative for Yinggarda Aboriginal Corporation (YAC).

Woodside would like to consult with YAC as a 'relevant person' that may be affected by Greater Western Flank 4 (GWF-4) Drilling and Subsea Installation (the activity) Environment Plan (EP).

Consultation for this activity closes on Wednesday 27 August 2025.

Your feedback, opinions and comments provided by the consultation closing 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 about the activity.

* Provide an opportunity to discuss the activity.

* Discuss further ways to consult and engage with you about the activity.

Overview of the activity

The GWF-4 Project intends to partially fill the unused production capacity at the existing Goodwyn Alpha (GWA) facility.

GWF-4 EP comprises drilling offshore wells in nearfields and the Wilcox Field, which will be tied back to existing GWF subsea infrastructure. Woodside plans to drill up to six wells.

The EP will also cover installation and pre-commissioning of subsea infrastructure.

The attached Summary Consultation 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 also linked the 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:

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* How the activity could impact your cultural values, interests, and activities.
* Protection of the environment and its relationship to your cultural values.
* Your concerns about the proposed activity.
* Other elements we should consider in the Environment Plan.
* Any other individuals, groups, or organisations we should talk to about this activity.

Cultural values

We have collated information in relation to cultural values that have either been provided to Woodside during previous EP consultation or via publicly available literature. These are outlined in Appendix A.

If there are any changes or additional information about YAC's cultural values that you would like Woodside to consider in the preparation of this EP, please let us know by Wednesday 27 August 2025. Please also get in touch if you'd like to know more about how we have collected this information.

Consultation preferences

Please let us know your preferred method of consultation including whether you would like to meet face-to-face. We welcome the opportunity to meet and speak with Board members, 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 EP consultation. If you would like us to meet with you as part of Woodside's consultation on this activity, please contact me to discuss and confirm details.

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Further information about NOPSEMA

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* Policy: Draft policy for managing gender-restricted information PL2098.pdf (nopsema.gov.au)

Ongoing Feedback

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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 of YAC, Traditional Owners and other people and organisations who may be interested.

We also acknowledge our discussions relating to the consultation 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

Appendix A

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.	x	

6.1.52 Email sent to Yued Aboriginal Corporation – 28 July 2025

I am sending this email and information on behalf of Dewayne Ball, who is currently on leave.

We are contacting you as the delegated representative for Yued Aboriginal Corporation.

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Woodside would like to consult with Yued Aboriginal Corporation as a 'relevant person' that may be affected by Greater Western Flank 4 (GWF-4) Drilling and Subsea Installation (the activity) Environment Plan (EP).

Consultation for this activity opens on Monday 28 July 2025 and closes on Wednesday 27 August 2025.

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The purpose of this email is to:

· Inform you about our plans for the activity.

· Invite you to submit feedback about the activity.

· Provide an opportunity to discuss the activity.

· Discuss further ways to consult and engage with you about the activity.

Overview of the activity

The GWF-4 Project intends to partially fill the unused production capacity at the existing Goodwyn Alpha (GWA) facility.

GWF-4 EP comprises drilling offshore wells in nearfields and the Wilcox Field, which will be tied back to existing GWF subsea infrastructure. Woodside plans to drill up to six wells.

The EP will also cover installation and pre-commissioning of subsea infrastructure.

The attached Summary Consultation 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 also linked the 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.

· Your concerns about the proposed activity.

· Other elements we should consider in the Environment Plan.

· Any other individuals, groups, or organisations we should talk to about this activity.

Consultation preferences

Please let us know your preferred method of consultation including whether you would like to meet face-to-face. We welcome the opportunity to meet and speak with Board members, Elders, office holders and other interested parties about this activity.

Woodside provides various forms of assistance to organisations, Traditional Custodian groups and

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individuals to support participation in EP consultation. If you would like us to meet with you as part of Woodside's consultation on this activity, please contact me to discuss and confirm details.

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Ongoing Feedback

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Please feel free to forward this email and the attached document to members of Yued Aboriginal Corporation, 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,

6.1.53 Email sent to Kimberley Land Council – 28 July 2025

I hope this finds you well.

We are contacting you as the delegated representative for Kimberley Land Council (KLC).

Woodside would like to consult with KLC as a 'relevant person' that may be affected by Greater Western Flank 4 (GWF-4) Drilling and Subsea Installation (the activity) Environment Plan (EP).

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Consultation for this activity opens on Monday 28 July 2025 and closes on Wednesday 27 August 2025.

Your feedback, opinions and comments provided by the consultation closing 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 about the activity.

· Provide an opportunity to discuss the activity.

· Discuss further ways to consult and engage with you about the activity.

Overview of the activity

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The EP will also cover installation and pre-commissioning of subsea infrastructure.

The attached Summary Consultation 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 also linked the 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.

· Your concerns about the proposed activity.

· Other elements we should consider in the Environment Plan.

· Any other individuals, groups, or organisations we should talk to about this activity.

Consultation preferences

Please let us know your preferred method of consultation including whether you would like to meet face-to-face. We welcome the opportunity to meet and speak with Board members, 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 EP consultation. If you would like us to meet with you as part of

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Woodside's consultation on this activity, please contact me to discuss and confirm details.

How to contact us and further information

Information can be sent to feedback@woodside.com, via telephone on 1800 442 977 or directly to me.

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 at communications@nopsema.gov.au.

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.pdf (nopsema.gov.au)

· Guideline: Guideline: Consultation in the course of preparing an environment plan (nopsema.gov.au)

· Policy: Draft policy for managing gender-restricted information PL2098.pdf (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 of the KLC, 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,

6.1.54 Email sent to Yamatji Southern Regional Corporation (YSRC) – 28 July 2025

I hope this email finds you well. Please let me know if you would like this information shared with a direct representative of your Corporation.

We are contacting you as the delegated representative for Yamatji Southern Regional Corporation.

Woodside would like to consult with Yamatji Southern Regional Corporation as a 'relevant person' that may be affected by **Greater Western Flank 4 (GWF-4) Drilling and Subsea Installation** (the activity) Environment Plan (EP).

Consultation for this activity opens on **Monday 28 July 2025** and closes on **Wednesday 27 August 2025**.

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Your feedback, opinions and comments provided by the consultation closing 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 about the activity.
- Provide an opportunity to discuss the activity.
- Discuss further ways to consult and engage with you about the activity.

Overview of the activity

The GWF-4 Project intends to partially fill the unused production capacity at the existing Goodwyn Alpha (GWA) facility.

GWF-4 EP comprises drilling offshore wells in nearfields and the Wilcox Field, which will be tied back to existing GWF subsea infrastructure. Woodside plans to drill up to six wells.

The EP will also cover installation and pre-commissioning of subsea infrastructure.

The attached Summary Consultation 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 also linked the 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.
- Your concerns about the proposed activity.
- Other elements we should consider in the Environment Plan.
- Any other individuals, groups, or organisations we should talk to about this activity.

Consultation preferences

Please let us know your preferred method of consultation including whether you would like to meet face-to-face. We welcome the opportunity to meet and speak with Board members, Elders, office holders and other interested parties about this activity.

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Woodside provides various forms of assistance to organisations, Traditional Custodian groups and individuals to support participation in EP consultation. If you would like us to meet with you as part of Woodside's consultation on this activity, please contact me to discuss and confirm details.

How to contact us and further information

Information can be sent to feedback@woodside.com, via telephone on 1800 442 977 or directly to me.

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 at communications@nopsema.gov.au.

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.pdf (nopsema.gov.au)
- **Guideline:** Guideline: Consultation in the course of preparing an environment plan (nopsema.gov.au)
- **Policy:** Draft policy for managing gender-restricted information PL2098.pdf (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 of the Yamatji Southern Regional Corporation, 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

6.1.55 Email sent to Ngarluma Yindjibarndi Foundation Ltd and Yindjibarndi Aboriginal Corporation (via NYFL) – 29 July 2025

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We are contacting you as the delegated representative for Yindjibarndi Aboriginal Corporation and Ngarluma Yindjibarndi Foundation Ltd (NYFL).

Woodside would like to consult with Yindjibarndi Aboriginal Corporation and NYFL as a ‘relevant person’ that may be affected by Greater Western Flank 4 (GWF-4) Drilling and Subsea Installation (the activity) Environment Plan (EP).

Consultation for this activity is open and closes on Wednesday 27 August 2025.

Your feedback, opinions and comments provided by the consultation closing 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 about the activity.

* Provide an opportunity to discuss the activity.

* Discuss further ways to consult and engage with you about the activity.

Overview of the activity

The GWF-4 Project intends to partially fill the unused production capacity at the existing Goodwyn Alpha (GWA) facility.

GWF-4 EP comprises drilling offshore wells in nearfields and the Wilcox Field, which will be tied back to existing GWF subsea infrastructure. Woodside plans to drill up to six wells.

The EP will also cover installation and pre-commissioning of subsea infrastructure.

The attached Summary Consultation 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 also linked the 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.

* Your concerns about the proposed activity.

* Other elements we should consider in the Environment Plan.

* Any other individuals, groups, or organisations we should talk to about this activity.

Consultation preferences

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Please let us know your preferred method of consultation including whether you would like to meet face-to-face. We welcome the opportunity to meet and speak with Board members, 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 EP consultation. If you would like us to meet with you as part of Woodside's consultation on this activity, please contact me to discuss and confirm details.

How to contact us and further information

Information can be sent to feedback@woodside.com , via telephone on 1800 442 977 or directly to me.

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 at communications@nopsema.gov.au .

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.pdf (nopsema.gov.au)

* Guideline: Guideline: Consultation in the course of preparing an environment plan (nopsema.gov.au)

* Policy: Draft policy for managing gender-restricted information PL2098.pdf (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 of Yindjibarndi Aboriginal Corporation and NYFL, Traditional Owners and other people and organisations who may be interested.

We also acknowledge our discussions relating to the consultation 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

6.1.56 Email sent to Save Our Songlines (via legal representative) – 29 July 2025

We would like to consult with Save Our Songlines and yourself, as a 'relevant person' that may be affected by Greater Western Flank 4 (GWF-4) Drilling and Subsea Installation (the activity) Environment Plan (EP).

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Consultation for this activity closes on Wednesday 27 August 2025.

Your feedback, opinions and comments provided by the consultation closing 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 about the activity.

* Provide an opportunity to discuss the activity.

* Discuss further ways to consult and engage with you about the activity.

Overview of the activity

The GWF-4 Project intends to partially fill the unused production capacity at the existing Goodwyn Alpha (GWA) facility.

GWF-4 EP comprises drilling offshore wells in nearfields and the Wilcox Field, which will be tied back to existing GWF subsea infrastructure. Woodside plans to drill up to six wells.

The EP will also cover installation and pre-commissioning of subsea infrastructure.

The attached Summary Consultation 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 also linked the 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.

* Your concerns about the proposed activity.

* Other elements we should consider in the Environment Plan.

* Any other individuals, groups, or organisations we should talk to about this activity.

Consultation preferences

We note your previously stated preference for consultation to occur in written format (as set out in an email dated 10 April 2024). Woodside also welcomes the opportunity to meet face-to-face.

How to contact us and further information

Information can be sent to feedback@woodside.com, via telephone on 1800 442 977 or directly to me.

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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 at communications@nopsema.gov.au .

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.pdf (nopsema.gov.au)

* Guideline: Guideline: Consultation in the course of preparing an environment plan (nopsema.gov.au)

* Policy: Draft policy for managing gender-restricted information PL2098.pdf (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 of Save Our Songlines, 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

6.1.57 Email sent to Australian Fisheries Management Authority (AFMA), Commonwealth Fisheries Association (CFA), North-West Slope Trawl Fishery licence holders, Tuna Australia, Western Deepwater Trawl Fishery licence holders, Western Tuna and Billfish Fishery licence holders – 29 July 2025

Woodside is planning to submit the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan. The GWF-4 Project, which covers Production Licences WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L, intends to partially fill ullage (unused production capacity) at the existing Goodwyn Alpha (GWA) facility and is located in Commonwealth waters ~140 km north-west of Karratha, Western Australia.

If you would like to comment on the proposed activity, please provide feedback to Woodside by **28 August 2025** using the details below.

Overview

The GWF-4 Drilling and Subsea Installation petroleum activities include:

- Subsea tiebacks from nearfields and the Wilcox Field to existing GWF subsea infrastructure.
- The drilling of up to six wells (WCA01, WCA02, YDA01, ESA01, TPA04 and contingent well WCA).
- The installation and pre-commissioning of subsea infrastructure.

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Consultation information

The Consultation Information Sheet provides additional background on the proposed activities including summaries of potential key impacts and risks and associated management measures. This is available on our website.

Activity and location summary

Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan	
Activity details	Activities include: • Mooring installation for the Mobile Offshore Drilling Unit (MODU) (including piling). • Development drilling. • Pre- and post- lay survey activities. • Installation of subsea infrastructure. • Inspection, monitoring, maintenance and repair (IMMR). • Tie-in to existing subsea infrastructure. • Pre-commissioning testing.
Titles	Production Licence: WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L.
Location	In Commonwealth waters ~140 km north-west of Karratha, Western Australia.
Water depth	~ 40 m - 160 m deep
Timing	• Drilling activities: Q3 2026 to Q2 2028 (~90 days per well, up to an expected total of 450 days). Contingency 2029. • Subsea Installation: • Nearfield: Q3 2027 to Q1 2028 ~ 3 months. • Wilcox Field: Q4 2027 to Q2 2028 ~6 months. • Contingency 2029. • Decommissioning is not planned during the next 5 years.
Duration	• When activities occur, operations will run 24 hours a day, 7 days a week. Simultaneous Operations (SIMOPS) of drilling and subsea installation activities may occur. • IMMR activities will take place as required.
Infrastructure	Key infrastructure includes, but is not limited to: • Wilcox Field: Xmas trees and wellheads, flowlines, electro-hydraulic umbilicals (EHUs), manifolds, pipeline end terminations (PLETs), flowline end termination (FLET), umbilical termination assemblies (UTAs), electrical flying leads (EFLs), hydraulic flying leads (HFLs), flexible pipe jumpers, rigid spools, subsea intensifiers. • Nearfield: flowlines, UTAs, EFLs, HFLs, flexible pipe jumpers, cooling skids, pressure protection systems, and accumulator modules.

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Vessels	Key vessels include, but are not limited to: • Installation vessel for installing the subsea infrastructure. • Inspection, monitoring, maintenance and repair (IMMR) vessel for Xmas tree installation, isolation testing, IMMR or contingent activities. • Support vessels including barge(s), heavy lift vessel(s) (HLVs), multi-service construction vessel(s), anchor handling vessel(s) and general supply/support vessels. • MODU: Moored, or hybrid (moored and dynamic positioning) MODU will be used.
Operational Area and exclusion zones	The location of infrastructure is marked on nautical charts. The Operational Area and exclusion zones include: • A radius of 4,000 m from each well to allow for MODU mooring. • 1.5 km radius (3,000 m corridor) around subsea installation locations in which subsea installation and pre-commissioning activities will occur, to allow for the movement and position of vessels. • 500 m safety exclusion zone around the MODU and installation vessel.

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 loss of well integrity, and 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 will 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 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

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our website by **28 August 2025**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suit 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 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.

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.

6.1.57.1 Email sent to AFMA, Commonwealth Fisheries Association (CFA), North-West Slope Trawl Fishery licence holders, Tuna Australia, Western Deepwater Trawl Fishery licence holders, Western Tuna and Billfish Fishery licence holders – 30 July 2025

Dear Stakeholder,

Due to technical issues, you may have experienced some display errors in the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan consultation email we sent you yesterday. We apologise for this.

Please see below for the full text of the email. The Consultation Information Sheet, which was attached to yesterday's email, is also available here on the website.

We have extended the consultation period until 29 August 2025.

Kind regards,

Woodside Energy Consultation

[Initial email content attached]

6.1.58 Email sent to Australian Institute of Marine Science (AIMS), Commonwealth Scientific and Industrial Research Organisation (CSIRO), Western Australian Marine Science Institution (WAMSI), Curtin University, Edith Cowan University (ECU), Murdoch University, University of Western Australia (UWA) – 29 July 2025

Woodside is planning to submit the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan. The GWF- 4 Project, which covers Production licences WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L, intends to partially fill ullage (unused production capacity) at the existing Goodwyn Alpha (GWA) facility and is located in Commonwealth waters ~140 km north-west of Karratha, Western Australia.

If you would like to comment on the proposed activity, please provide feedback to Woodside by **28 August 2025** using the details below.

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Overview

The GWF-4 Drilling and Subsea Installation petroleum activities include:

- Subsea tiebacks from nearfields and the Wilcox Field to existing GWF subsea infrastructure.
- The drilling of up to six wells (WCA01, WCA02, YDA01, ESA01, TPA04 and contingent well WCA).
- The installation and pre-commissioning of subsea infrastructure.

Consultation information

A Consultation Information Sheet is attached, which provides additional background on the proposed activities including summaries of potential 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

Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan	
Activity details	Activities include: • Mooring installation for the Mobile Offshore Drilling Unit (MODU) (including piling). • Development drilling. • Pre- and post- lay survey activities. • Installation of subsea infrastructure. • Inspection, monitoring, maintenance and repair (IMMR). • Tie-in to existing subsea infrastructure. • Pre-commissioning testing.
Titles	Production Licence: WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L.
Location	In Commonwealth waters ~140 km north-west of Karratha, Western Australia.
Water depth	~ 40 m - 160 m deep
Timing	• Drilling activities: Q3 2026 to Q2 2028 (~90 days per well, up to an expected total of 450 days). Contingency 2029. • Subsea Installation: • Nearfield: Q3 2027 to Q1 2028 ~ 3 months. • Wilcox Field: Q4 2027 to Q2 2028 ~6 months. • Contingency 2029. • Decommissioning is not planned during the next 5 years.
Duration	• When activities occur, operations will run 24 hours a day, 7 days a week. Simultaneous Operations (SIMOPS) of drilling and subsea installation activities may occur. • IMMR activities will take place as required.

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Infrastructure	Key infrastructure includes, but is not limited to: • Wilcox Field: Xmas trees and wellheads, flowlines, electro-hydraulic umbilicals (EHUs), manifolds, pipeline end terminations (PLETs), flowline end termination (FLET), umbilical termination assemblies (UTAs), electrical flying leads (EFLs), hydraulic flying leads (HFLs), flexible pipe jumpers, rigid spools, subsea intensifiers. • Nearfield: flowlines, UTAs, EFLs, HFLs, flexible pipe jumpers, cooling skids, pressure protection systems, and accumulator modules.
Vessels	Key vessels include, but are not limited to: • Installation vessel for installing the subsea infrastructure. • Inspection, monitoring, maintenance and repair (IMMR) vessel for Xmas tree installation, isolation testing, IMMR or contingent activities. • Support vessels including barge(s), heavy lift vessel(s) (HLVs), multi-service construction vessel(s), anchor handling vessel(s) and general supply/support vessels. • MODU: Moored, or hybrid (moored and dynamic positioning) MODU will be used.
Operational Area and exclusion zones	The location of infrastructure is marked on nautical charts. The Operational Area and exclusion zones include: • A radius of 4,000 m from each well to allow for MODU mooring. • 1.5 km radius (3,000 m corridor) around subsea installation locations in which subsea installation and pre-commissioning activities will occur, to allow for the movement and position of vessels. • 500 m safety exclusion zone around the MODU and installation vessel.

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 loss of well integrity, and 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 will 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 **28 August 2025**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suit 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

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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.

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.

6.1.58.1 Email sent to Australian Institute of Marine Science (AIMS, Commonwealth Scientific and Industrial Research Organisation (CSIRO), Western Australian Marine Science Institution (WAMSI), Curtin University, Edith Cowan University (ECU), Murdoch University, University of Western Australia (UWA) – 30 July 2025

Dear Stakeholder,

Due to technical issues, you may have experienced some display errors in the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan consultation email we sent you yesterday. We apologise for this

Please see below for the full text of the email. The Consultation Information Sheet is also available here on our website. We have extended the consultation period until 29 August 2025.

Kind regards,

Woodside Energy Consultation

[Initial email content attached]

6.1.59 Email sent to Department of Climate Change, Energy, the Environment and Water (DCCEEW) – 29 July 2025

Woodside is planning to submit the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan. The GWF-4 Project, which covers Production Licences WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L, intends to partially fill ullage (unused production capacity) at the existing Goodwyn Alpha (GWA) facility and is located in Commonwealth waters ~140 km north-west of Karratha, Western Australia.

If you would like to comment on the proposed activity, please provide feedback to Woodside by **28 August 2025** using the details below.

Overview

The GWF-4 Drilling and Subsea Installation petroleum activities include:

- Subsea tiebacks from nearfields and the Wilcox Field to existing GWF subsea infrastructure.

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- The drilling of up to six wells (WCA01, WCA02, YDA01, ESA01, TPA04 and contingent well WCA).
- The installation and pre-commissioning of subsea infrastructure.

Consultation information

The Consultation Information Sheet provides additional background on the proposed activities including summaries of potential key impacts and risks and associated management measures.

This is available on our website. Please also find attached the details of Commonwealth shipwrecks that are relevant for this EP.

Activity and location summary

Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan	
Activity details	Activities include: • Mooring installation for the Mobile Offshore Drilling Unit (MODU) (including piling). • Development drilling. • Pre- and post- lay survey activities. • Installation of subsea infrastructure. • Inspection, monitoring, maintenance and repair (IMMR). • Tie-in to existing subsea infrastructure. • Pre-commissioning testing.
Titles	Production Licence: WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L.
Location	In Commonwealth waters ~140 km north-west of Karratha, Western Australia.
Water depth	~ 40 m - 160 m deep
Timing	• Drilling activities: Q3 2026 to Q2 2028 (~90 days per well, up to an expected total of 450 days). Contingency 2029. • Subsea Installation: • Nearfield: Q3 2027 to Q1 2028 ~ 3 months. • Wilcox Field: Q4 2027 to Q2 2028 ~6 months. • Contingency 2029. • Decommissioning is not planned during the next 5 years.
Duration	• When activities occur, operations will run 24 hours a day, 7 days a week. Simultaneous Operations (SIMOPS) of drilling and subsea installation activities may occur. • IMMR activities will take place as required.
Infrastructure	Key infrastructure includes, but is not limited to:

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	• Wilcox Field: Xmas trees and wellheads, flowlines, electro-hydraulic umbilicals (EHUs), manifolds, pipeline end terminations (PLETs), flowline end termination (FLET), umbilical termination assemblies (UTAs), electrical flying leads (EFLs), hydraulic flying leads (HFLs), flexible pipe jumpers, rigid spools, subsea intensifiers. • Nearfield: flowlines, UTAs, EFLs, HFLs, flexible pipe jumpers, cooling skids, pressure protection systems, and accumulator modules.
Vessels	Key vessels include, but are not limited to: • Installation vessel for installing the subsea infrastructure. • Inspection, monitoring, maintenance and repair (IMMR) vessel for Xmas tree installation, isolation testing, IMMR or contingent activities. • Support vessels including barge(s), heavy lift vessel(s) (HLVs), multi-service construction vessel(s), anchor handling vessel(s) and general supply/support vessels. • MODU: Moored, or hybrid (moored and dynamic positioning) MODU will be used.
Operational Area and exclusion zones	The location of infrastructure is marked on nautical charts. The Operational Area and exclusion zones include: • A radius of 4,000 m from each well to allow for MODU mooring. • 1.5 km radius (3,000 m corridor) around subsea installation locations in which subsea installation and pre-commissioning activities will occur, to allow for the movement and position of vessels. • 500 m safety exclusion zone around the MODU and installation vessel.

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 loss of well integrity, and 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 will 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 **28 August 2025**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suit 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

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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.

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.

6.1.59.1 Email sent to Department of Climate Change, Energy, the Environment and Water (DCCEEW) – 30 July 2025

Dear DCCEEW

Due to technical issues, you may have experienced some display errors in the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan consultation email we sent you yesterday. We apologise for this.

Please see below for the full text of the email. The Consultation Information Sheet, which was attached to yesterday's email, is also available here on our website. A list of relevant Commonwealth Shipwrecks was also attached to yesterday's email.

We have extended the consultation period until 29 August 2025.

Kind regards,

Woodside Energy Consultation

[Initial email content attached]

6.1.60 Email sent to Pilbara/Kimberley recreational marine users; Gascoyne recreational marine users; Shark Bay recreational marine users; Marine Tourism WA; WA Game Fishing Association – 29 July 2025

Woodside is planning to submit the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan. The GWF-4 Project, which covers Production Licences WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L, intends to partially fill ullage (unused production capacity) at the existing Goodwyn Alpha (GWA) facility and is located in Commonwealth waters ~140 km north-west of Karratha, Western Australia.

If you would like to comment on the proposed activity, please provide feedback to Woodside by **28 August 2025** using the details below.

Overview

The GWF-4 Drilling and Subsea Installation petroleum activities include:

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- Subsea tiebacks from nearfields and the Wilcox Field to existing GWF subsea infrastructure.
- The drilling of up to six wells (WCA01, WCA02, YDA01, ESA01, TPA04 and contingent well WCA).
- The installation and pre-commissioning of subsea infrastructure.

Consultation information

The Consultation Information Sheet provides additional background on the proposed activities including summaries of potential key impacts and risks and associated management measures. This is available on our website.

Activity and location summary

Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan	
Activity details	Activities include: • Mooring installation for the Mobile Offshore Drilling Unit (MODU) (including piling). • Development drilling. • Pre- and post- lay survey activities. • Installation of subsea infrastructure. • Inspection, monitoring, maintenance and repair (IMMR). • Tie-in to existing subsea infrastructure. • Pre-commissioning testing.
Titles	Production Licence: WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L.
Location	In Commonwealth waters ~140 km north-west of Karratha, Western Australia.
Water depth	~ 40 m - 160 m deep
Timing	• Drilling activities: Q3 2026 to Q2 2028 (~90 days per well, up to an expected total of 450 days). Contingency 2029. • Subsea Installation: • Nearfield: Q3 2027 to Q1 2028 ~ 3 months. • Wilcox Field: Q4 2027 to Q2 2028 ~6 months. • Contingency 2029. • Decommissioning is not planned during the next 5 years.
Duration	• When activities occur, operations will run 24 hours a day, 7 days a week. Simultaneous Operations (SIMOPS) of drilling and subsea installation activities may occur. • IMMR activities will take place as required.
Infrastructure	Key infrastructure includes, but is not limited to: • Wilcox Field: Xmas trees and wellheads, flowlines, electro-hydraulic umbilicals (EHUs), manifolds, pipeline end terminations

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	(PLETs), flowline end termination (FLET), umbilical termination assemblies (UTAs), electrical flying leads (EFLs), hydraulic flying leads (HFLs), flexible pipe jumpers, rigid spools, subsea intensifiers. • Nearfield: flowlines, UTAs, EFLs, HFLs, flexible pipe jumpers, cooling skids, pressure protection systems, and accumulator modules.
Vessels	Key vessels include, but are not limited to: • Installation vessel for installing the subsea infrastructure. • Inspection, monitoring, maintenance and repair (IMMR) vessel for Xmas tree installation, isolation testing, IMMR or contingent activities. • Support vessels including barge(s), heavy lift vessel(s) (HLVs), multi-service construction vessel(s), anchor handling vessel(s) and general supply/support vessels. • MODU: Moored, or hybrid (moored and dynamic positioning) MODU will be used.
Operational Area and exclusion zones	The location of infrastructure is marked on nautical charts. The Operational Area and exclusion zones include: • A radius of 4,000 m from each well to allow for MODU mooring. • 1.5 km radius (3,000 m corridor) around subsea installation locations in which subsea installation and pre-commissioning activities will occur, to allow for the movement and position of vessels. • 500 m safety exclusion zone around the MODU and installation vessel.

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 loss of well integrity, and 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 will 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 **28 August 2025**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suit 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

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may also be used to support other regulatory processes associated with the planned activities (which may or may not be confidential).

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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.

6.1.60.1 Email sent to Pilbara/Kimberley recreational marine users, Gascoyne recreational marine users – 30 July 2025

Dear Stakeholder,

Due to technical issues, you may have experienced some display errors in the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan consultation email we sent you yesterday. We apologise for this.

Please see below for the full text of the email. The Consultation Information Sheet, which was attached to yesterday's email, is also available here on our website.

We have extended the consultation period until 29 August 2025.

Kind regards,

Woodside Energy Consultation

[Initial email content attached]

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6.1.61 Letter sent to Pilbara/Kimberley recreational marine users, Gascoyne recreational marine users, Western Rock Lobster Fishery licence holders – 29 July 2025

Please direct all responses/queries to:
Woodside Energy Feedback
t: +61 8 (1)800 442 977
e: consultation@feedback.woodside.com.au



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

GREATER WESTERN FLANK 4 DRILLING AND SUBSEA INSTALLATION ENVIRONMENT PLAN

Woodside is planning to submit the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan. The GWF-4 Project, which covers Production Licences WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L, intends to partially fill ullage (unused production capacity) at the existing Goodwyn Alpha (GWA) facility and is located in Commonwealth waters ~140 km north-west of Karratha, Western Australia.

If you would like to comment on the proposed activity, please provide feedback to Woodside by **27 August 2025** using the details below.

Overview

The GWF-4 Drilling and Subsea Installation petroleum activities include:

- Subsea tiebacks from nearfields and the Wilcox Field to existing GWF subsea infrastructure.
- The drilling of up to six wells (WCA01, WCA02, YDA01, ESA01, TPA04 and contingent well WCA).
- The installation and pre-commissioning of subsea infrastructure.

Consultation information

A Consultation Information Sheet is enclosed, which provides additional background on the proposed activities including summaries of potential key impacts and risks and associated management measures. This is also available on our website at www.woodside.com/what-we-do/consultation-activities.

Activity and location summary

Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan	
Activity details	Activities include: • Mooring installation for the Mobile Offshore Drilling Unit (MODU) (including piling). • Development drilling. • Pre- and post- lay survey activities. • Installation of subsea infrastructure. • Inspection, monitoring, maintenance and repair (IMMR). • Tie-in to existing subsea infrastructure. • Pre-commissioning testing.
Titles	Production Licence: WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L.

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Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan	
Location	In Commonwealth waters ~140 km north-west of Karratha, Western Australia.
Water depth	~ 40 m - 160 m deep
Timing	• Drilling activities: Q3 2026 to Q2 2028 (~90 days per well, up to an expected total of 450 days). – Contingency 2029. • Subsea Installation: – Nearfield: Q3 2027 to Q1 2028 ~ 3 months. – Wilcox Field: Q4 2027 to Q2 2028 ~6 months. – Contingency 2029. • Decommissioning is not planned during the next 5 years.
Duration	• When activities occur, operations will run 24 hours a day, 7 days a week. Simultaneous Operations (SIMOPS) of drilling and subsea installation activities may occur. • IMMR activities will take place as required.
Infrastructure	Key infrastructure includes, but is not limited to: • Wilcox Field: Xmas trees and wellheads, flowlines, electro-hydraulic umbilicals (EHUs), manifolds, pipeline end terminations (PLETs), flowline end termination (FLET), umbilical termination assemblies (UTAs), electrical flying leads (EFLs), hydraulic flying leads (HFLs), flexible pipe jumpers, rigid spools, subsea intensifiers. • Nearfield: flowlines, UTAs, EFLs, HFLs, flexible pipe jumpers, cooling skids, pressure protection systems, and accumulator modules.
Vessels	Key vessels include, but are not limited to: • Installation vessel for installing the subsea infrastructure. • Inspection, monitoring, maintenance and repair (IMMR) vessel for Xmas tree installation, isolation testing, IMMR or contingent activities. • Support vessels including barge(s), heavy lift vessel(s) (HLVs), multi-service construction vessel(s), anchor handling vessel(s) and general supply/support vessels. • MODU: Moored, or hybrid (moored and dynamic positioning) MODU will be used.
Operational Area and exclusion zones	The location of infrastructure is marked on nautical charts. The Operational Area and exclusion zones include: • A radius of 4,000 m from each well to allow for MODU mooring. • 1.5 km radius (3,000 m corridor) around subsea installation locations in which subsea installation and pre-commissioning activities will occur, to allow for the movement and position of vessels. • 500 m safety exclusion zone around the MODU and installation vessel.

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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 loss of well integrity, and 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 will 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 **27 August 2025**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suit 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 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.

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 Consultation

Woodside Energy
Mia Yellagonga
Karlak, 11 Mount Street
Perth WA 6000
Australia

T: 1800 442 977
E: consultation@feedback.woodside.com
www.woodside.com

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6.1.62 Email sent to Mackerel Managed Fishery (Area 2), Marine Aquarium Managed Fishery, Onslow Prawn Managed Fishery, Pilbara Line Fishery, Pilbara Trap Fishery licence holders – 30 July 2025

Dear Licence Holders,

Woodside is planning to submit the Greater Western Flank 4 (GWF-4) Drilling and Subsea Installation Environment Plan. The GWF-4 Project, which covers Production Licences WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L, intends to partially fill ullage (unused production capacity) at the existing Goodwyn Alpha (GWA) facility and is located in Commonwealth waters ~ 140 km north-west of Karratha, Western Australia.

If you would like to comment on the proposed activity, please provide feedback to Woodside by **28 August 2025** using the details below.

Overview

The GWF-4 Drilling and Subsea Installation petroleum activities include:

· Subsea tiebacks from nearfields and the Wilcox Field to existing GWF subsea infrastructure.

· The drilling of up to six wells (WCA01, WCA02, YDA01, ESA01, TPA04 and contingent well WCA).

· The installation and pre-commissioning of subsea infrastructure.

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. This is also available on Woodside's website.

Activity and location summary

Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan	
Activity details	Activities include: · Mooring installation for the Mobile Offshore Drilling Unit (MODU) (including piling). · Development drilling. · Pre- and post- lay survey activities. · Installation of subsea infrastructure. · Inspection, monitoring, maintenance and repair (IMMR). · Tie-in to existing subsea infrastructure. · Pre-commissioning testing.
Titles	Production Licences: WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L.
Location	In Commonwealth waters ~140 km north-west of Karratha, Western Australia.
Water depth	~ 40 m - 160 m deep
Timing	· Drilling activities: Q3 2026 to Q2 2028 (~90 days per well, up to an expected total of 450 days). – Contingency 2029.

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	· Subsea Installation: – Nearfield: Q3 2027 to Q1 2028 ~ 3 months. – Wilcox Field: Q4 2027 to Q2 2028 ~ 6 months. – Contingency 2029. · Decommissioning is not planned during the next 5 years.
Duration	· When activities occur, operations will run 24 hours a day, 7 days a week. Simultaneous Operations (SIMOPS) of drilling and subsea installation activities may occur. · IMMR activities will take place as required.
Infrastructure	Key infrastructure includes, but is not limited to: · Wilcox Field: Xmas trees and wellheads, flowlines, electro-hydraulic umbilicals (EHUs), manifolds, pipeline end terminations (PLETs), flowline end termination (FLET), umbilical termination assemblies (UTAs), electrical flying leads (EFLs), hydraulic flying leads (HFLs), flexible pipe jumpers, rigid spools, subsea intensifiers. · Nearfield: Flowlines, UTAs, EFLs, HFLs, flexible pipe jumpers, cooling skids, pressure protection systems, and accumulator modules.
Vessels	Key vessels include, but are not limited to: · Installation vessel for installing the subsea infrastructure. · Inspection, monitoring, maintenance and repair (IMMR) vessel for Xmas tree installation, isolation testing, IMMR or contingent activities. · Support vessels including barge(s), heavy lift vessel(s) (HLVs), multi-service construction vessel(s), anchor handling vessel(s) and general supply/support vessels. · MODU: Moored, or hybrid (moored and dynamic positioning) MODU will be used.
Operational Area and exclusion zones	The location of infrastructure is marked on nautical charts. The Operational Area and exclusion zones include: · A radius of 4,000 m from each well to allow for MODU mooring. · 1.5 km radius (3,000 m corridor) around subsea installation locations in which subsea installation and pre-commissioning activities will occur, to allow for the movement and position of vessels. · 500 m safety exclusion zone around the MODU and installation vessel.

Notifications

Please let WAFIC know if you require notification prior to and on completion of the proposed activities.

Feedback

Please provide feedback/questions specific to the proposed activities to [Individual 3]@wafic.org.au by **28 August 2025**.

Your feedback and Woodside response will be included in the 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).

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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.

Kind regards,

6.1.63 Email sent to Specimen Shell Managed Fishery licence holders – 11 February 2026

Dear Licence Holders,

Woodside is planning to submit **the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan**. The GWF-4 Project, which covers Production Licences WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L, intends to partially fill ullage (unused production capacity) at the existing Goodwyn Alpha (GWA) facility and is located in Commonwealth waters ~ 140 km north-west of Karratha, Western Australia.

Overview

The GWF-4 Drilling and Subsea Installation petroleum activities include:

· Subsea tiebacks from nearfields and the Wilcox Field to existing GWF subsea infrastructure.

· The drilling of up to six wells (WCA01, WCA02, YDA01, ESA01, TPA04 and contingent well WCA).

· The installation and pre-commissioning of subsea infrastructure.

Consultation information

A Consultation Information Sheet is attached, which provides additional background on the proposed activities including summaries of potential key impacts and risks and associated management measures. This is also available on Woodsides website.

Activity and location summary

Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan	
Activity details	Activities include: · Mooring installation for the Mobile Offshore Drilling Unit (MODU) (including piling). · Development drilling. · Pre- and post- lay survey activities. · Installation of subsea infrastructure. · Inspection, monitoring, maintenance and repair (IMMR). · Tie-in to existing subsea infrastructure. · Pre-commissioning testing.
Titles	Production Licence: WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L.
Location	In Commonwealth waters ~140 km north-west of Karratha, Western Australia.

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Water depth	~ 40 m - 160 m deep
Timing	· Drilling activities: Q3 2026 to Q2 2028 (~90 days per well, up to an expected total of 450 days). – Contingency 2029. · Subsea Installation: – Nearfield: Q3 2027 to Q1 2028 ~ 3 months. – Wilcox Field: Q4 2027 to Q2 2028 ~6 months. – Contingency 2029. · Decommissioning is not planned during the next 5 years.
Duration	· When activities occur, operations will run 24 hours a day, 7 days a week. Simultaneous Operations (SIMOPS) of drilling and subsea installation activities may occur. · IMMR activities will take place as required.
Infrastructure	Key infrastructure includes, but is not limited to: · Wilcox Field: Xmas trees and wellheads, flowlines, electro-hydraulic umbilicals (EHUs), manifolds, pipeline end terminations (PLETs), flowline end termination (FLET), umbilical termination assemblies (UTAs), electrical flying leads (EFLs), hydraulic flying leads (HFLs), flexible pipe jumpers, rigid spools, subsea intensifiers. · Nearfield: Flowlines, UTAs, EFLs, HFLs, flexible pipe jumpers, cooling skids, pressure protection systems, and accumulator modules.
Vessels	Key vessels include, but are not limited to: · Installation vessel for installing the subsea infrastructure. · Inspection, monitoring, maintenance and repair (IMMR) vessel for Xmas tree installation, isolation testing, IMMR or contingent activities. · Support vessels including barge(s), heavy lift vessel(s) (HLVs), multi-service construction vessel(s), anchor handling vessel(s) and general supply/support vessels. · MODU: Moored, or hybrid (moored and dynamic positioning) MODU will be used.
Operational Area and exclusion zones	The location of infrastructure is marked on nautical charts. The Operational Area and exclusion zones include: · A radius of 4,000 m from each well to allow for MODU mooring. · 1.5 km radius (3,000 m corridor) around subsea installation locations in which subsea installation and pre-commissioning activities will occur, to allow for the movement and position of vessels. · 500 m safety exclusion zone around the MODU and installation vessel.

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 loss of well containment, and vessel collision.

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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.

Notifications

Please let WAFIC know if you require notification prior to and on completion of the proposed activities.

Feedback

Please provide feedback/questions specific to the proposed activities to [Individual 3]@wafic.org.au **by 13 March 2026**.

Your feedback and Woodside response will be included in the 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).

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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.

Kind regards,

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6.1.64 Email sent to Shire of Ashburton – 29 July 2025

Woodside is planning to submit the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan. The GWF-4 Project, which covers Production Licences WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L, intends to partially fill ullage (unused production capacity) at the existing Goodwyn Alpha (GWA) facility and is located in Commonwealth waters ~140 km north-west of Karratha, Western Australia.

If you would like to comment on the proposed activity, please provide feedback to Woodside by **28 August 2025** using the details below.

Woodside would also like to propose a meeting with Shire of Ashburton to discuss this EP and other upcoming Woodside EPs. Please advise if this is convenient for Shire of Ashburton and we will make arrangements for an online meeting in the near future.

Overview

The GWF-4 Drilling and Subsea Installation petroleum activities include:

· Subsea tiebacks from nearfields and the Wilcox Field to existing GWF subsea infrastructure.

· The drilling of up to six wells (WCA01, WCA02, YDA01, ESA01, TPA04 and contingent well WCA).

· The installation and pre-commissioning of subsea infrastructure.

Consultation information

A Consultation Information Sheet is attached, which provides additional background on the proposed activities including summaries of potential key impacts and risks and associated management measures. This is also available on our website.

Activity and location summary

Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan	
Activity details	Activities include: · Mooring installation for the Mobile Offshore Drilling Unit (MODU) (including piling). · Development drilling. · Pre- and post- lay survey activities. · Installation of subsea infrastructure. · Inspection, monitoring, maintenance and repair (IMMR). · Tie-in to existing subsea infrastructure. · Pre-commissioning testing.
Titles	Production Licences: WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L.
Location	In Commonwealth waters ~140 km north-west of Karratha, Western Australia.
Water depth	~ 40 m - 160 m deep
Timing	· Drilling activities: Q3 2026 to Q2 2028 (~90 days per well, up to an expected total of 450 days). – Contingency 2029. · Subsea Installation:

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Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan	
	– Nearfield: Q3 2027 to Q1 2028 ~ 3 months. – Wilcox Field: Q4 2027 to Q2 2028 ~6 months. – Contingency 2029. · Decommissioning is not planned during the next 5 years.
Duration	· When activities occur, operations will run 24 hours a day, 7 days a week. Simultaneous Operations (SIMOPS) of drilling and subsea installation activities may occur. · IMMR activities will take place as required.
Infrastructure	Key infrastructure includes, but is not limited to: · Wilcox Field: Xmas trees and wellheads, flowlines, electro-hydraulic umbilicals (EHUs), manifolds, pipeline end terminations (PLETs), flowline end termination (FLET), umbilical termination assemblies (UTAs), electrical flying leads (EFLs), hydraulic flying leads (HFLs), flexible pipe jumpers, rigid spools, subsea intensifiers. · Nearfield: Flowlines, UTAs, EFLs, HFLs, flexible pipe jumpers, cooling skids, pressure protection systems, and accumulator modules.
Vessels	Key vessels include, but are not limited to: · Installation vessel for installing the subsea infrastructure. · Inspection, monitoring, maintenance and repair (IMMR) vessel for Xmas tree installation, isolation testing, IMMR or contingent activities. · Support vessels including barge(s), heavy lift vessel(s) (HLVs), multi-service construction vessel(s), anchor handling vessel(s) and general supply/support vessels. · MODU: Moored, or hybrid (moored and dynamic positioning) MODU will be used.
Operational Area and exclusion zones	The location of infrastructure is marked on nautical charts. The Operational Area and exclusion zones include: · A radius of 4,000 m from each well to allow for MODU mooring. · 1.5 km radius (3,000 m corridor) around subsea installation locations in which subsea installation and pre-commissioning activities will occur, to allow for the movement and position of vessels. · 500 m safety exclusion zone around the MODU and installation vessel.

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 loss of well integrity, and 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 will not be affected. The specific and minimal part of the EMBA that is affected will only be known if there is a release.

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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

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 **28 August 2025**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suit 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 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.

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

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6.2 Follow-up consultation

6.2.1 Email sent to Australian Border Force (ABF); Australian Maritime Safety Authority (AMSA) – Marine Pollution; Pilbara Ports Authority (PPA); Ningaloo Coast World Heritage Advisory Committee (NCWHAC); Department of Mines, Petroleum and Exploration (DMPE); Department of Industry, Science and Resources (DISR); Australian Energy Producers (AEP); Australian Conservation Foundation (ACF); Australian Marine Conservation Society (AMCS); Conservation Council of Western Australia (CCWA); Greenpeace Asia Pacific (GAP); The Wilderness Society (TWS); RAC Monkey Mia Dolphin Resort; Dirk Hartog Island; Shark Bay Community Resource Centre; Shark Bay Coastal Tours; Naturetime Tours; Wula Gura Eco Cultural Tours; Protect Ningaloo; Cape Conservation Group (CCG); Shire of Exmouth; Exmouth Community Liaison Group (CLG); Exmouth Chamber of Commerce and Industry; City of Karratha; Karratha Community Liaison Group (CLG); Karratha and Districts Chamber of Commerce and Industry; Shire of Broome; Broome Chamber of Commerce and Industry; Shire of Shark Bay; Shire of Carnarvon; Carnarvon Chamber of Commerce and Industry; Onslow Chamber of Commerce and Industry; 3D Energi; Allasso Energy; Beagle No 1; Bounty Oil and Gas; BP Developments Australia; Carbon CQ; Carnarvon Energy; Coastal Oil and Gas; Energy Resources; Exxon Mobil Australia Resources; Finder Energy; INPEX Alpha; Jadestone; JX Nippon O&G Exploration; Longreach Capital; KATO Energy; KUFPEC; Kyushu Electric Wheatstone; OMV Australia; OPIC Australia; Pelstart Resources; PE Wheatstone; Santos; SK Earthon; Shell Australia; Skye Napoleon/Resources; Tanami Energy; Vermilion Energy; Western Gas; Australian Institute of Marine Science (AIMS); Commonwealth Scientific and Industrial Research Organisation (CSIRO); Western Australian Marine Science Institution (WAMSI); Curtin University; Edith Cowan University (ECU); Murdoch University; University of Western Australia (UWA); Pilbara/Kimberley recreational marine users; Gascoyne recreational marine users; Commonwealth Fisheries Association (CFA); North-West Slope Trawl Fishery licence holders; Tuna Australia; Western Deepwater Trawl Fishery licence holders; Western Tuna and Billfish Fishery licence holders; Aquaculture Council of Western Australia (ACWA); Western Rock Lobster Council; Department of Transport and Major Infrastructure (DTMI); Western Australian Museum; Chevron Australia; Department of Defence (DoD); Department of Primary Industries and Regional Development (DPIRD); Department of Climate Change, Energy, the Environment and Water (DCCEEW); Department of Biodiversity, Conservation and Attractions (DBCA); Director of National Parks (DNP); Department of Agriculture, Fisheries and Forestry (DAFF) – Fisheries; Department of Agriculture, Fisheries and Forestry (DAFF) – Biosecurity; Australian Maritime Safety Authority (AMSA) – Marine Safety; Australian Southern Bluefin Tuna Industry Association (ASBTIA); North-West Slope Trawl Fishery; Western Deepwater Trawl Fishery; Western Tuna and Billfish Fishery license holders; Marine Tourism WA; WA Game Fishing Association; Shark Bay Marine Users; – 18 August 2025

Woodside previously consulted you on its plans to submit the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan (EP).

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The GWF-4 Project, which covers Production Licences WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L, intends to partially fill ullage (unused production capacity) at the existing Goodwyn Alpha (GWA) facility and is located in Commonwealth waters ~140 km north-west of Karratha, Western Australia.

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 would like to provide 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 **29 August 2025**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suit 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).

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Regards,

Woodside Energy Consultation

6.2.2 Email sent to Shire of Ashburton – 21 August 2025

Woodside previously consulted you on its plans to submit the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan (EP).

The GWF-4 Project, which covers Production Licences WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L, intends to partially fill ullage (unused production capacity) at the existing Goodwyn Alpha (GWA) facility and is located in Commonwealth waters ~140 km north-west of Karratha, Western Australia.

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 would like to provide 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 **29 August 2025**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suit 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).

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Regards,

Woodside Energy Consultation

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6.2.3 Letter sent to Pilbara/Kimberley recreational marine users; Gascoyne recreational marine users; Western Rock Lobster Fishery licence holders – 18 August 2025

Please direct all responses/queries to:
Woodside Energy Feedback
t: +61 8 (1)800 442 977
e: consultation@feedback.woodside.com.au

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

18 August 2025

053 - 1
[redacted]

Dear Stakeholder

GREATER WESTERN FLANK PHASE 4 DRILLING AND SUBSEA INSTALLATION EP

Woodside previously consulted you on its plans to submit the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan (EP).

Woodside is planning to submit the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan. The GWF-4 Project, which covers Production Licences WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L, intends to partially fill ullage (unused production capacity) at the existing Goodwyn Alpha (GWA) facility and is located in Commonwealth waters ~140 km north-west of Karratha, Western Australia.

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 consultation@feedback.woodside.com or via phone call at 1800 442 977 by 27 August 2025.

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 Consultation

Woodside Energy
Mia Yellagonga
Karlak, 11 Mount Street
Perth WA 6000

T: 1800 442 977
E: consultation@feedback.woodside.com
www.woodside.com

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6.3 Consultation Update

6.3.1 Consultation Information Sheet – January 2026

Woodside Energy

Consultation Information Sheet
January 2026

Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan

Carnarvon Basin, North-West Australia

Activity overview

The Greater Western Flank Phase 4 (GWF-4) Project intends to partially fill ullage (unused production capacity) at the existing Goodwyn Alpha (GWA) facility. The GWF-4 Drilling and Subsea Installation Environment Plan (EP) comprises drilling offshore wells in nearfields and the Wilcox Field which will be tied back to existing GWF subsea infrastructure. Woodside plans to drill up to six wells. The EP will also cover installation and pre-commissioning of subsea infrastructure.

Location

- In Commonwealth waters ~140 km north-west of Karratha, WA (Figure 2).

Water depth

- ~ 40 m -160 m deep.

Timing

Drilling activities: Q3 2026 to Q2 2028 (~90 days per well, up to an expected total of 450 days)

- Contingency 2029

Subsea Installation:

- Nearfield: Q3 2027 to Q1 2028 ~ 3 months
- Wilcox Field: Q4 2027 to Q2 2028 ~ 6 months
- Contingency 2029

Decommissioning is not planned during the next 5 years.

Duration

- When activities occur, operations will run 24 hours a day, 7 days a week. Simultaneous operations of drilling and subsea installation activities may occur. Inspection, Monitoring, Maintenance and Repair (IMMR) activities will take place as required.

Joint Venture

- Operator – Woodside Energy Ltd.
- Joint Venture - Woodside Energy Ltd, BP Developments Australia Pty Ltd, Woodside Energy (North West Shelf) Pty Ltd, Chevron Australia Pty Ltd, Japan Australia LNG (MIMI) Pty Ltd, CNOOC NWS Private Ltd, and Shell Developments (Australia) 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 be consulted and provide feedback.

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 carried out in a manner 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 affected by the activities under this EP, we would like to hear from you by **27 February 2026.**

consultation@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: The Goodwyn Alpha (GWA) platform. The Greater Western Flank Phase 4 (GWF-4) Project intends to partially fill ullage (unused production capacity) at the existing GWA facility.

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.

1 Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan | January 2026

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Table 1 – Activity and Location Summary

Greater Western Flank 4 (GWF-4) Drilling and Subsea Installation Environment Plan	
Activity details	• Mooring installation for the Mobile Offshore Drilling Unit (MODU) (including piling). • Development drilling. • Pre- and post- lay survey activities. • Installation of subsea infrastructure. • IMMR. • Tie-in to existing subsea infrastructure. • Pre-commissioning testing.
Titles	Production Licences: WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L.
Infrastructure	Subsea: • Wilcox: Xmas trees and wellheads, flowlines, electro-hydraulic umbilicals (EHUs), manifolds, pipeline end terminations (PLETs), flowline end termination (FLET), umbilical termination assemblies (UTAs), electrical flying leads (EFLs), hydraulic flying leads (HFLs), flexible pipe jumpers, rigid spools, subsea intensifiers. • Nearfield: Flowlines, UTAs, EFLs, HFLs, flexible pipe jumpers, cooling skids, pressure protection systems, and accumulator modules.
Vessels	• Installation vessel for installing the subsea infrastructure. • IMMR vessel for Xmas tree installation, isolation testing, IMMR or contingent activities. • Support vessels including barge(s), heavy lift vessel(s) (HLVs), multi-service construction vessel(s), anchor handling vessel(s) and general supply/support vessels. • MODU: Moored, or hybrid (moored and DP) MODU will be used.
Operational area and exclusion zones	The location of infrastructure is marked on nautical charts. The Operational Area includes: • A radius of 4,000 m from each well to allow for MODU mooring. • 1.5 km radius (3,000 m corridor) around subsea installation locations in which subsea installation and pre-commissioning activities will occur, to allow for the movement and position of vessels. • 500 m safety exclusion zone around the MODU and installation vessel.
Communication with mariners	Marine notices will be issued prior to activity commencement to alert vessels which may be operating in waters nearby. Commercial fishers and other marine users are permitted to use the Operational Area but are prohibited from entering the 500 m safety exclusion zone to avoid interactions between vessels and the operations, unless authorised by Woodside.
Distance to nearest marine park/nature reserve	• Montebello Islands Marine Park (WA) is approximately 29 km south of the Operational Area. • Montebello Marine Park – Multiple Use Zone (Cth) overlaps the south west of the Operational Area. • Dampier Marine Park – Habitat Protection Zone (Cth) ~115 km south east of the Operational Area.

Activity Location

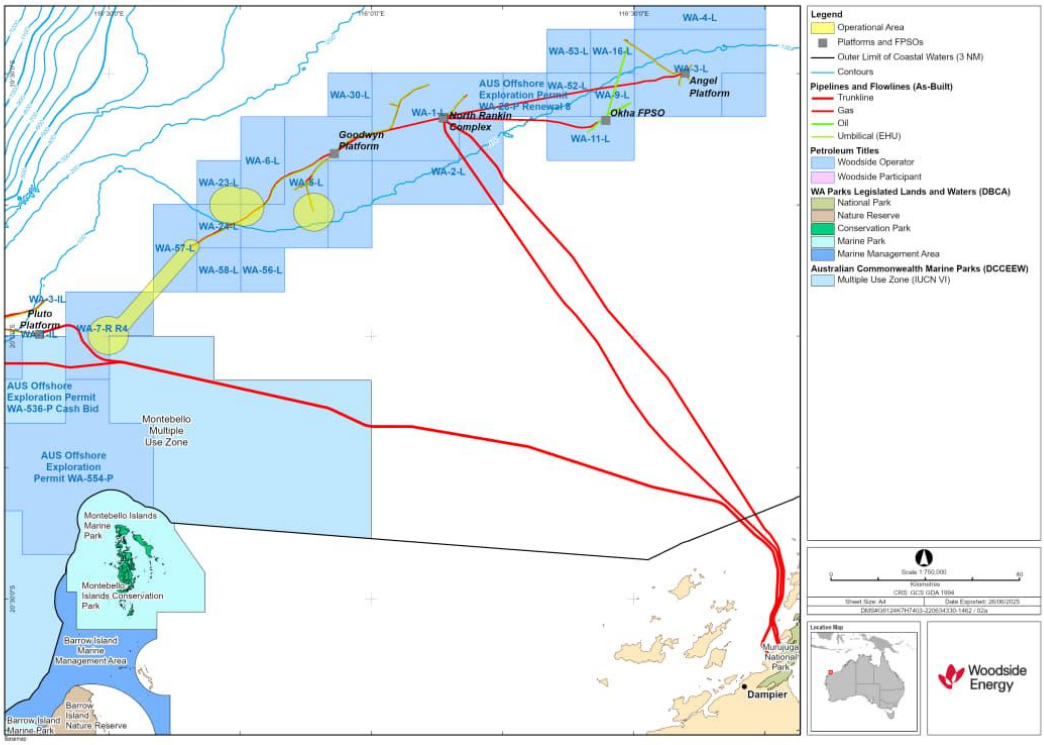


Figure 2. Location of the activity, including Operational Area and associated infrastructure.

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Table 2 – Approximate locations of key infrastructure within the scope of the GWF-4 Drilling and Subsea Installation EP

Structure	Water Depth (m)	Latitude	Longitude	Titles
New Wells and Manifolds				
WCA01	~ 74	19°59'55.28"S	115°29'55.97"E	WA-7-R
WCA02	~ 74	19°59'53.66"S	115°29'55.99"E	WA-7-R
YDA01	~ 131	19°45'00.50"S	115°43'49.73"E	WA-24-L
ESA01	~ 126	19°45'15.46"S	115°45'26.64"E	WA-24-L
TPA04	~ 112	19°45'49.54"S	115°53'26.05"E	WA-5-L
Contingent WCA	~ 74	Within 500m of Wilcox manifold, outside the Montebello Marine Park		WA-7-R
Wilcox manifold	~ 74	19°59'48.35"S	115°30'02.71"E	WA-7-R
Echo Yodel manifold	~ 128	19°45'16.62"S	115°45'30.89"E	WA-24-L
Existing Manifolds				
LPA manifold	~ 78 (m LAT)	19°49'45.90"S	115°39'29.10"E	WA-57-L
KDA manifold	~ 123 (m LAT)	19°45'28.12"S	115°47'07.62"E	WA-5-L
TPA manifold	~ 113 (m LAT)	19°45'44.29"S	115°53'24.40"E	WA-5-L
Flowlines				
Wilcox (starting point)	~ 74	19°59'48.35"S	115°30'02.71"E	WA-7-R
Wilcox (end point)	~ 74	19°49'47.04"S	115°39'25.55"E	WA-57-L
Flowlines and flexibles		Flowlines will connect wells to YDA and then to KDA and TPA. The exact location may vary during installation.		



Figure 3: The Goodwyn Alpha (GWA) platform. The Greater Western Flank Phase 4 (GWF-4) Project intends to partially fill ullage (unused production capacity) at the existing GWA facility.

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Environment that May Be Affected (EMBA)

The EMBA is the largest geographic area where an unplanned event could potentially have an environmental consequence on the surrounding environment. 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 loss of well containment and vessel collision. The EMBA is depicted in Figure 4.

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**.

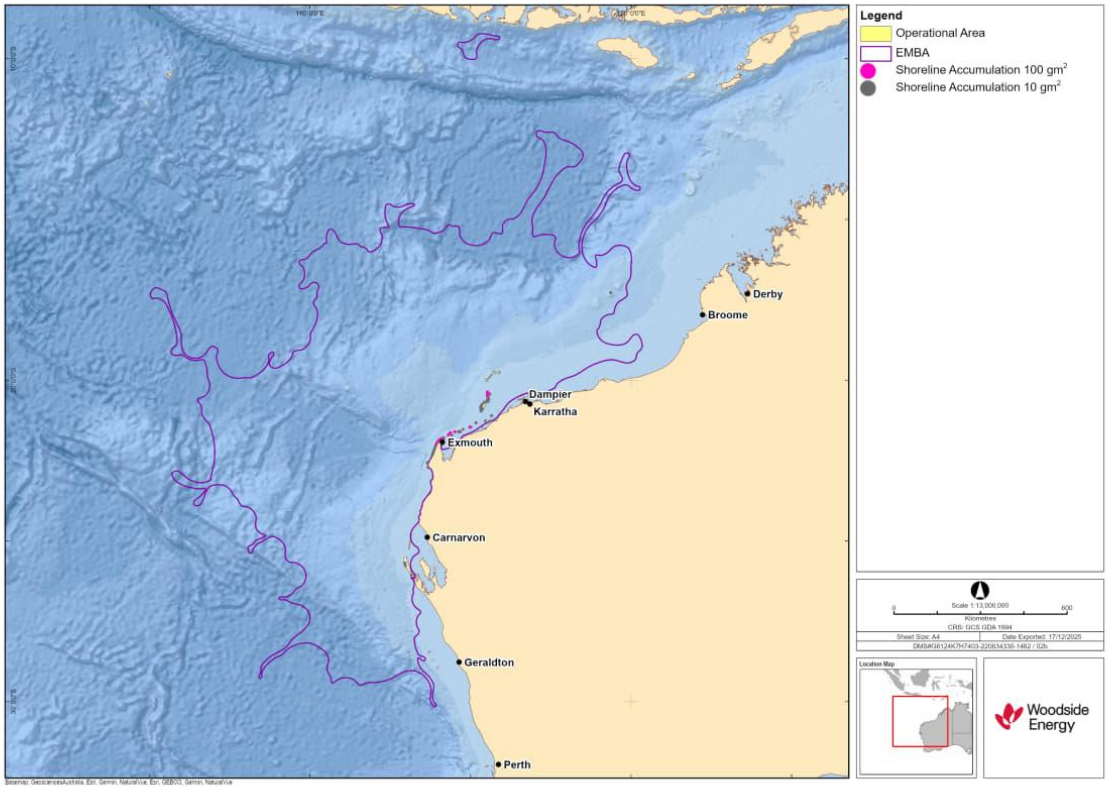


Figure 4: The Operational Area and Environment that May Be Affected (EMBA) by the GWF-4 Drilling and Subsea Installation EP.

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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 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 MODU and subsea wells/Infrastructure as well as offshore support vessels. • Activity execution may occur at any time during the project timeline.	• Localised impact with no lasting effect arising from: – Subsea wells and infrastructure with the potential to interact with marine users such as commercial fisheries where fishing methods are at or close to the seabed. – Displacement or exclusion of other marine users when the MODU or vessels are in the field.	• Vessels adhere to regulatory requirements for navigational safety. • Notify relevant government departments, and nominated fishing industry representative bodies and licence holders of activities prior to commencement and on completion of activities. • Notify the Australian Hydrographic Office (AHO) prior to commencement of the activity to enable them to update maritime charts ensuring 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: • Drilling operations (including preparation activities). • Installation of subsea infrastructure. • Contingency activities (including well interventions, workovers).	• Localised impact 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 fauna.	• Assessments of seabed sensitivities will be undertaken to support subsea infrastructure placement. • Infrastructure will be placed on the seabed within the predefined design footprint using positioning technology to limit seabed disturbance. • Infrastructure wet parked (temporarily placed) on the seabed will be tracked and removed. • MODU well site locations will consider seabed sensitivities.
Routine acoustic emissions: generation of noise during routine operations - generation continuous	Noise generated in the Operational Area from: • MODU and support vessel thruster engines, propellers. • Drilling operations. • Contingency activities. • Positioning equipment.	Localised minor impact arising from: • Behavioural changes to marine fauna around MODU, installation vessel, and support vessels. • Behavioural changes to marine fauna during piling installation.	• Project vessels comply with *EPBC Regulations 2000 – Part 8 Division 8.1 Interacting with cetaceans.* • Implement an adaptive management procedure prior to support vessels coming alongside the MODU and installation vessel.
Routine acoustic emissions: generation of noise during routine operations - generation impulse	Noise generated in the Operational Area from: • Geotechnical surveys (SSS, MBES, SBP). • Drilling transponders. • Piling Installation.		

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Impact/Risk	Description of Source of Impact/Risk	Description of Impact/Risk	Proposed Mitigation and/or Management Measure
Routine and non-routine discharges: project vessels	· Sewage, greywater and macerated food waste will be discharged from project vessels and the MODU. · Bilge water, deck drainage and brine and cooling water may also be discharged.	Localised impact with no lasting effect arising from: · Change in marine water quality, which may affect marine fauna.	· MODU, subsea installation vessel and support vessels will comply with Marine Orders. · Assessment of chemicals used following Woodside's Chemical Selection and Assessment Environment Guideline.
Routine and non-routine discharges: drill cuttings and Drilling Fluids ***Routine and non-routine discharges: cement, cementing fluids, subsea well fluids, produced water, unused bulk product and subsea chemicals*** ***Routine and non-routine discharges: produced water.***	Routine and non-routine drilling discharges such as: Non-Water Based Muds (NWBM), swarf, cements, cuttings, drilling chemicals, well fluids, bulk products during and produced water (if discharge from MODU required).	· Localised impact arising from: – Temporary reduction in water quality. – Sediment deposition. – Accumulation of drill cuttings resulting in minor and short term impacts to benthic communities. – Potential contamination and toxicity effects to benthic and in-water biota.	· Assessment of chemicals used following Woodside's Chemical Selection and Assessment Environment Guideline. · No wellhead locations within the Montebello Marine Park. · Options for use of excess bulk cement, bentonite and barite will be managed as per Woodside's Management process for excess bulk product. · Displacement, brine, intervention, or returned well fluids contaminated with hydrocarbons will be treated prior to discharge or contained. If discharge specification cannot be met the fluid will be returned to shore. · Maintain average OOC at <6.9% by weight on wet cuttings (for sections drilled with NWBM). · Solids Control Equipment (SCE) used to treat drill cuttings returned to the MODU prior to discharge. · During well unloading and completion activities, if produced water is not flared, it will be processed through a water filtration treatment package prior to discharge to the environment.
Routine and non-routine atmospheric and Greenhouse Gas (GHG) emissions	· Atmospheric and GHG emissions generated from flaring or venting, power generation, and fuel combustion.	· Localised impact with no lasting effect arising from: – Localised reduction in air quality in the immediate vicinity. – Contribution to global GHG emissions.	· Comply with regulatory requirements relating to GHG emissions and reporting. · Vessels comply with Marine Orders for pollution prevention to air.
Routine light emissions	· External light emissions from MODU and project vessels and submersible equipment. · Light emissions from MODU operations - flaring.	· Localised impact with no lasting effect arising from: – Change in ambient light resulting in change in fauna behaviour.	· Lighting to be limited to the minimum required for navigational and safety requirements except for emergency events. · Implementation of Woodside Offshore Seabird Management Plan. · Flaring restricted to a duration necessary to achieve the well objectives, eliminating unnecessary flared volumes and corresponding light emissions.
Unplanned events (accidents / incidents)			
Physical presence (unplanned): interaction with marine fauna and avifauna	· Accidental collision between project vessels/MODU and protected marine fauna. · Potential changes to avifauna behaviour.	· Potential minor impact with high recoverability arising from: – Injury or death to marine fauna (single individual) including protected species. – Behavioural changes on seabirds utilising vessels as resting points.	· Adhere to the EPBC Regulations 2000 – Part 8 Division 8.1 Interacting with cetaceans. · Environmental induction of all relevant vessel crew.
Physical presence (unplanned): Introduction of Invasive Marine Species (IMS)	· Vessels and submersible 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.	· Potential moderate impact with moderate recoverability arising from: – Introduction and establishment of IMS in the Operational Area.	· Ballast water and biofouling will be managed according to regulatory requirements, including the Australian Ballast Water Management Requirements, and the Australian Biofouling Management Requirements (international vessels), as applicable. · Woodside's IMS risk assessment process will be applied to project vessels and immersible equipment entering the Operational Area.

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Impact/Risk	Description of Source of Impact/Risk	Description of Impact/Risk	Proposed Mitigation and/or Management Measure
Physical presence: (unplanned) Seabed Disturbance	· Dropped objects (including wellhead). · Loss of station-keeping of MODU leading to seabed disturbance.	· Potential localised impact arising from: – Localised disturbance to benthic habitat (fish, benthic communities, Key Ecological Features). – Reduction in water and sediment quality. – Disruption to marine fauna.	· Station-keeping systems and mooring system testing implemented as per project-specific Mooring Design Analysis. · Dropped objects to be recovered where safe and practicable to do so.
Unplanned discharges: hazardous and non-hazardous solid waste/equipment	· Accidental, unplanned loss of hazardous or non-hazardous solid wastes/equipment to the marine environment may occur if dropped or blown overboard.	· Potential localised impact with no lasting effect arising from: – Reduction in water and sediment quality. – Disruption to marine fauna.	· Comply with Marine Orders for the prevention of marine pollution. · Implement waste management procedures which provide for safe handling and transportation, segregation and storage and appropriate classification of waste generated. · Lost waste or dropped objects will be recovered, where safe and practicable.
Unplanned discharges: hydrocarbon and chemicals	· Accidental discharge of hydrocarbons/ chemicals from MODU or project vessels deck activities and equipment. · Accidental discharge of Water Based Mud (WBM) or NWBM to marine environment due to failure of MODU pipework, bulk transfer hose/fitting, emergency disconnect system or from routine MODU operations.	· Potential minor level impact arising from: – Reduction in water and sediment quality. – Disruption to marine fauna. – Archaeological and intangible cultural heritage damage.	· Comply with Marine Orders for the prevention of marine pollution. · Where there is potential for loss of primary containment of oil and chemicals on the project vessels, deck drainage must be collected via a deck drainage management system. · Spill kits positioned in high-risk locations around the vessel (near potential spill points such as transfer stations). · Assessment of chemicals used following Woodside's Chemical Selection and Assessment Environment Guideline.
Unplanned hydrocarbon release: gas/condensate	· Loss of hydrocarbons to the marine environment due to loss of well control.	· Potential moderate level impact arising from: – Reduction in water and sediment quality. – Disruption to marine fauna including protected species. – Potential archaeological and intangible cultural heritage damage. – Potential disturbance to tourism, recreation, and commercial fisheries.	**Preventing loss of well control:** · OPGGS (Resource Management and Administration) Regulations 2011: accepted WOMP which describes the well integrity outcomes, control measures and performance criteria used to demonstrate how the risk of loss of well integrity is managed to ALARP including the well design and barriers to be used to prevent a loss of well integrity, which aligns with industry guidance and good practice. · An approved Source Control Emergency Response Plan will be prepared prior to drilling each well. · Subsea Blow Out Preventer (BOP) specification, installation and testing compliant with Woodside Standards. **Spill response arrangements:** · Develop a project specific Oil Pollution Emergency Preparation document (OPEP) including first strike response plan. · Arrangements supporting the Oil Pollution Emergency Preparation document (OPEP) will be tested to ensure the OPEP can be implemented as planned.
Unplanned hydrocarbon release: marine diesel	Loss of marine diesel to the environment during vessel and MODU operations arising from: · Bunkering/refuelling. · Vessel collision (e.g. MODU, support vessels, or other marine users).	· Potential minor level impact with high recovery arising from: – Reduction in water quality. – Disruption to marine fauna including protected species. – Interference with or displacement of other marine users including activities of other regional petroleum activities.	**Preventing loss of marine diesel:** · Project vessels comply with Marine Orders for safe vessel operations. · Establishment of a temporary 500 m exclusion zone around MODU /Installation vessel and communicated to marine users. · Support vessel on standby as per the MODU safety case during the Petroleum Activity. **Spill response arrangements:** · Arrangements supporting the Oil Pollution Emergency Preparation document (OPEP) will be tested to ensure the OPEP can be implemented as planned. · Emergency response activities would be implemented in line with the OPEP.

**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.*

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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 contact Woodside before **27 February 2026** via:

consultation@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 NOPSEMA as required under legislation. Woodside will communicate any material changes to the proposed activity to affected relevant persons as relevant and appropriate.

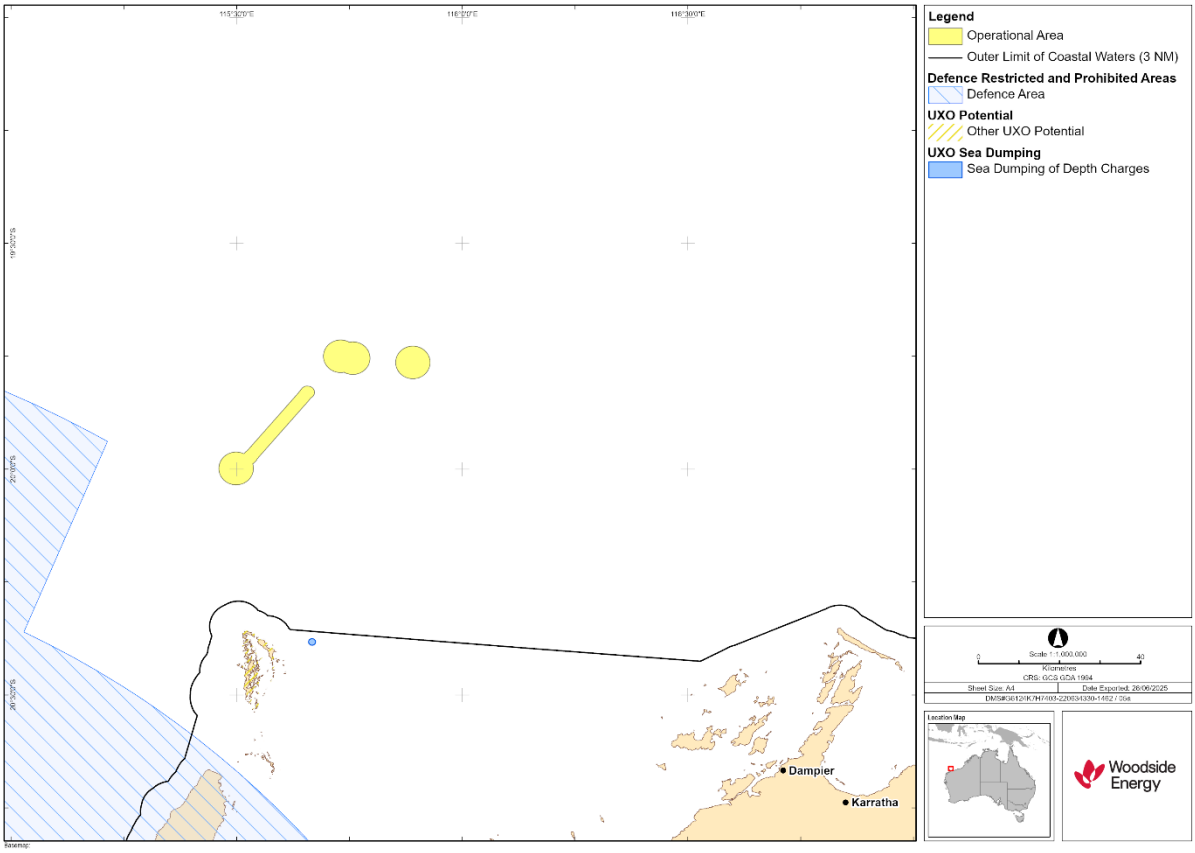
Your feedback and our response will be included in our EP for the proposed activity, which will be submitted to NOPSEMA for acceptance in accordance with the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023* (Cth) and support other regulatory processes associated with the 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



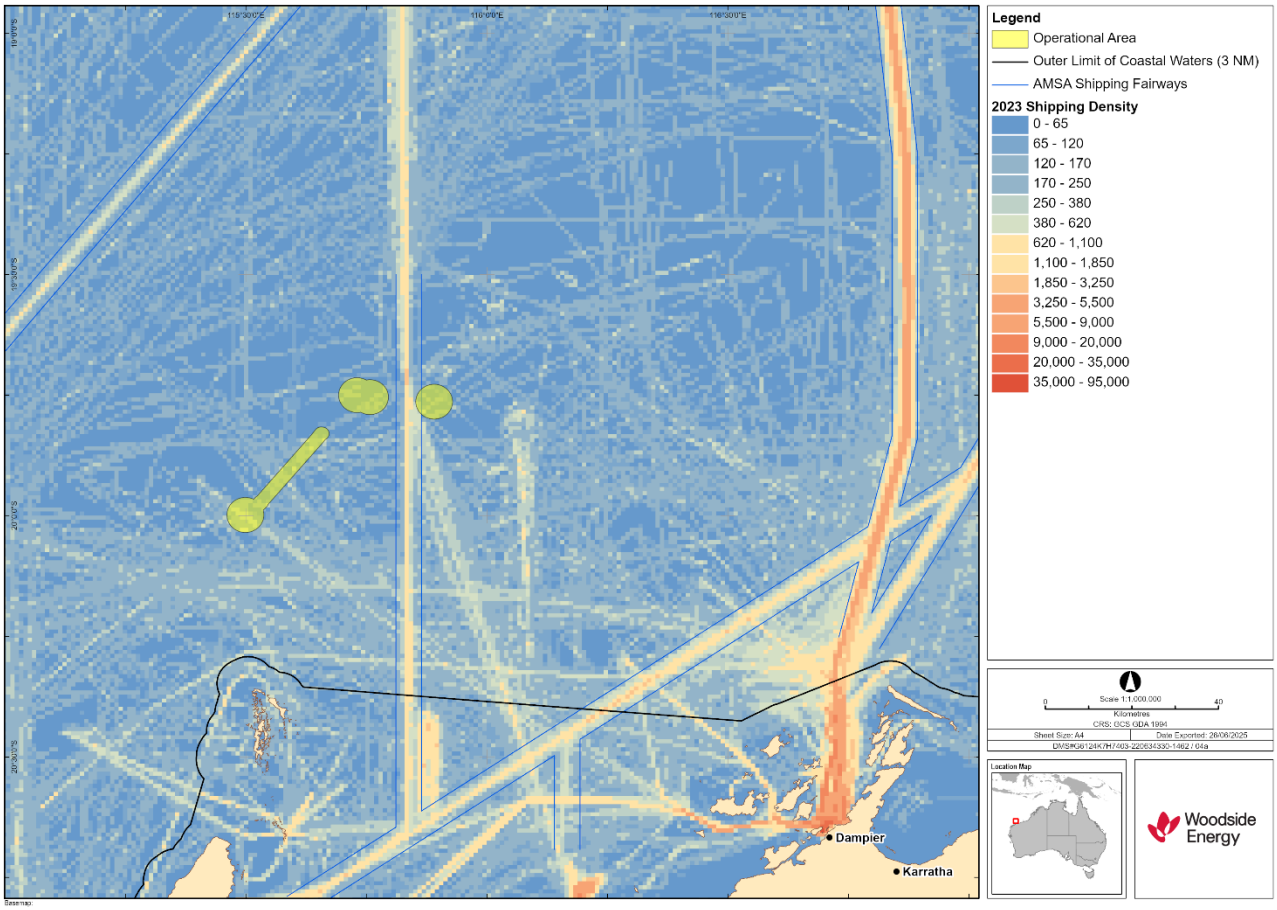
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6.3.2 Defence zones map



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6.3.3 Vessel density map



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6.3.4 Commonwealth shipwrecks

GWF-4 Drilling and Subsea Installation EP
EMBA and Accumulated Shoreline – Australia National shipwrecks overlap

Vessel Name	Vessel Type	When Lost	Where Lost	Latitude	Longitude
Agnes	Sailing vessel	1893	Exmouth Gulf	-21.75	114.0833333
Airlie	Sailing vessel	1889	Ashburton River	-21.66666667	114.8666667
Alexandra	Sailing vessel	1872	Geraldton	-26.66666667	112
Alfred	Sailing vessel	1908	Off north-west coast	-17	118.75
Ama May	Trawler	1970	Off cliffs at Edel Land	-26.13333333	113.0666667
Amelia	Sailing vessel	1874	Shark Bay	-24.5	113
Anxiety	Sailing vessel	1898	Shark Bay area	-24.25	112
Arab	Sailing vessel	1921	Geraldton	-26.66666667	112
Arabian	Sailing vessel	1872	Geraldton	-26.66666667	112
Ariel	Sailing vessel	1868	Locker Point, 50k west of Ashburton	-10.0000	115
Barbara Gay	Trawler	1962	Near Geraldton	-26.66666667	112
Beagle	Unknown	1904	Cape Inscription	-25.4	112.8666667
Beatrice	Sailing vessel	1899	Off North-West Cape	-21.61666667	113.9833333
Bell	Sailing vessel	1893	Exmouth	-21.75	114.0833333
Benan	Sailing vessel	1888	Point Cloates	-22.74151667	113.6745
Bertha	Sailing vessel	1874	Reef off Point Cloates	-22.55	113.5
Beryl Joyce	Trawler	1957	Gap at Northampton	-26.66666667	112
Boreas	Sailing vessel	1932	Weld Island, north of Onslow, 15 miles from Mary Anne Passage	-10	115
Cheryl D	Trawler	1962	Eve's Passage, Geraldton	-26.66666667	112
Chofuku Maru	Twin screw steamer	1931	Point Cloates	-22.51755	113.6629833
Cock Of The North	Sailing vessel	1879	Point Cloates	-22.55	113.5
Correio da Azia	Sailing vessel	1816	Point Cloates	-22.8628	113.7450667
Cossack	Sailing vessel	1889	Ashburton River (?)	-21.66666667	114.8666667
Countess	Single screw steamer	1929	Between Geraldton and Point Cloats	-29.16666667	112
Crighton	Launch	1921	Island Homestead	-24.25	112
Curlew	Sailing vessel	1911	At Onslow, Monte Bellos Group	-20	115.1666667
Dampier	Trawler		Enderby Island, Dampier Archipelago	-20.52333333	116.2366667
Don Joseph	Sailing vessel	1899	6.5 Kilometres North of Point Cloates	-22.61666667	113.6
Doreen	Trawler	1931	False Entrance, Shark's Bay	-26.25	113.1833333
Dot	Sailing vessel	1893	Shark Bay	-24.5	113
Elizabeth	Sailing vessel	1893	Exmouth Gulf	-21.75	114.0833333
Ellen	Unknown	1905	Onslow	-10	115
Ellen	Sailing vessel	1893	Exmouth Gulf	-21.75	114.0833333
Emlyn Castle	Unknown	1960		-21.78472167	114.165
Emma	Sailing vessel	1867	Coral Bay	-23.08255	113.7335
Era	Trawler	1958	Shark Bay at South Passage	-25.96666667	112.9833333
Era	Trawler	1928	Geraldton	-26.66666667	112
Eveline	Sailing vessel	1893	Shark Bay	-24.5	113
Falcon	Trawler	1960	South of Dirk Hartog Island	-26.16666667	113

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Fin	Single screw steamer	1923	Point Cloates, Fraser Island	-22.6476	113.6282667
Florence	Sailing vessel	1893	Exmouth Gulf	-21.75	114.0833333
Florrie	Sailing vessel	1921	Tetroden Loop (or Leep)	-25.88333333	113.1166667
G.G.S.	Sailing vessel	1883	Pt Cloates	-22.55	113.5
Gem	Sailing vessel	1893	North West Cape	-21.61666667	113.9833333
Genesta	Unknown	1909	Off Dorre Island	-24.83333333	112.9333333
Gift	Sailing vessel	1898	Shark Bay Area	-24.25	112
Haw Kiet	Unknown	2003		-18.45816667	117.2583333
Hawk	Sailing vessel		Around 55 kilometres south of the Cape at Carbaddaman Passage	-22.45	113.73333
Helena Mena	Sailing vessel	1898	Dirk Hartog Island	-25.31666667	112.7833333
Hildas	Sailing vessel	1893	Shark Bay	-24.5	113
Idahlia	Sailing vessel	1898	Shark Bay, Willieman	-24.25	112
Iona	Sailing vessel	1923	Point Cloates, entering Black Rock Passage	-22.8	113.6333333
Judith Ann	Trawler	1972	Near Geraldton	-26.66666667	112
Julie Dawn	Trawler	1971	Near Geraldton	-26.66666667	112
Junee	Trawler	1967	Geraldton	-26.66666667	112
Just In Time	Sailing vessel	1898	Williemia	-24.25	112
Kadna	Unknown	1902	1902	-17.96166667	112.2363833
Kapala	Unknown	1964	Exmouth Gulf	-21.75	114.0833333

Koombana	Twin screw steamer	1912	Port Hedland and Broome, Bedout Island	-19.4	118.9
Korean Star MV	Motor vessel	1988	Cape Cuvier	-24.2	113.4166667
Kormoran HSK	Unknown	1941	150 miles of Carvarvon	-26.09705555	111.2243056
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
Lighter	Sailing vessel	1906	Off White Beach Landing, Dorre Island	-25.1	113.1
Lily Of The Lake	Sailing vessel	1875	Exmouth Gulf	-21.75	114.0833333
Lively	Sailing vessel	1810	Mermaid Reef, Rowley Shoals	-17.08968333	119.5915
Louisa	Sailing vessel	1893	Shark Bay	-24.5	113
Mabel	Sailing vessel	1893	Exmouth Gulf	-21.75	114.0833333
Macquarie	Sailing vessel	1978	Levillain Shoal	-25.48333333	113.0333333
Maratta	Unknown	1905		-20.72783333	115.4261167
Marietta	Unknown	1905	Barrow Island	-20	115.1666667
Marutta	Unknown	1905		-20.72783333	115.4261667
Matchless	Sailing vessel	1893	Shark Bay	-24.5	113
May	Sailing vessel	1872	Geraldton	-26.66666667	112
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

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6.3.5 WA shipwrecks

GWF-4 Drilling and Subsea Installation EP
EMBA and Accumulated Shoreline – State Historical Shipwrecks overlap

Vessel Name	Vessel Type	When Lost	Where Lost	Latitude	Longitude
Ama May	Fishing vessel	8/08/1970	Off cliffs at Edel Land	26°08	113°04
Beagle		8/07/1904	Cape Inscription	25°24	112°52.5
Benan		1888/12/13	Point Cloates	22°44.491	113°40.47
Bertha	Cutter	1874/07/20	Reef off Point Cloates	22°33	113°30
Chofuku Maru	Steamer screw	5/02/1931	Point Cloates	22°31.053	113°39.779
Cock of the North	Ketch (Aux)	1879/05/07	20 km north of Geraldton	22°33	113°30
Correio da Azia	Ship	1816/11/25	Point Cloates	22°51.80598	113°45.04002
Curlew	Lugger	7/02/1911	At Onslow, Monte Bellos Group	20°00	115°10
Dampier		unknown	Enderby Island, Dampier Archipelago	20°31.4	116°14.2
Don Joseph	Lugger	1899/04/30	5-7 NM south of Point Cloates	22°37	113°36
Emlyn Castle		1960		21°47.0833	114°09.9
Emma	Schooner	1867/03	Coral Bay	23°04.953	113°44.010
Era	Fishing vessel	29/05/1958	Shark Bay at South Passage	25°58	112°59
Experimental shell pool	Other		North Delta Island, Monte Bello Islands	20°25.910546	115°32.605015
Falcon	Fishing vessel	9/08/1960	South of Dirk Hartog Island	26°10	113°00
Fin	Steamship	15/01/1923	Point Cloates, Fraser Island	22°38.856	113°37.696
Florrie	Cutter	18/02/1921	Tetroden Loop (or Leep)	25°53.5	113°07.5
G.S.S.	Lugger	1883	Pt Cloates	22°33	113°30
Gem	Lugger	1893/03/25	North West Cape	21°37	113°59
Genesta	Cutter	13/07/1909	Off White Beach, Dorre Island	24°50	112°56
Haw Kiet		2003		18°27.49	117°15.5
Helena Mena	Cutter	1898/01/24	Dirk Hartog Island	25°19	112°47
Iona	Barque	16/04/1923	Point Cloates, entering Black Rock Passage	22°48	113°38
Kadna		1902	1902	17°57.7	112°14.183
Kormoran HSK		19/11/1941	150 miles of Carvarvon	26°05.823333	111°13.4583333
Lady Ann	Ship (non-sail)	18/09/1982	24 miles north of NW Cape	21°24	114°12
Lighter	Lugger	25/12/1906	Off White Beach Landing, Dorre Island	25°06	113°06
Lively	Ship	1806?07	Mermaid Reef, Rowley Shoals	17°05.381	119°35.490
Macquarie	Schooner	1878/11	Levillian Shoal NE of Dirk Hartog Island, Shark Bay	25°29	113°02
Maratta		1905		20°43.67	115°25.567
Marietta		8/02/1905	Barrow Island	20°00	115°10
Marutta		1905		20°43.67	115°25.57
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	20/10/1989	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
Occator	Brigantine	1856/02/09	Around 55 kilometres south of the Cape at Carbaddaman Passage	22°25	113°41
Olive	Cutter	5/12/1916	Dorre Island, Carnarvon	24°51	112°55

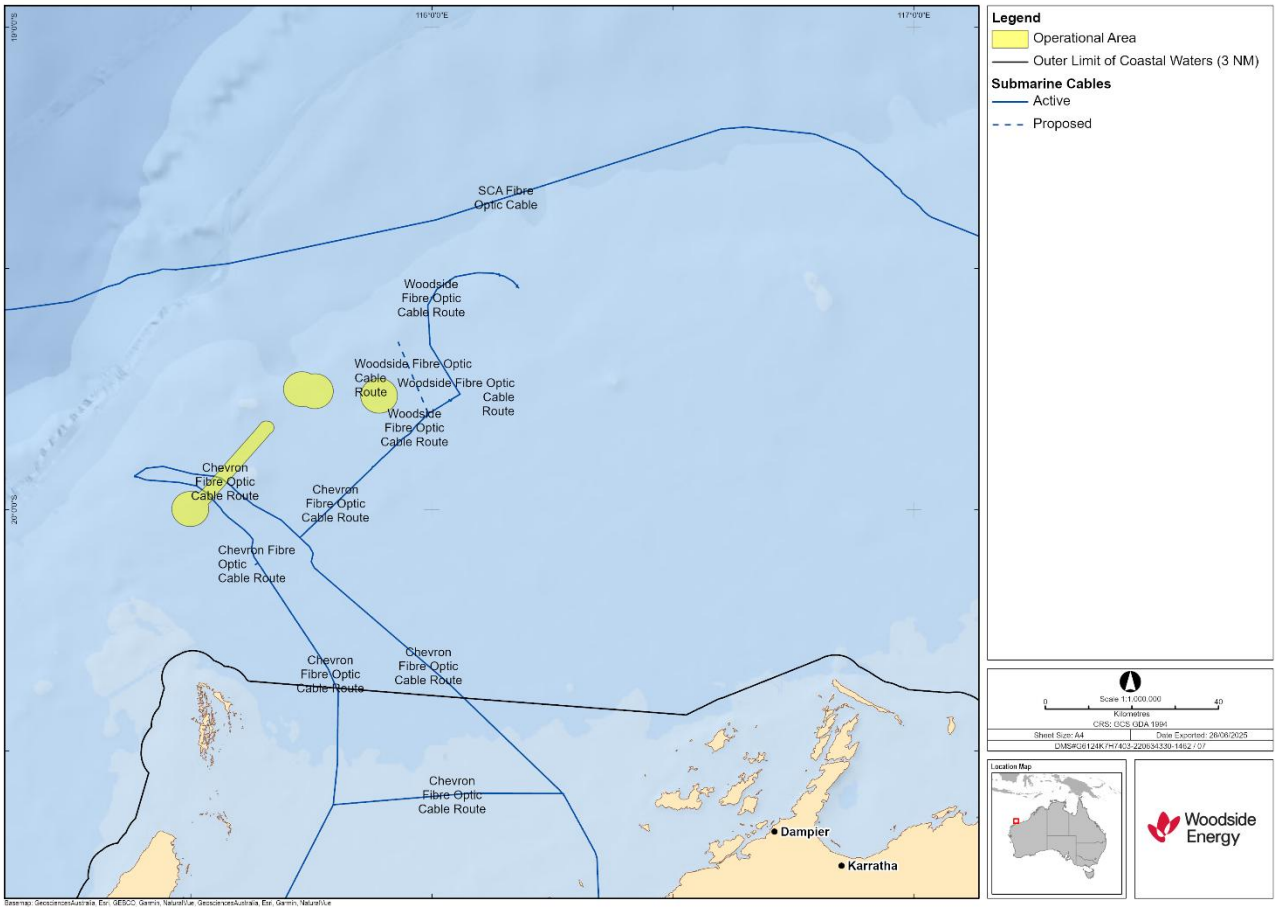
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Parks Lugger		unknown	Hermite Island. Montebello Islands	20°28.62492	115°31.71108
Patience	Schooner	13/07/1930	Between Red Bluff and Cape Cuvier	24°00	113°12
Pelsart (Pelsaert)	Cutter	15/10/1908	12 miles Northwest of Imperieuse Reef, Rowley Shoals	17°34	118°35
Perentie		8/11/1976	Barrow Island	20°43.67	115°25.57
Perseverant	Ship	1841/03/16	Shark Bay	25°30.42944S	113°01.085385E
Perth	Steamship	1887/09/17	Point Cloates	22°41.548	113°38.536
Plym HMS	Warship	17808	Trimouille Island Island	20°24.208	115°33.950
Point Cloates Unidentified/ Ningaloo Reef Unidentified		unknown	North of Correio da Azia site	22°51.768	113°44.70402
Queen	Cutter	1892/01/25	Off Point Cloates	22°33	113°30
Rapid	Ship	1811/01/07	Ningaloo Reef	22°44.36628	113°41.55858
Rose	Lugger	27/04/1908	Ashburton	21°35	114°50
S.S.S.		7/02/1901	Off Point Cloates	22°39.5	113°35
Samson II		17/08/1998		20°25.88	117°12.717
Santa Magdelena		1992	Off Cape Inscription	25°28.944333333333	112°57.893
See Taube		1954	North-east of Rowley Shoals	17°00	118°45
Shunsei Maru		5/02/1931	Carbaddaman Passage, north of Point Cloates	22°25	113°41
Stefano	Barque	1875/10/27	Point Cloates	22°49.613	113°43.271
Strathmore	Barque	1870	Point Cloates	22°33	113°30
Sydney HMAS	Warship	19/11/1941	113 n miles W of Steep Point	26°14.6166667	111°13.05

Tantabiddi Lagoon Admiralty anchor			Tantabiddi Lagoon	21 54.843	113 57.779
The Two Friends	Lugger	6/08/1925	Off Dirk Hartog Island	25°19	112°47
Trial	Ship	1622/05/24	Trial Rocks	20°17.159	115°22.514
Tropic Queen		9/04/1975		20°26	115°30.05
Veronica	Lugger	1928/07	Sunday Island, Exmouth Gulf	21°41	114°23
Vianen	Ship	1628/01/25	Barrow Island Area	20°00	115°10
Vittoria		25/07/1929	Dorre Island	24°50	112°56
Wild Wave (China)	Brig	1873/08/30	Monte Bello Island	20°00	115°10
Wyndham	Schooner	26/01/1910	Point Cloates	22°33	113°30
Zelma		20/07/1990	Dampier Archipelago	20°22.63	116°52.48
Zvir	Steamship	27/11/1902	Point Cloates	22°36.55	113°37.56

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6.3.6 Submarine communication cables map



6.3.7 Email sent to Department of Foreign Affairs and Trade (DFAT) – 6 February 2026

Woodside is planning to submit the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan. The GWF-4 Project, which covers Production Licences WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L, intends to partially fill ullage (unused production capacity) at the existing Goodwyn Alpha (GWA) facility and is located in Commonwealth waters ~ 140 km north-west of Karratha, Western Australia.

If you would like to comment on the proposed activity, please provide feedback to Woodside by **9 March 2026** using the details below.

Overview

The GWF-4 Drilling and Subsea Installation petroleum activities include:

· Subsea tiebacks from nearfields and the Wilcox Field to existing GWF subsea infrastructure.

· The drilling of up to six wells (WCA01, WCA02, YDA01, ESA01, TPA04 and contingent well WCA).

· The installation and pre-commissioning of subsea infrastructure.

Consultation information

A Consultation Information Sheet is attached, which provides additional background on the proposed activities including summaries of potential key impacts and risks and associated management measures. This is also available on our website.

International Consultation

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Woodside's approach to international consultation has been developed following advice provided by the Department of Foreign Affairs and Trade (DFAT) during consultation on the Pyrenees Facility Operations Environment Plan, Stybarrow Plug and Abandonment Environment Plan and WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision.

Woodside acknowledges that DFAT is responsible for the management of communications and sensitivities with other countries, and that DFAT has requested Woodside not contact foreign embassies directly. Following this guidance, Woodside consults DFAT if there is the highly unlikely chance that environmental impacts may extend beyond Australia's jurisdiction.

Woodside is providing consultation information as the Environment that may be affected (EMBA) for the GWF-4 Drilling and Subsea Installation EP overlaps with Indonesia's Exclusive Economic Zone (200nm). The EMBA does not overlap with Indonesia's Territorial Sea (12nm).

Activity and location summary

Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan	
Activity details	Activities include: · Mooring installation for the Mobile Offshore Drilling Unit (MODU) (including piling). · Development drilling. · Pre- and post- lay survey activities. · Installation of subsea infrastructure. · Inspection, monitoring, maintenance and repair (IMMR). · Tie-in to existing subsea infrastructure. · Pre-commissioning testing.
Titles	Production Licence: WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L.
Location	In Commonwealth waters ~140 km north-west of Karratha, Western Australia.
Water depth	~ 40 m - 160 m deep
Timing	· Drilling activities: Q3 2026 to Q2 2028 (~90 days per well, up to an expected total of 450 days). – Contingency 2029. · Subsea Installation: – Nearfield: Q3 2027 to Q1 2028 ~ 3 months. – Wilcox Field: Q4 2027 to Q2 2028 ~6 months. – Contingency 2029. · Decommissioning is not planned during the next 5 years.
Duration	· When activities occur, operations will run 24 hours a day, 7 days a week. Simultaneous Operations (SIMOPS) of drilling and subsea installation activities may occur. · IMMR activities will take place as required.
Infrastructure	Key infrastructure includes, but is not limited to:

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	· Wilcox Field: Xmas trees and wellheads, flowlines, electro-hydraulic umbilicals (EHUs), manifolds, pipeline end terminations (PLETs), flowline end termination (FLET), umbilical termination assemblies (UTAs), electrical flying leads (EFLs), hydraulic flying leads (HFLs), flexible pipe jumpers, rigid spools, subsea intensifiers. · Nearfield: Flowlines, UTAs, EFLs, HFLs, flexible pipe jumpers, cooling skids, pressure protection systems, and accumulator modules.
Vessels	Key vessels include, but are not limited to: · Installation vessel for installing the subsea infrastructure. · Inspection, monitoring, maintenance and repair (IMMR) vessel for Xmas tree installation, isolation testing, IMMR or contingent activities. · Support vessels including barge(s), heavy lift vessel(s) (HLVs), multi-service construction vessel(s), anchor handling vessel(s) and general supply/support vessels. · MODU: Moored, or hybrid (moored and dynamic positioning) MODU will be used.
Operational Area and exclusion zones	The location of infrastructure is marked on nautical charts. The Operational Area and exclusion zones include: · A radius of 4,000 m from each well to allow for MODU mooring. · 1.5 km radius (3,000 m corridor) around subsea installation locations in which subsea installation and pre-commissioning activities will occur, to allow for the movement and position of vessels. · 500 m safety exclusion zone around the MODU and installation vessel.

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 loss of well integrity, and 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 will 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 **9 March 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suit 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 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.

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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

6.3.8 Email sent to Melbana Exploration; Pathfinder Energy – 6 February 2026

Woodside is planning to submit the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan. The GWF-4 Project, which covers Production Licences WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L, intends to partially fill ullage (unused production capacity) at the existing Goodwyn Alpha (GWA) facility and is located in Commonwealth waters ~ 140 km north-west of Karratha, Western Australia.

If you would like to comment on the proposed activity, please provide feedback to Woodside by **9 March 2026** using the details below.

Overview

The GWF-4 Drilling and Subsea Installation petroleum activities include:

· Subsea tiebacks from nearfields and the Wilcox Field to existing GWF subsea infrastructure.

· The drilling of up to six wells (WCA01, WCA02, YDA01, ESA01, TPA04 and contingent well WCA).

· The installation and pre-commissioning of subsea infrastructure.

Consultation information

A Consultation Information Sheet is attached, which provides additional background on the proposed activities including summaries of potential key impacts and risks and associated management measures. This is also available on our website.

Activity and location summary

Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan	
Activity details	Activities include: · Mooring installation for the Mobile Offshore Drilling Unit (MODU) (including piling). · Development drilling. · Pre- and post- lay survey activities. · Installation of subsea infrastructure. · Inspection, monitoring, maintenance and repair (IMMR). · Tie-in to existing subsea infrastructure. · Pre-commissioning testing.
Titles	Production Licence: WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L.
Location	In Commonwealth waters ~140 km north-west of Karratha, Western Australia.

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Water depth	~ 40 m - 160 m deep
Timing	· Drilling activities: Q3 2026 to Q2 2028 (~90 days per well, up to an expected total of 450 days). – Contingency 2029. · Subsea Installation: – Nearfield: Q3 2027 to Q1 2028 ~ 3 months. – Wilcox Field: Q4 2027 to Q2 2028 ~6 months. – Contingency 2029. · Decommissioning is not planned during the next 5 years.
Duration	· When activities occur, operations will run 24 hours a day, 7 days a week. Simultaneous Operations (SIMOPS) of drilling and subsea installation activities may occur. · IMMR activities will take place as required.
Infrastructure	Key infrastructure includes, but is not limited to: · Wilcox Field: Xmas trees and wellheads, flowlines, electro-hydraulic umbilicals (EHUs), manifolds, pipeline end terminations (PLETs), flowline end termination (FLET), umbilical termination assemblies (UTAs), electrical flying leads (EFLs), hydraulic flying leads (HFLs), flexible pipe jumpers, rigid spools, subsea intensifiers. · Nearfield: Flowlines, UTAs, EFLs, HFLs, flexible pipe jumpers, cooling skids, pressure protection systems, and accumulator modules.
Vessels	Key vessels include, but are not limited to: · Installation vessel for installing the subsea infrastructure. · Inspection, monitoring, maintenance and repair (IMMR) vessel for Xmas tree installation, isolation testing, IMMR or contingent activities. · Support vessels including barge(s), heavy lift vessel(s) (HLVs), multi-service construction vessel(s), anchor handling vessel(s) and general supply/support vessels. · MODU: Moored, or hybrid (moored and dynamic positioning) MODU will be used.
Operational Area and exclusion zones	The location of infrastructure is marked on nautical charts. The Operational Area and exclusion zones include: · A radius of 4,000 m from each well to allow for MODU mooring. · 1.5 km radius (3,000 m corridor) around subsea installation locations in which subsea installation and pre-commissioning activities will occur, to allow for the movement and position of vessels. · 500 m safety exclusion zone around the MODU and installation vessel.

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 loss of well containment, and vessel collision.

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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.

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 **9 March 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suit 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).

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Regards,

Woodside Energy Consultation

6.3.9 Email sent to Department of Industry, Science and Resources (DISR); Australian Maritime Safety Authority (AMSA – Marine Pollution; Department of Mines, Petroleum and Exploration (DMPE); Pilbara Ports; Ningaloo Coast World Heritage Advisory Committee (NCWHAC); Department of Transport and Major Infrastructure (DTMI); Department of Agriculture, Fisheries and Forestry (DAFF) – Fisheries; Department of Agriculture, Fisheries and Forestry (DAFF) – Biosecurity; Department of Biodiversity, Conservation and Attractions (DBCA) – 10 February 2026

Woodside previously consulted DBCA on its plans to submit the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan (EP).

The GWF-4 Drilling and Subsea Installation petroleum activities include:

- Subsea tiebacks from nearfields and the Wilcox Field to existing GWF subsea infrastructure.
- The drilling of up to six wells (WCA01, WCA02, YDA01, ESA01, TPA04 and contingent well WCA).
- The installation and pre-commissioning of subsea infrastructure.

EMBA Revision

As part of the EP development process, Woodside has undertaken additional modelling which has resulted in changes to the Environment that May Be Affected (EMBA) for the GWF-4 Drilling and Subsea Installation EP.

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Because of this change, Woodside is providing an update to Stakeholders.

The EMBA is the largest area where activities could potentially have a direct or indirect impact on the environment. The broadest extent of the EMBA takes into consideration planned and unplanned activities, and for this EP the EMBA is based on a loss of well containment and a vessel collision. Releases of these kinds are highly unlikely to occur.

Please see the attached updated Consultation Information Sheet which includes an updated map for the revised EMBA.

Other details regarding this activity remain the same as during the initial consultation, including the activity description, location of the activity, timing of the activity, impacts and risks associated with the activity, and proposed mitigation and management measures.

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 **27 February 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suit 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 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.

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.

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Regards,

Woodside Energy Consultation

6.3.10 Email sent to Australian Border Force (ABF); Australian Fisheries Management Authority (AFMA) – 10 February 2026

Woodside previously consulted you on its plans to submit the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan (EP).

The GWF-4 Drilling and Subsea Installation petroleum activities include:

- Subsea tiebacks from nearfields and the Wilcox Field to existing GWF subsea infrastructure.
- The drilling of up to six wells (WCA01, WCA02, YDA01, ESA01, TPA04 and contingent well WCA).
- The installation and pre-commissioning of subsea infrastructure.

EMBA Revision

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As part of the EP development process, Woodside has undertaken additional modelling which has resulted in changes to the Environment that May Be Affected (EMBA) for the GWF-4 Drilling and Subsea Installation EP.

Because of this change, Woodside is providing an update to Stakeholders.

The EMBA is the largest area where activities could potentially have a direct or indirect impact on the environment. The broadest extent of the EMBA takes into consideration planned and unplanned activities, and for this EP the EMBA is based on a loss of well containment and a vessel collision. Releases of these kinds are highly unlikely to occur.

Please see the attached updated Consultation Information Sheet (CIS) which includes an updated map for the revised EMBA.

Other details regarding this activity remain the same as during the initial consultation, including the activity description, location of the activity, timing of the activity, impacts and risks associated with the activity, and proposed mitigation and management measures.

Wilcox Flowline

As outlined in the attached CIS, Woodside plans to install a subsea flowline (Wilcox Flowline) to tieback the Wilcox Field to the existing Greater Western Flank subsea infrastructure.

Feedback received regarding this activity may, where relevant, be used to support Woodside's application for a Pipeline Licence under the *Offshore Petroleum and Greenhouse Gas Storage (OPGGS) Act* for the construction and operation of the Wilcox Flowline.

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 **27 February 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suit 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 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.

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.

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Regards,

Woodside Energy Consultation

6.3.11 Email to Department of Planning, Lands and Heritage (DPLH) – 10 February 2026

Woodside previously consulted you on its plans to submit the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan (EP).

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The GWF-4 Drilling and Subsea Installation petroleum activities include:

- Subsea tiebacks from nearfields and the Wilcox Field to existing GWF subsea infrastructure.
- The drilling of up to six wells (WCA01, WCA02, YDA01, ESA01, TPA04 and contingent well WCA).
- The installation and pre-commissioning of subsea infrastructure.

EMBA Revision

As part of the EP development process, Woodside has undertaken additional modelling which has resulted in changes to the Environment that May Be Affected (EMBA) for the GWF-4 Drilling and Subsea Installation EP.

Because of this change, Woodside is providing an update to Stakeholders.

The EMBA is the largest area where activities could potentially have a direct or indirect impact on the environment. The broadest extent of the EMBA takes into consideration planned and unplanned activities, and for this EP the EMBA is based on a loss of well containment and a vessel collision. Releases of these kinds are highly unlikely to occur.

Please see the attached updated Consultation Information Sheet which includes an updated map for the revised EMBA. Please also find attached the details of WA shipwrecks that are relevant for this EP.

Other details regarding this activity remain the same as during the initial consultation, including the activity description, location of the activity, timing of the activity, impacts and risks associated with the activity, and proposed mitigation and management measures.

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 **27 February 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suit 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 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.

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.

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Regards,

Woodside Energy Consultation

6.3.12 Email sent to Department of Climate Change, Energy, the Environment and Water (DCCEEW) – 10 February 2026

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Woodside previously consulted you on its plans to submit the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan (EP).

The GWF-4 Drilling and Subsea Installation petroleum activities include:

- Subsea tiebacks from nearfields and the Wilcox Field to existing GWF subsea infrastructure.
- The drilling of up to six wells (WCA01, WCA02, YDA01, ESA01, TPA04 and contingent well WCA).
- The installation and pre-commissioning of subsea infrastructure.

EMBA Revision

As part of the EP development process, Woodside has undertaken additional modelling which has resulted in changes to the Environment that May Be Affected (EMBA) for the GWF-4 Drilling and Subsea Installation EP.

Because of this change, Woodside is providing an update to Stakeholders.

The EMBA is the largest area where activities could potentially have a direct or indirect impact on the environment. The broadest extent of the EMBA takes into consideration planned and unplanned activities, and for this EP the EMBA is based on a loss of well containment and a vessel collision. Releases of these kinds are highly unlikely to occur.

Please see the attached updated Consultation Information Sheet which includes an updated map for the revised EMBA, a list of relevant Commonwealth Shipwrecks is also attached.

Other details regarding this activity remain the same as during the initial consultation, including the activity description, location of the activity, timing of the activity, impacts and risks associated with the activity, and proposed mitigation and management measures.

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 **27 February 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suit 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 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.

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.

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Regards,

Woodside Energy Consultation

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6.3.13 Email sent to Department of Primary Industries and Regional Development – 10 February 2026

Woodside previously consulted you on its plans to submit the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan (EP).

The GWF-4 Drilling and Subsea Installation petroleum activities include:

- Subsea tiebacks from nearfields and the Wilcox Field to existing GWF subsea infrastructure.
- The drilling of up to six wells (WCA01, WCA02, YDA01, ESA01, TPA04 and contingent well WCA).
- The installation and pre-commissioning of subsea infrastructure.

EMBA Revision

As part of the EP development process, Woodside has undertaken additional modelling which has resulted in changes to the Environment that May Be Affected (EMBA) for the GWF-4 Drilling and Subsea Installation EP.

Because of this change, Woodside is providing an update to Stakeholders.

The EMBA is the largest area where activities could potentially have a direct or indirect impact on the environment. The broadest extent of the EMBA takes into consideration planned and unplanned activities, and for this EP the EMBA is based on a loss of well containment and a vessel collision. Releases of these kinds are highly unlikely to occur.

Please see the attached updated Consultation Information Sheet which includes an updated map for the revised EMBA.

With regards to changes to relevant State fisheries, Pearl Oyster Managed Fishery, and West Coast Demersal Gillnet and Demersal Longline Fishery are now relevant to the EMBA. Fisheries relevant to the Operational Area now includes Specimen Shell Managed Fishery.

Other details regarding this activity remain the same as during the initial consultation, including the activity description, location of the activity, timing of the activity, impacts and risks associated with the activity, and proposed mitigation and management measures.

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 **27 February 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suit 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 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.

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.

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Regards,

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Woodside Energy Consultation

6.3.14 Email sent to Australian Communications Management Authority (ACMA) – 10 February 2026

Woodside previously consulted you on its plans to submit the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan (EP).

The GWF-4 Drilling and Subsea Installation petroleum activities include:

- Subsea tiebacks from nearfields and the Wilcox Field to existing GWF subsea infrastructure.
- The drilling of up to six wells (WCA01, WCA02, YDA01, ESA01, TPA04 and contingent well WCA).
- The installation and pre-commissioning of subsea infrastructure.

EMBA Revision

As part of the EP development process, Woodside has undertaken additional modelling which has resulted in changes to the Environment that May Be Affected (EMBA) for the GWF-4 Drilling and Subsea Installation EP.

Because of this change, Woodside is providing an update to Stakeholders.

The EMBA is the largest area where activities could potentially have a direct or indirect impact on the environment. The broadest extent of the EMBA takes into consideration planned and unplanned activities, and for this EP the EMBA is based on a loss of well containment and a vessel collision. Releases of these kinds are highly unlikely to occur.

Please see the attached updated Consultation Information Sheet (CIS) which includes an updated map for the revised EMBA. Please also find attached a map of the submarine communication cables in the vicinity of the Operational Area.

Other details regarding this activity remain the same as during the initial consultation, including the activity description, location of the activity, timing of the activity, impacts and risks associated with the activity, and proposed mitigation and management measures.

Wilcox Flowline

As outlined in the attached CIS, Woodside plans to install a subsea flowline (Wilcox Flowline) to tieback the Wilcox Field to the existing Greater Western Flank subsea infrastructure.

Feedback received regarding this activity may, where relevant, be used to support Woodside's application for a Pipeline Licence under the *Offshore Petroleum and Greenhouse Gas Storage (OPGGS) Act* for the construction and operation of the Wilcox Flowline.

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 **27 February 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suit 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).

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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.

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Regards,

Woodside Energy Consultation

6.3.15 Email sent to Department of Defence (DoD) – 10 February 2026

Woodside previously consulted you on its plans to submit the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan (EP).

The GWF-4 Drilling and Subsea Installation petroleum activities include:

- Subsea tiebacks from nearfields and the Wilcox Field to existing GWF subsea infrastructure.
- The drilling of up to six wells (WCA01, WCA02, YDA01, ESA01, TPA04 and contingent well WCA).
- The installation and pre-commissioning of subsea infrastructure.

EMBA Revision

As part of the EP development process, Woodside has undertaken additional modelling which has resulted in changes to the Environment that May Be Affected (EMBA) for the GWF-4 Drilling and Subsea Installation EP.

Because of this change, Woodside is providing an update to Stakeholders.

The EMBA is the largest area where activities could potentially have a direct or indirect impact on the environment. The broadest extent of the EMBA takes into consideration planned and unplanned activities, and for this EP the EMBA is based on a loss of well containment and a vessel collision. Releases of these kinds are highly unlikely to occur.

Please see the attached updated Consultation Information Sheet (CIS) which includes an updated map for the revised EMBA, please also refer to the attached defence zone maps.

Other details regarding this activity remain the same as during the initial consultation, including the activity description, location of the activity, timing of the activity, impacts and risks associated with the activity, and proposed mitigation and management measures.

Wilcox Flowline

As outlined in the attached CIS, Woodside plans to install a subsea flowline (Wilcox Flowline) to tieback the Wilcox Field to the existing Greater Western Flank subsea infrastructure.

Feedback received regarding this activity may, where relevant, be used to support Woodside's application for a Pipeline Licence under the *Offshore Petroleum and Greenhouse Gas Storage (OPGGS) Act* for the construction and operation of the Wilcox Flowline.

Feedback

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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 **27 February 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suit 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).

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Regards,

Woodside Energy Consultation

6.3.16 Email sent to Australian Hydrographic Office (AHO) – 10 February 2026

Woodside previously consulted you on its plans to submit the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan (EP).

The GWF-4 Drilling and Subsea Installation petroleum activities include:

- Subsea tiebacks from nearfields and the Wilcox Field to existing GWF subsea infrastructure.
- The drilling of up to six wells (WCA01, WCA02, YDA01, ESA01, TPA04 and contingent well WCA).
- The installation and pre-commissioning of subsea infrastructure.

EMBA Revision

As part of the EP development process, Woodside has undertaken additional modelling which has resulted in changes to the Environment that May Be Affected (EMBA) for the GWF-4 Drilling and Subsea Installation EP.

Because of this change, Woodside is providing an update to Stakeholders.

The EMBA is the largest area where activities could potentially have a direct or indirect impact on the environment. The broadest extent of the EMBA takes into consideration planned and unplanned activities, and for this EP the EMBA is based on a loss of well containment and a vessel collision. Releases of these kinds are highly unlikely to occur.

Please see the attached updated Consultation Information Sheet (CIS) which includes an updated map for the revised EMBA. Please also find attached a vessel density map and GIS Shape Files.

Other details regarding this activity remain the same as during the initial consultation, including the activity description, location of the activity, timing of the activity, impacts and risks associated with the activity, and proposed mitigation and management measures.

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Wilcox Flowline

As outlined in the attached CIS, Woodside plans to install a subsea flowline (Wilcox Flowline) to tieback the Wilcox Field to the existing Greater Western Flank subsea infrastructure.

Feedback received regarding this activity may, where relevant, be used to support Woodside's application for a Pipeline Licence under the *Offshore Petroleum and Greenhouse Gas Storage (OPGGS) Act* for the construction and operation of the Wilcox Flowline.

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 **27 February 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suit 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).

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Regards,

Woodside Energy Consultation

6.3.17 Email sent to Australian Maritime Safety Authority (AMSA) – Marine Safety – 10 February 2026

Woodside previously consulted you on its plans to submit the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan (EP).

The GWF-4 Drilling and Subsea Installation petroleum activities include:

- Subsea tiebacks from nearfields and the Wilcox Field to existing GWF subsea infrastructure.
- The drilling of up to six wells (WCA01, WCA02, YDA01, ESA01, TPA04 and contingent well WCA).
- The installation and pre-commissioning of subsea infrastructure.

EMBA Revision

As part of the EP development process, Woodside has undertaken additional modelling which has resulted in changes to the Environment that May Be Affected (EMBA) for the GWF-4 Drilling and Subsea Installation EP.

Because of this change, Woodside is providing an update to Stakeholders.

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The EMBA is the largest area where activities could potentially have a direct or indirect impact on the environment. The broadest extent of the EMBA takes into consideration planned and unplanned activities, and for this EP the EMBA is based on a loss of well containment and a vessel collision. Releases of these kinds are highly unlikely to occur.

Please see the attached updated Consultation Information Sheet (CIS) which includes an updated map for the revised EMBA. Please also find attached a vessel density map and GIS Shape Files.

Other details regarding this activity remain the same as during the initial consultation, including the activity description, location of the activity, timing of the activity, impacts and risks associated with the activity, and proposed mitigation and management measures.

Wilcox Flowline

As outlined in the attached CIS, Woodside plans to install a subsea flowline (Wilcox Flowline) to tieback the Wilcox Field to the existing Greater Western Flank subsea infrastructure.

Feedback received regarding this activity may, where relevant, be used to support Woodside's application for a Pipeline Licence under the *Offshore Petroleum and Greenhouse Gas Storage (OPGGS) Act* for the construction and operation of the Wilcox Flowline.

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 **27 February 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suit 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).

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Regards,

Woodside Energy Consultation

6.3.18 Email sent to Aquaculture Council of Western Australia – 10 February 2026

Woodside previously consulted you on its plans to submit the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan (EP).

The GWF-4 Drilling and Subsea Installation petroleum activities include:

- Subsea tiebacks from nearfields and the Wilcox Field to existing GWF subsea infrastructure.
- The drilling of up to six wells (WCA01, WCA02, YDA01, ESA01, TPA04 and contingent well WCA).

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- The installation and pre-commissioning of subsea infrastructure.

EMBA Revision

As part of the EP development process, Woodside has undertaken additional modelling which has resulted in changes to the Environment that May Be Affected (EMBA) for the GWF-4 Drilling and Subsea Installation EP.

Because of this change, Woodside is providing an update to Stakeholders.

The EMBA is the largest area where activities could potentially have a direct or indirect impact on the environment. The broadest extent of the EMBA takes into consideration planned and unplanned activities, and for this EP the EMBA is based on a loss of well containment and a vessel collision. Releases of these kinds are highly unlikely to occur.

Please see the attached updated Consultation Information Sheet which includes an updated map for the revised EMBA.

Other details regarding this activity remain the same as during the initial consultation, including the activity description, location of the activity, timing of the activity, impacts and risks associated with the activity, and proposed mitigation and management measures.

EMBA Overlap

Woodside is providing this information to the Aquaculture Council of Western Australia as our mapping data shows the EMBA for this EP overlaps with pearl farm leases in the Montebello Islands, Dailey Shoal and Bennett Shoal, and aquaculture sites in the Mackerel Islands, Exmouth, and Shark Bay.

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 **27 February 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suit 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).

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Regards,

Woodside Energy Consultation

6.3.19 Email sent to Pearl Producers Association – 25 February 2026

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Woodside is planning to submit the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan. The GWF-4 Project, which covers Production Licences WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L, intends to partially fill ullage (unused production capacity) at the existing Goodwyn Alpha (GWA) facility and is located in Commonwealth waters ~ 140 km north-west of Karratha, Western Australia.

If you would like to comment on the proposed activity, please provide feedback to Woodside by **27 March 2026** using the details below.

Overview

The GWF-4 Drilling and Subsea Installation petroleum activities include:

· Subsea tiebacks from nearfields and the Wilcox Field to existing GWF subsea infrastructure.

· The drilling of up to six wells (WCA01, WCA02, YDA01, ESA01, TPA04 and contingent well WCA).

· The installation and pre-commissioning of subsea infrastructure.

Consultation information

A Consultation Information Sheet is attached, which provides additional background on the proposed activities including summaries of potential key impacts and risks and associated management measures. This is also available on our website.

Activity and location summary

Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan	
Activity details	Activities include: · Mooring installation for the Mobile Offshore Drilling Unit (MODU) (including piling). · Development drilling. · Pre- and post- lay survey activities. · Installation of subsea infrastructure. · Inspection, monitoring, maintenance and repair (IMMR). · Tie-in to existing subsea infrastructure. · Pre-commissioning testing.
Titles	Production Licence: WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L.
Location	In Commonwealth waters ~140 km north-west of Karratha, Western Australia.
Water depth	~ 40 m - 160 m deep
Timing	· Drilling activities: Q3 2026 to Q2 2028 (~90 days per well, up to an expected total of 450 days). – Contingency 2029. · Subsea Installation: – Nearfield: Q3 2027 to Q1 2028 ~ 3 months. – Wilcox Field: Q4 2027 to Q2 2028 ~6 months. – Contingency 2029. · Decommissioning is not planned during the next 5 years.

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Duration	· When activities occur, operations will run 24 hours a day, 7 days a week. Simultaneous Operations (SIMOPS) of drilling and subsea installation activities may occur. · IMMR activities will take place as required.
Infrastructure	Key infrastructure includes, but is not limited to: · Wilcox Field: Xmas trees and wellheads, flowlines, electro-hydraulic umbilicals (EHUs), manifolds, pipeline end terminations (PLETs), flowline end termination (FLET), umbilical termination assemblies (UTAs), electrical flying leads (EFLs), hydraulic flying leads (HFLs), flexible pipe jumpers, rigid spools, subsea intensifiers. · Nearfield: Flowlines, UTAs, EFLs, HFLs, flexible pipe jumpers, cooling skids, pressure protection systems, and accumulator modules.
Vessels	Key vessels include, but are not limited to: · Installation vessel for installing the subsea infrastructure. · Inspection, monitoring, maintenance and repair (IMMR) vessel for Xmas tree installation, isolation testing, IMMR or contingent activities. · Support vessels including barge(s), heavy lift vessel(s) (HLVs), multi-service construction vessel(s), anchor handling vessel(s) and general supply/support vessels. · MODU: Moored, or hybrid (moored and dynamic positioning) MODU will be used.
Operational Area and exclusion zones	The location of infrastructure is marked on nautical charts. The Operational Area and exclusion zones include: · A radius of 4,000 m from each well to allow for MODU mooring. · 1.5 km radius (3,000 m corridor) around subsea installation locations in which subsea installation and pre-commissioning activities will occur, to allow for the movement and position of vessels. · 500 m safety exclusion zone around the MODU and installation vessel.

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 loss of well containment, and 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 will 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 **27 March 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suit 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

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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).

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Regards,

Woodside Energy Consultation

6.3.20 Email sent to Western Australian Museum (WAM) – 10 February 2026

Woodside previously consulted you on its plans to submit the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan (EP).

The GWF-4 Drilling and Subsea Installation petroleum activities include:

- Subsea tiebacks from nearfields and the Wilcox Field to existing GWF subsea infrastructure.
- The drilling of up to six wells (WCA01, WCA02, YDA01, ESA01, TPA04 and contingent well WCA).
- The installation and pre-commissioning of subsea infrastructure.

EMBA Revision

As part of the EP development process, Woodside has undertaken additional modelling which has resulted in changes to the Environment that May Be Affected (EMBA) for the GWF-4 Drilling and Subsea Installation EP.

Because of this change, Woodside is providing an update to Stakeholders.

The EMBA is the largest area where activities could potentially have a direct or indirect impact on the environment. The broadest extent of the EMBA takes into consideration planned and unplanned activities, and for this EP the EMBA is based on a loss of well containment and a vessel collision. Releases of these kinds are highly unlikely to occur.

Please see the attached updated Consultation Information Sheet which includes an updated map for the revised EMBA, a list of relevant WA Shipwrecks is also attached.

Other details regarding this activity remain the same as during the initial consultation, including the activity description, location of the activity, timing of the activity, impacts and risks associated with the activity, and proposed mitigation and management measures.

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 **27 February 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suit 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

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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).

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Regards,

Woodside Energy Consultation

6.3.21 Email sent to Department of Agriculture, Fisheries and Forestry (DAFF) – Fisheries; Department of Agriculture, Fisheries and Forestry (DAFF) - Biosecurity – 10 February 2026

Woodside previously consulted you on its plans to submit the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan (EP).

The GWF-4 Drilling and Subsea Installation petroleum activities include:

- Subsea tiebacks from nearfields and the Wilcox Field to existing GWF subsea infrastructure.
- The drilling of up to six wells (WCA01, WCA02, YDA01, ESA01, TPA04 and contingent well WCA).
- The installation and pre-commissioning of subsea infrastructure.

EMBA Revision

As part of the EP development process, Woodside has undertaken additional modelling which has resulted in changes to the Environment that May Be Affected (EMBA) for the GWF-4 Drilling and Subsea Installation EP.

Because of this change, Woodside is providing an update to Stakeholders.

The EMBA is the largest area where activities could potentially have a direct or indirect impact on the environment. The broadest extent of the EMBA takes into consideration planned and unplanned activities, and for this EP the EMBA is based on a loss of well containment and a vessel collision. Releases of these kinds are highly unlikely to occur.

Please see the attached updated Consultation Information Sheet which includes an updated map for the revised EMBA.

Other details regarding this activity remain the same as during the initial consultation, including the activity description, location of the activity, timing of the activity, impacts and risks associated with the activity, and proposed mitigation and management measures.

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 **27 February 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suit you.

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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.

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.

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Regards,

Woodside Energy Consultation

6.4 Consultation Update – Follow-up

6.4.1 Email sent to Department of Foreign Affairs and Trade (DFAT); Melbana Exploration; Pathfinder Energy – 25 February 2026

Woodside previously consulted you on its plans to submit the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan (EP).

The GWF-4 Project, which covers Production Licences WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L, intends to partially fill ullage (unused production capacity) at the existing Goodwyn Alpha (GWA) facility and is located in Commonwealth waters ~140 km north-west of Karratha, Western Australia.

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 would like to provide 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 **9 March 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suit 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 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.

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Regards,

Woodside Energy Consultation

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6.4.2 Email sent to Pearl Producers Association (PPA) – 16 March 2026

Woodside previously consulted you on its plans to submit the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan (EP).

The GWF-4 Project, which covers Production Licences WA-7-R, WA-57-L, WA-24-L, WA-5-L, WA-23-L, WA-6-L, intends to partially fill ullage (unused production capacity) at the existing Goodwyn Alpha (GWA) facility and is located in Commonwealth waters ~140 km north-west of Karratha, Western Australia.

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 would like to provide 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 **27 March 2026**. Alternatively, Woodside is willing to consider and accept your feedback via a means which suit 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).

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Regards,

Woodside Energy Consultation

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6.5 Newspaper advertisements

6.5.1 Summary table

Newspaper	Coverage	Readership	Publication dates
The Australian	National	Weekly – 453,000	28 July 2025
The West Australian	Regional (WA)	Daily – 364,000	28 July 2025
Pilbara News	Local (WA)	Weekly – 17,611	30 July 2025
Midwest Times	Local (WA)	Weekly – 50,534	30 July 2025
North West Telegraph	Local (WA)	Weekly – 8,154	30 July 2025
Koori Mail	Indigenous	Monthly – 80,000	30 July 2025
National Indigenous Times	Indigenous	Monthly – 1,484,340	29 July 2025

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6.5.1.1 The Australian – 28 July 2025

THE AUSTRALIAN MONDAY, JULY 28, 2025

Up in smoke: busts smash illicit tobacco trade

EXCLUSIVE

MOHAMMAD ALFARES

Tobacco smugglers have been stripped of more than 2.5 billion cigarettes and thousands of tonnes of tobacco at the nation's borders, costing the federal government more than $4bn in lost duty.

The volume of tobacco intercepted between July 2024 and June 2025 represents $4.36bn in lost duty, marking the largest annual bust on record and a turning point to the scale of tobacco smuggling in Australia.

While the number of interceptions dropped, the quantity of tobacco seized surged to its highest level, a shift that's attributed to better targeting of high-volume sea cargo shipments linked to transnational organised crime.

The latest Australian Border Force data obtained by The Australian reveals a more than four-fold increase of seizures in half a decade – from 598 million sticks in 2020-21 to a record 2.5 billion in 2024-25.

The figures eclipse last year's record haul of 1.86 billion cigarettes and reflect a consistent upward trend, including 898 million seized in 2021-22 and 867 million in 2022-23.

The federal government collected just $9.7bn in tobacco excise last financial year – a 40 per cent drop from the 2019–20 peak of $16.3bn, and the lowest return since 2014-15, according to federal Treasury data.

The promise of massive profits has driven the rise of corner stores selling illicit tobacco and nicotine products, fuelling a wave of firebombings and violent turf wars as gangs and Middle Eastern crime syndicates battle for control of the booming black market.

Most of the intercepted product was shipped through ports in Victoria and NSW and originated from China, Hong Kong, Singapore and the United Arab Emirates. A single container of illicit cigarettes can cost $400,000 to ship from overseas and return profits of up to $10m.



AARON FRANCIS (MAIN), JAKE NOWAKOWSKI

Australian Border Force officers display seized shipping containers containing millions of illegally imported cigarettes

Authorities believe many of the syndicates behind the shipments are also involved in drug trafficking and money laundering, using tobacco as a low-risk, high-reward source of revenue.

The ABF says the rise in seizures is the result of intensified operations across international supply chains, with Australian officers embedded overseas now stopping tobacco shipments long before they reach Australian shores.

"We're seizing millions of illicit cigarettes and hundreds of kilos of illicit tobacco at the border every single week," said Commander Ken McKern, who leads the ABF's Illicit Tobacco and Vape Enforcement unit.

"These detections aren't based on luck or random finds, they're the result of precise, intelligence-led targeting and close collaboration with offshore partner agencies."

Commander McKern said the 2.5 billion cigarettes seized at the border represented a more than 320 per cent increase on the volume intercepted four years ago.

"These significant volumes aren't just numbers – they represent millions in lost profit for criminal syndicates and demonstrate ABF's important role in protecting Australia's border integrity," he said.

"Stopping illicit tobacco isn't just a domestic issue. Our officers deployed overseas are on the front line of this fight, using intelligence and international partnerships to stop illicit shipments long before they reach Australian shores.

"Our international footprint gives us a strategic advantage – we're not waiting for the problem to arrive on our doorstep, we're inside the supply chain, sharing intelligence, and actively preventing illicit tobacco from reaching our borders."

The ABF recorded 23,097 tobacco detections across the 2024–25 financial year – less than half the number from the previous year – but the volume of tobacco seized was significantly higher.

In total, officers seized 2,533 billion cigarette sticks and 435.46 tonnes of loose-leaf tobacco, compared to 1.86 billion sticks and 436.57 tonnes the year before.



The combined weight of this year's haul was 2091 tonnes, compared to 1700.5 tonnes in 2023-24.

Several of the largest seizures occurred in July. On July 4, officers intercepted 14.04 million cigarettes shipped in sea cargo from Asia. On July 13, a man travelling from the UAE with a woman and two minors was stopped with 166,200 cigarettes and six kilograms of chewing tobacco hidden in 11 suitcases. That same day, a separate passenger from the UAE was caught carrying 71,200 cigarettes. A week later, 10.18 million cigarettes were seized from another sea cargo consignment.

In one of the biggest operations of the year, a container carrying 15.5 million cigarettes was intercepted in mid-July after arriving in NSW from the UAE.

The ABF says criminal networks continue to change their shipping routes and concealment methods in response to enforcement activity. Most of the illicit product now enters through sea freight, often packed in containers disguised as commercial goods.

A single shipping container can hold tens of millions of cigarette sticks, making large-scale interceptions far more significant than dozens of smaller seizures through mail or at airports.

Authorities are now focusing heavily on upstream disruption, targeting shipments before they leave foreign ports and working closely with international customs agencies to share intelligence and dismantle supply chains.

The ABF's overseas network was established to identify high-risk consignments earlier and intercept larger volumes of product before they reach Australia.

Domestically, the ABF leads the Illicit Tobacco Taskforce, a joint agency initiative that includes the Australian Criminal Intelligence Commission, the ATO, AUSTRAC and the Commonwealth Director of Public Prosecutions. It works alongside state and territory police forces to pursue criminal prosecutions, disrupt local distribution networks and recover proceeds of crime.

While enforcement at the border remains the ABF's primary focus, the agency says its efforts complement broader health and compliance strategies aimed at reducing demand for illegal tobacco and educating consumers about the risks associated with black-market products.

The ABF expects illicit tobacco shipments to keep evolving as enforcement pressure increases, but says it is investing in more sophisticated targeting tools, expanding its global reach and building stronger relationships with international partners to stay ahead of the trade.

Recent research conducted by three of Australia's largest tobacco wholesalers shows illicit products could account for nearly half of all consumption this year.

The data, compiled by Philip Morris, British American Tobacco and Imperial Brands, estimates 39.4 per cent of all tobacco consumed in 2024 was illicit, with market forecasts predicting that number could rise to nearly 50 per cent in 2025.

The report found that "chop-chop" loose leaf tobacco – either grown illegally in Australia or imported without branding – accounts for up to 70 per cent of the illicit market. The ATO estimates about 20 per cent of this is cultivated in clandestine farms along the NSW–Victoria and NSW–Queensland borders.

South Australia is currently the only state jurisdiction that has a dedicated tobacco enforcement body, while other states rely on under-resourced compliance officers or police assistance to stamp out tobacconist stores that are selling illicit products.

Tobacco companies predict the illicit market will continue to grow, which undermines public health goals and guts small business revenues while emboldening criminal networks.

A spokesperson for Imperial Brands, the nation's third largest tobacco wholesaler, said while the scale of the ABF's latest seizures was encouraging, "clear and decisive" action was needed at the state and federal level.

"Whilst it is encouraging that the ABF data shows an increase in seizures, a record amount of unregulated illicit tobacco continues to enter the country," the spokesperson said.

"Recent research shows that in 2024 nearly 40 per cent of tobacco products were illegal, up from 28 per cent in 2023. Clear and decisive action is needed ... to address significant enforcement gaps, as well as address the underlying drivers that have caused this illegal market to flourish."

Greater Western Flank Phase 4 Drilling and Subsea Installation Environment Plan

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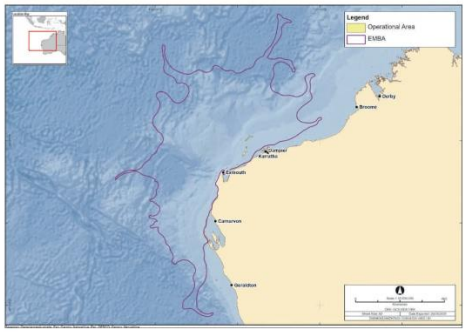
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Woodside Energy

On Darwin's trail, young crew put wind in life project's sails

LYDIA LYNCH

After two years skippering the Dutch tall ship Oosterschelde, retracing Charles Darwin's voyage aboard the HMS Beagle, Stewart McPherson is ready to relax with a cocktail in the Blue Mountains.

The British naturalist, who lives in Sydney, said while the two-year global conservation expedition had been gruelling, his pursuit to train and empower the next generation of environmental leaders had been an overwhelming success.

Branded the "world's most exciting classroom", the Oosterschelde departed from Plymouth Harbour in the southwest of England in August 2023 on a 43,000-nautical-mile odyssey around the world that included stops in Sydney and Hobart last year.

Now at the conclusion of its epic journey, the Oosterschelde has docked in London, the city where Darwin's On the Origin of Species was first published in 1859.

"We are basically at the end of the voyage now and looking back on it, it's been an incredibly intense two years," Mr McPherson told The Australian.

"I honestly think we've done everything we possibly could to try and drive forward that message that conservation isn't about what we've lost, it's about what we still have."

Recreating Darwin's expedition on the Beagle nearly 200 years ago, which inspired his theory of natural selection, more than 100 young people boarded the Oosterschelde to study the conservation of a particular endangered species and were charged with charting a way forward for its survival.



LYDIA LYNCH

Stewart McPherson aboard the Oosterschelde

"We've had 106 of them (young people) from 45 countries across the globe," Mr McPherson said. "Their objective wasn't to solve the problem, they're not going to do that in their one- to two-week placement with us, but what they did was learn how to think, get real experience on the ground, work with some of the most exciting conservationists and, most importantly, just get inspired to go home with that new knowledge."

The 84m ($8.2m) trip was funded through donations and corporate partnerships, and by selling about 700 tickets for the public to join various legs of the journey.

While in Australia last year, researchers engaged with six conservation projects, including the tracking of koala populations after bushfires and planting "several thousand trees" to support the gliding possum population, Mr McPherson said.

"People think conservation is this lofty idea by governments and NGOs, but it's not," he said.

"Every single one of us can make a positive change, and in many of these conservation projects we've worked with, it's often just one or two people that are stubborn, that won't let an animal or plant fall off the cliff of extinction."

Dame Jane Goodall, the world's leading expert on chimpanzees, gave various lessons via videoconference during the two-year voyage, and described Mr McPherson's journey as "truly inspiring".

"It's wonderful to see how many young people have benefited from the opportunities this project has created," she said.

Originally from the UK, Mr McPherson was married in Sydney and lives there with his Australian wife and children.

When he returns home, he plans to unwind "with a cocktail or two" in the Blue Mountains and visit the Glow Worm Tunnel before embarking on his next overseas adventure.

The Australian up for awards for excellence

The Australian's groundbreaking work in the world of sports and the war in the Middle East has earned its talented team of journalists a slew of nominations at this year's Kennedy Awards for Excellence in Journalism.

Europe correspondent Jacquelin Magnay has two nominations – for Scoop of the Year and Outstanding Sports Reporting – for her reporting alongside News Corp Australia's Peter Badel on the women's boxing gender war that eclipsed the Paris Olympics last year.

Also up for the Outstanding Sports Reporting award are chief sports writer Jessica Halloran and NSW editor Stephen Rice.

The pair are nominated for their series on Australia's most celebrated pole-vaulting coach being accused of grooming, sexually harassing and inappropriately touching multiple young female athletes in his care, in a case kept secret by the Western Australian Institute of Sport.

The Australian's top sports analyst, Andrew Webster, is also nominated for Outstanding Columnist for his extraordinary piece on controversial NRL titan Phil Gould.

Yoni Bashan and Liam Mendes have been nominated in the Outstanding Online News Breaking category for their work documenting Iranian missile attacks on Israel in text and video as they were happening live.

Media editor James Madden is up for Best Headlines for the likes of "Nine's big dogs gather at zoo to discuss elephants in the room".

And travel writer John Borthwick is nominated for Outstanding Travel Writing for his work in Travel+Luxury.

The Kennedy Awards will be held on August 15.

Storm front from west to bring rain across nation

BRENDAN KEARNS

Western Australia has been battered by a stormy cold front, but the weather system is only just beginning its march across the country.

The past few days have brought the most widespread rainfall of the year so far to Australia, with rain in every state and territory, and snow in alpine areas.

But a severe storm in WA has hit the state's southwest and will crawl eastwards, dumping more rain across the nation.

A warning was issued for WA as Perth was hit hard by lightning and hail, and there was also risk of flash flooding.

Wilyabrup in the Margaret River region recorded 72mm of rain in just six hours overnight on Saturday, while winds up to 98km/h were experienced in Cape Naturaliste.

Bureau of Meteorology meteorologist Angus Hines said the stormy cold front will cross the south of the country by Tuesday.

"We'll watch this band of rains start to sweep eastwards again into South Australia, once again back into NSW and southern parts of Queensland on Tuesday next week," he said.

"So this is going to be a follow-up spell of wet weather across the parts of the country which have just had a band of wet weather.

"And for most places, this will be another welcome spell of rain."

The country's east has already faced a weekend cold front as almost every capital city experienced downpours.

Dry parts of South Australia, Victoria and NSW welcomed wet weather; however, that still has not made up for the rainfall deficiencies this year.

The upcoming rain band is not set to be as heavy as the weekend weather, but some areas will receive a "top-up" of up to 15mm.

Monday will be dry in the north of Australia under a high pressure system.

WA will still experience some showers, storms and strong winds.

NEWSWIRE

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6.5.1.2 The West Australian – 28 July 2025

The West Australian
Monday, July 28, 2025

BRAVE AVA FIGHTING IN A TUTU

CLAIRE SADLER

Ava O'Kelly still feels like a ballerina even when enduring cancer treatments.

The four-year-old dancer was the first WA child to receive the ballerina-themed medical garment by Supertee and, thanks to Telethon, more than 1500 will be supplied to kids in WA hospitals over the next year.

The garment has side and top openings that enable her parents and hospital staff to easily change clothing and access medical lines.

"When she's going through lumbar punctures, bone marrow tests, an awful lot of theatre and general anaesthetics you think a T-shirt is the least on your mind but when you have it – it just completely changes everything," mum Lucy said. "This new design is amazing. There's nothing better than still feeling like a princess when you're in hospital."

Ava is taking oral chemotherapy every day and having a more intense form of the treatment once a week. However, after a year away from dance classes she has been able to return to ballet and tap.

"She pirouettes around the room and you can see her energy is coming back," Ms O'Kelly said.



Picture: Kelsey Reid

Fire trap blind spot

EXCLUSIVE JOHN FLINT

Apartment residents may be unknowingly living in buildings where life-saving fire systems are broken, outdated or never tested.

Despite mounting national concern over building safety, WA has no legal requirement for regular checks or reporting on fire systems.

WA building surveyors have sounded the alarm after recent audit inspections found systems were working properly in only 13 per cent of apartment buildings in Victoria and 32 per cent in NSW, where regulations stipulate annual maintenance.

The Australian Institute of Building Surveyors told a conference in Perth on Friday the situation in WA was likely worse because of weak regulations.

In Perth surveyors reported:

- A CBD office tower had an inadequate level of stair pressurisation, resulting in exit doors being inoperable in a fire.
- Several suburban shopping centres failed to undertake full function fire testing.

AIBS WA director Richard Attiwell said WA authorities, including local governments, don't have the resources to police this. "If combustible cladding was the canary in the coal mine, then failed fire and life safety systems are the elephant in the room and we're still pretending not to see it," he told The West.

The AIBS' Stephen Scimonello, who led the research in Victoria and NSW, said he was shocked to learn that there were no regulations in WA requiring property owners to report annual checks of their fire safety systems.

"This is a recipe for total disaster, and it would be quite likely in that the situation In Perth is much the same as it is in Melbourne. There is no other plausible conclusion that could be reached," Dr Scimonello.

"In WA, the real fire risk isn't the flames, it's the silence around system failures.

"We didn't know that the danger of combustible cladding until 72 lives were lost at Grenfell. What excuse will we have when fire safety systems fail in a real fire event in WA?"

A State Government spokesman said the Building and Energy departments were reviewing regulation of fire systems installers.

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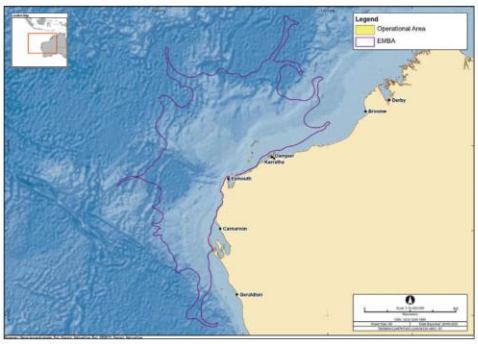
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6.5.1.3 Pilbara News – 30 July 2025



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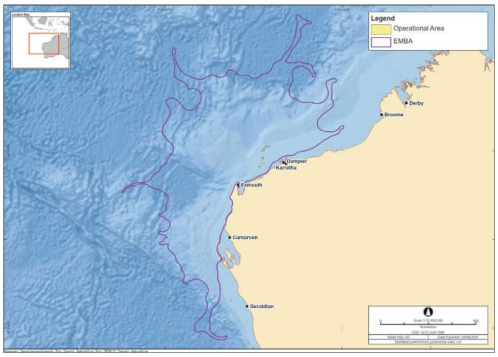
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6.5.1.4 North West Telegraph – 30 July 2025

NORTH WEST Telegraph
Wednesday, July 30, 2025
northwesttelegraph.com.au

Taxpayers will still pay for hub as BP pulls out



The Australian Renewable Energy Hub will be partly powered by wind turbines. Picture: Rabih Shasha

ADRIAN RAUSO & MATT MCKENZIE

Construction of a green hydrogen precinct in the Pilbara using $140 million of taxpayer cash is still moving forward despite BP exiting a key project the initiative could support.

A $55 billion Pilbara green hydrogen project was dealt a huge blow on Thursday after the venture's majority shareholder, BP, pulled out to focus on its core oil and gas business.

BP is relinquishing its 64 per cent stake in the Australian Renewable Energy Hub — slated to be the green hydrogen production centrepiece in WA's most resources-rich region.

But the State Government will move ahead with its Pilbara Hydrogen Hub common-user infrastructure proposal regardless.

Energy giants across the globe are curbing investment into green hydrogen projects as hype around the clean fuel's commercial viability wanes.

Singapore's InterContinental Energy has taken the reins from BP as the operator of AREH, which aims to produce 1.6 million tonnes of hydrogen annually using energy generated by a sea of solar panels and wind turbines.

The AREH setback comes 18 months after the State and Federal Governments agreed to each tip in $70m to build the Pilbara Hydrogen Hub nearby to support the industry.

PHH hopes to provide "common-user infrastructure, skills development, and future expansion works required to grow hydrogen opportunities in the Pilbara region", according to the WA Government's Pilbara Development Commission.

This includes construction of a hydrogen "and/or" ammonia pipeline, providing skills training related to clean energy, and upgrading infrastructure at Port Hedland to accommodate imports of renewable energy equipment like wind turbine blades.

A Cook Government spokesman on Friday said BP's AREH withdrawal would not prevent PHH from being in operation by mid-2028.

"The State Government remains committed to the Pilbara Hydrogen Hub which, when operational, will leverage WA's existing strengths and support the world's clean energy transition," the spokesman said.

"Hydrogen remains an emerging export opportunity for WA.

"By playing a role in de-carbonising WA's major trading partners through LNG exports now, then green hydrogen exports later, the State Government will continue to build on its strong record of creating jobs and supporting new business opportunities."

A spokeswoman for Federal Climate Change and Energy Minister Chris Bowen did not respond to a request for comment.

BP's AREH exit came during the same week as Fortescue and Woodside Energy pulled the pin on green hydrogen projects in Queensland, Arizona and Oklahoma.

But Woodside said it still planned to develop a $1b-plus liquid hydrogen production facility near Kwinana called H2Perth.

"We had previously proposed an ammonia and hydrogen facility, but have revised our concept to liquid hydrogen only, based on market feedback," a company spokeswoman said last Friday.

"H2Perth aims to make liquid hydrogen available initially for export, while creating employment and local content opportunities, as well as providing an opportunity to establish a new strategic export industry for Western Australia."

Construction on H2Perth had been due to start last year but the first sod is yet to be turned.

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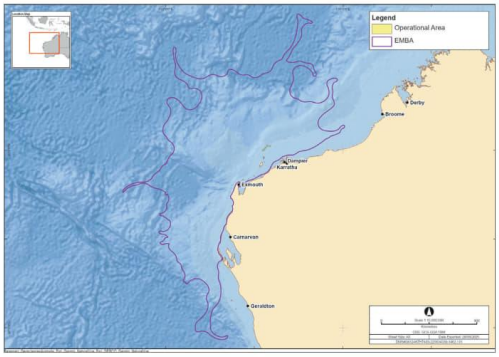
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6.5.1.5 Midwest Times – 30 July 2025

Times
Wednesday, July 30, 2025
midwesttimes.com.au

Criticism as Mid West left out of power plan

KATE CAMPBELL & OLIVER LANE

The State Government missed a golden opportunity to boost power transmission to Geraldton when it failed to include the city in a $342 million upgrade to the South West Interconnected System, according to a local MP.

Energy and Decarbonisation Minister Amber-Jade Sanderson announced on Wednesday $342m worth of contracts had been awarded to upgrade the northern section of the SWIS to Three Springs.

Geraldton MLA Kirrilee Warr said Geraldton was left out again and accused the State Government of failing to grasp a clear opportunity to unlock Geraldton's full potential.

"Instead, we're still waiting," she said.

"The expansion to Geraldton is a no-brainer thanks to the Mid West having some of the world's best renewable resources, and upgrades to the SWIS will be required to ensure these projects can be connected.

"The State Government hopes the Oakajee SIA will help innovate the renewable industry, but the infrastructure to get it up and running must come first, including power.



Amber-Jade Sanderson and Premier Roger Cook. Picture: 7NEWS



Kirrilee Warr Picture: David Boyes

"If Geraldton is to play its part in WA's energy transition, we need connection, consultation and real investment."

Ms Sanderson said contracts had been awarded to three companies to construct more than 26.5km of overhead transmission lines to better connect Perth to renewable projects.

UGL Engineering, GenusPlus and Acciona will all take part in projects on the lines, as well as construct terminals which will run from Western Power's Northern Terminal in Malaga to Three Springs. Work has already started on the projects.

In response to Ms Warr's criticism, Ms Sanderson said upgrading the SWIS was a "staged process".

"Clean Energy Link — North is the largest investment in electricity infrastructure in a decade, but it is just the start," she said.

"It is the first stage of our accelerated planning for future transmission corridors to unlock renewable energy across the State."

Ms Sanderson said further details of the government's SWIS plans would be released later this year.

"We're committed to delivering a credible transmission expansion for the benefit of all Western Australians," she said.

School and tennis club will benefit from grants

A pair of Mid West and Gascoyne schools and sporting clubs are among the first recipients of the State Government's Community Use of School Sporting Facilities grants program.

The Government announced the first round of recipients set to benefit from the $10 million grants scheme, which encourages partnerships between schools and community sporting groups to better use existing sporting facilities.

In total so far, $1.5m in grants have been awarded to 44 schools across eight different sporting codes, providing upgrades for local facilities, equipment and school resources.

In the Mid West, the only beneficiary in the first round is Yuna Primary School and Yuna Tennis Club, with upgrades to the hard-court surface.

Exmouth District High School and Exmouth Netball Association will receive funds for seating and water drinking stations.

The amount of money individual schools and clubs received was unspecified.

Sport and Recreation Minister Rita Saffioti said: "We're proud to be supporting schools and sports clubs in WA, and these upgrades will ensure our communities are set up for sporting success."

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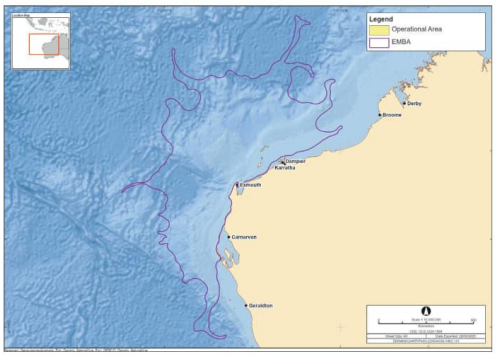
The EMBA is the largest geographic area where unplanned events could potentially have an environmental consequence. The whole EMBA will not be affected.

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 want to hear from you by **27 August 2025**.

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.



consultation@feedback.woodside.com
Toll free: 1800 442 977
woodside.com

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6.5.1.6 Koori Mail – 30 July 2025

Funding promised for roadmap

THE WA Government has promised funding to support action on the 2024 Yule River Call to Action and Solutions Roadmap.

WA Minister for Aboriginal Affairs Don Punch made the commitment at the 10th Annual on-Country Bush Meeting at Yule River, held over 23 and 24 July 2025.

Coordinated by Yamatji Marlpa Aboriginal Corporation (YMAC), more than 500 people attended the bush meeting to discuss local, community-led priorities to Close the Gap for First Nations people across the Pilbara.

Opening the meeting, YMAC Co-Chairperson Mrs Eaton said: "I stand here proudly to acknowledge the old people who met here at the Yule River Meeting Place decades ago to organise the 1946 Pilbara Strike. They fought for us. From Onslow to Marble Bar, from Roebourne, from the desert to Hedland – they stood as one. We're here to challenge the government. We're here as one voice."

In her speech, Mrs Eaton also acknowledged that past Yule River meetings have seen commitment from government with no action.

Day One saw First Nations attendees discuss and decide on several priority issues that they expect the government to address in the next 12 months. These priorities are aligned to the CTA and the National Agreement on Closing the Gap, and are across six key areas of concern: Systemic Reform, Education, Health, Housing, Wellbeing, and Community Safety, and decided on community presenters for Day Two.



Yule River Call to Action Working Group members with Minister Don Punch and other key government agency staff at the On-Country Bush Meeting at Yule River.

Day Two saw ministers, commissioners and heads of government agencies join the meeting, with community members Raylene Button and Henry Lockyer presenting the day-one priority items to government, before speeches from Minister Punch, Aboriginal and Torres Strait Islander Social Justice Commissioner Katie Kiss and a Q&A panel for community to ask questions of government directly.

Attendees at Yule River have been calling for many years for the government to act on the place-based solutions that have been developed by the community, and Minister Punch was clear that he will implement a place-based approach. Minister Punch also committed to attend a meeting with community members in the next six months to provide updates and reporting on what work is being undertaken to address and deliver on the CTA.

YMAC CEO Simon Hawkins acknowledges that the proposed funding from Minster Punch is a refreshing outcome to resource the CTA in partnership with the community – which has been a longstanding invitation to government at previous bush meetings.

The 2024 CTA is an open invitation to local, state and federal governments and industry to work together with First Nations peoples from across the Pilbara to achieve real and sustainable change.

It contains practical strategies and place-based solutions, identified by community members for: Systemic Reform, Education, Health, Housing, Wellbeing, and Community Safety.

Yamatji Marlpa Aboriginal Corporation (YMAC) coordinates the Yule River Bush Meeting under the direction of its Pilbara Regional Committee and in consultation with the Yule River Call to Action Working Group. In March this year, YMAC called on the state government to urgently address the concerns laid out in the Call to Action after the Productivity Commission released its data on Closing the Gap which highlighted ongoing failure to address the issues facing Aboriginal communities.

YMAC thanked the Town of Port Hedland and the Pilbara Development Commission for their sponsorship of this year's event.

Greater Western Flank Phase 4 Drilling and Subsea Installation 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.

Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation Environment Plan (EP)

The Greater Western Flank Phase 4 (GWF-4) Project intends to partially fill ullage (unused production capacity) at the existing Goodwyn Alpha (GWA) facility. The GWF-4 Drilling and Subsea Installation EP comprises drilling offshore wells in nearfields and the Wilcox Field which will be tied back to existing GWF subsea infrastructure. Woodside plans to drill up to six wells. The EP will also cover installation and pre-commissioning of subsea infrastructure.

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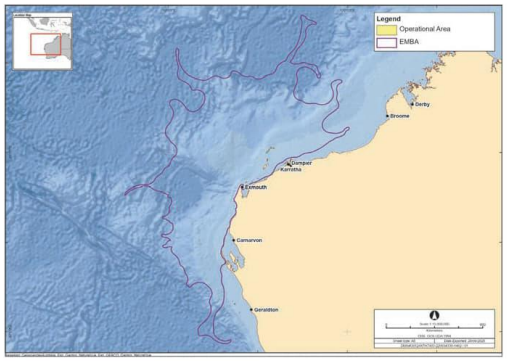
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6.5.1.7 National Indigenous Times – 29 July 2025

Elder takes her artwork to London

DAVID PRESTIPINO

Yinjibarndi artist and Elder Allery Sandy took her first overseas journey this month, at the age of 70, as artist-in-residence at a 20th anniversary exhibition of Pilbara art in London, held from July 14-18.

Before the trip, Ms Sandy told National Indigenous Times she was "looking forward to a wider audience to listen to my story, to see why Country that connects to the Aboriginal people is so important".

"For me to just stand up there and tell my story, and just meet everyone, is going to be an honour," she said before leaving for the UK, where the Rio Tinto-funded exhibition has been taken overseas for the first time, before another stint on the road back home in Busselton in August, and a final showing in Boorloo/Perth in September.

Ms Sandy shared the inspiration behind her signature piece After The Rain, part of a curated selection of works from six Pilbara artists at the special London showing.

"When the rain comes, it makes the country flourish again, and brings the beauty of the land that we live in . . . it provides all that we need," she said.

"When the heavy dew comes along, it's nature itself, it just waters the Mother Earth and slowly brings the beauty, the wildflowers and the fruits that we can get from the trees."

The Colours Of Our Country exhibition has become a vital support for artists in the Pilbara over its two decades and brought much attention to the region and Roebourne specifically, where many craft their works at Yinjaa-Barni Art Centre.

The selection for the London showing features nine artworks from six artists. Accompanying Ms Sandy to London was fellow artist Lynette Upton, a Pilbara Nyamal woman, and Rachael Sandover, the centre's executive manager.



Rachael Sandover and Allery Sandy at Yinjaa-Barni Art Centre ahead of the London exhibition.

"The exhibition is a real highlight for the artists they've been supporting for the 20 years it's been running, and allowed for a lot of attention . . . that they otherwise might not receive," Ms Sandover said.

She said Ms Sandy, the signature artist for the 2025 exhibition, was an amazing woman and passionate about her culture and inspiring others into the medium.

"To be in her presence, you can really feel that power. She really wants to preserve Yindjibarndi culture," Ms Sandover said.

"She also wants to encourage lots of other people to practise their art and consider it as a meaningful source of income."

Ms Sandy said she was proud painting was still important to many local artists throughout the years.

"Today we see what we have developed, and how we are proud of our work and what we can achieve in this, and seeing all that we have done . . . we've lost count of how many paintings and artwork we've done over the years."

Ms Sandy hopes sharing the connection Aboriginal people have to Country would enlighten the broader London audience, and inspire young people back home to share theirs. "I'd love to encourage my younger generations today to stand up for who they are and tell their story boldly, strong and just be who they are," the Elder said.

The exhibitions are open to the public in Busselton (August 25-29) and Perth (September 15-26).

Greater Western Flank Phase 4 Drilling and Subsea Installation Environment Plan

Woodside has led the development of the LNG industry in Australia and today aims to thrive through the global energy transition.

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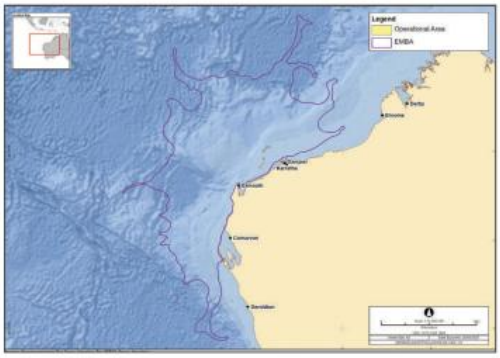
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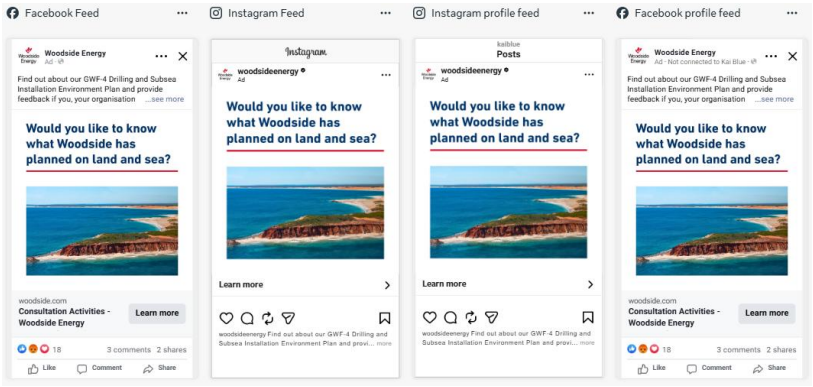
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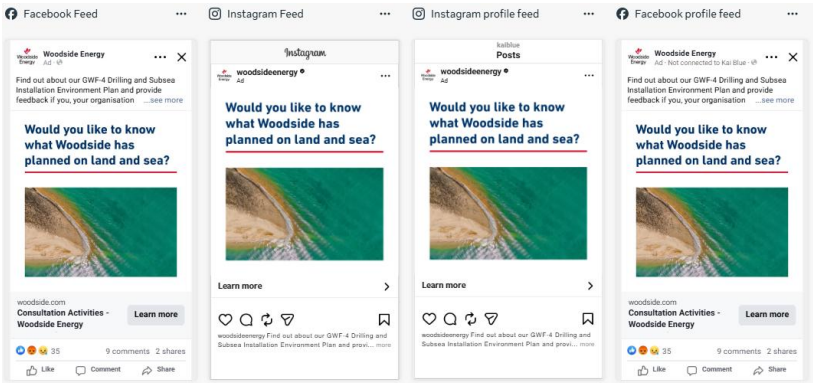
6.6 Social media

6.6.1 Social media EP targeted campaign

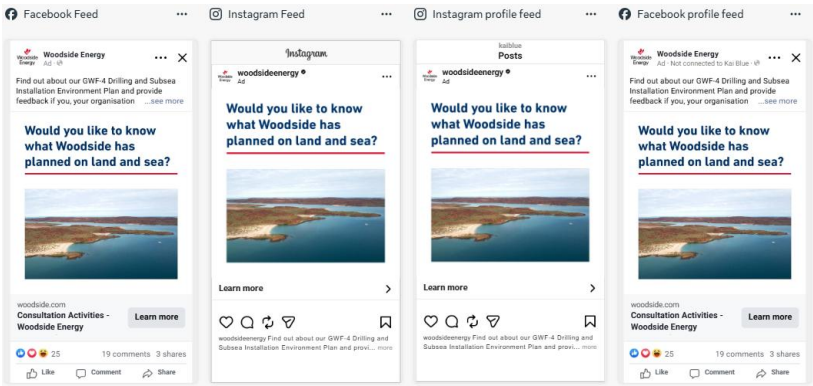
Tile design 1



Tile design 2



Tile design 3



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6.7 Community information sessions

The community information sessions that Woodside has conducted are captured below:

6.7.1 Pilbara Region

6.7.1.1 FeNaCING Festival – 2 to 3 August, 2025

	Location: Karratha
Activity	FeNaCING Festival
Date	2-3 August, 2025
Description of the consultation	Woodside hosted a stand at the FeNaCING Festival 2025**.** Members of Woodside's Corporate Affairs, Environment and Operations teams actively engaged with the community to discuss proposed EP activities. Woodside displayed a QR code on the stand linked to the 'Consultation activities' page of the Woodside website. A pull-up banner was on display regarding engaging on Woodside's 'Let's Talk', with a QR code linking to the 'Consultation activities' page of the Woodside website. Woodside made available printed consultation information sheets on the GWF-4 Drilling and Subsea Installation
Advertising and invitations	Woodside advertised the sessions to enable individuals to self-identify, promote awareness of the community consultation, and enable individuals to provide feedback on proposed activities, through the following: • Advertisement in Pilbara News on Wednesday, 30 July 2025 edition. • Social media posts published on the Woodside North West Facebook page inviting the public to attend (see table below) • 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 / organisations consulted	Over 5,000 community members attended the event. Woodside spoke to many community members, recording 50 conversations.
Summary of Feedback, Objection or Claim	
• General queries around employment opportunities, including apprenticeship and trainee opportunities. • Interest in local content and community contribution opportunities. • General interest in the Scarborough Energy Project progress and Pluto Train 2 and Train 1 modifications projects. • Conversations on the North West Shelf Project Extension including support for local community, timelines, investing partners, political views and the future of gas in the energy transition. Many pro approval. • 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. • Heritage BHP and Woodside merger, interest in the environmental approvals in the Bass Straight regarding decommissioning. • Murujuga World Heritage & MRAMP queries.	
Woodside's Assessment of Merits of Feedback, Objection or Claim and its Response	
Whilst feedback was received, there were no objections or claims.	

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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 – 30 July 2025**	**Social media** **Woodside North West Facebook – Friday, 1 August**
	
Advertisement **Ieramagadu Store, Roebourne community notice board – 24 July 2025**	**Advertisement** **Ieramagadu Store, Roebourne community notice board – 24 July 2025**
	

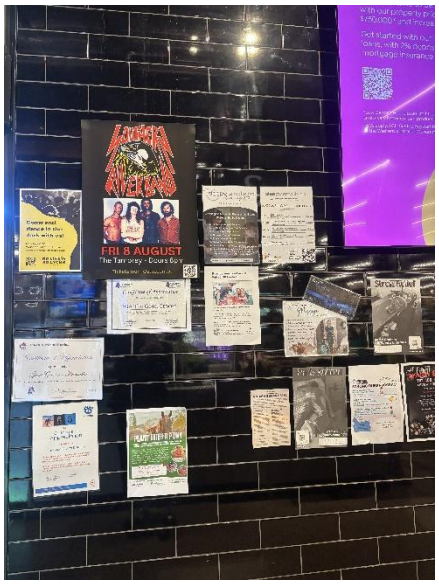
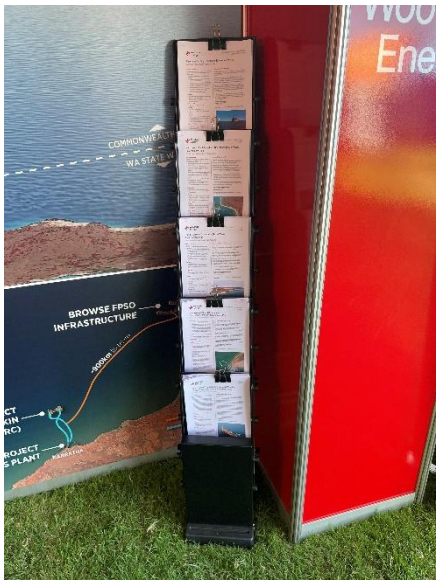
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Advertisement **Australia Post, Ngarliyarndu Bindirri Aboriginal Corporation / BRIDA, community noticeboard Roebourne − 24 July 2025**	**Advertisement** **Australia Post, Ngarliyarndu Bindirri Aboriginal Corporation / BRIDA, community noticeboard Roebourne − 24 July 2025**
	
Advertisement **Lo's Cafe, Karratha community notice board − 24 July 2025**	**Advertisement** **Lo's Cafe, Karratha community notice board − 24 July 2025**
	

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Advertisement **Karratha City Plaza community notice board − 29 July 2025**	**Advertisement** **Karratha City Plaza community notice board − 29 July 2025**
	
Advertisement **Karratha City Plaza community notice board − 29 July 2025**	**Advertisement** **Karratha City Plaza community notice board − 29 July 2025**
	

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Advertisement **Good Grocer IGA Karratha, community notice board − 29 July 2025**	**Advertisement** **Good Grocer IGA Karratha, community notice board − 29 July 2025**
	
Banner at event	**Consultation Information Sheets at event**
	

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Consultation Information Sheets at event	Image of internal panel with QR code to consultation information
	 Wall B

Social media campaign results

Platform	Date	Description	Number of views	Reach	Interactions
Woodside North West Facebook page	1 July 2025	Below tile published via stories tool for 24 hours 	272 views over 24 hours	258	0

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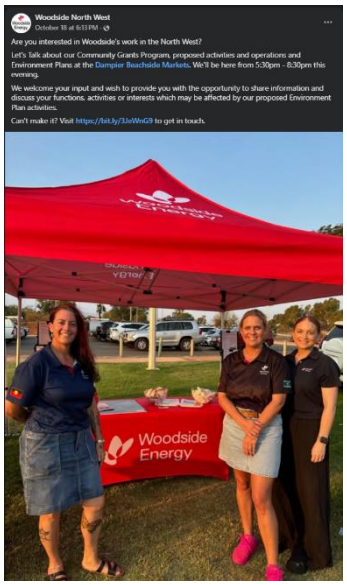
6.7.1.2 Dampier Beachside Markets − 18 October 2025

	Location: Dampier
Activity	Dampier Beachside Markets
Date	Saturday, 18 October 2025
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 Greater Western Flank Phase 4 (GWF 4) Drilling and Subsea Installation.
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 15 October 2025 (see below). • A social media post Dampier Community Association Facebook page advising that Woodside would be in attendance at the event (see below). • A social media post via Woodside North West Facebook account advising that Woodside would be in attendance at the event (see below). • An advertisement displayed on community noticeboards at 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 / organisations consulted	Over 500 community members attended the event. Woodside spoke to many community members, recording 5 conversations.
Summary of Feedback, Objection or Claim	
• Queries around employment opportunities. • General interest in the Scarborough Energy Project progress and Pluto Train 2 and Train 1 modifications projects. • Conversation on the North West Shelf Project Extension; pro approval. • 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 company and near neighbour employees.	
Woodside's Assessment of Merits of Feedback, Objection or Claim and its Response	
Whilst feedback was received, there were no objections or claims.	

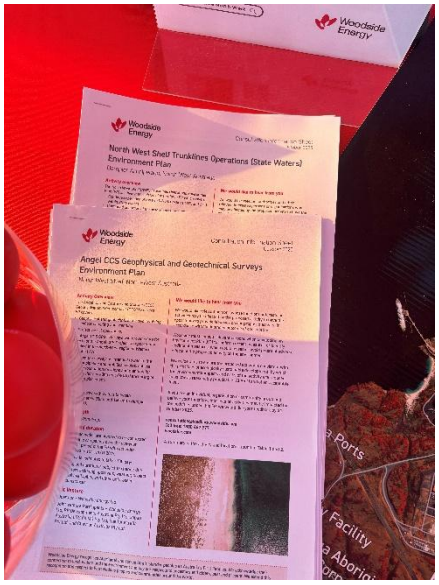
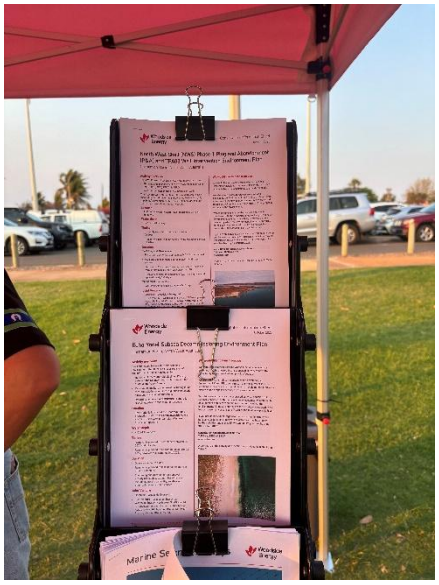
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The community information sessions were part of Woodside's broader consultation approach to enable self-identification and provide relevant persons with the opportunity to assess any impacts on their functions, interests or activities, and provide 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 − 15 October 2025**	**Social media** **Dampier Beachside Markets Facebook post –** **17 October 2025**
	
Advertisement **IGA Good Grocer notice board − 15 October 2025**	**Social Media – Woodside North West Facebook post – 18 October 2025**
	

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Advertisement - Lo's Cafe, Karratha community notice board − 15 October 2025	Banner at event – 18 October 2025
	
Consultation Information Sheets at event	**Consultation Information Sheets at event**
	

Social media campaign results

Platform	Date	Description	Number of views	Reach	Interactions
Woodside North West Facebook page	October 18 6:13 PM	Post with text: Are you interested in Woodside's work in the North West? Let's Talk about our Community Grants Program, proposed activities			52 reactions

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		and operations and Environment Plans at the Dampier Beachside Markets. We'll be here from 5:30pm - 8:30pm this evening. We welcome your input and wish to provide you with the opportunity to share information and discuss your functions, activities or interests which may be affected by our proposed Environment Plan activities. Can't make it? Visit https://bit.ly/3JeWnG9 to get in touch.			

6.7.2 Gascoyne Region

6.7.2.1 Exmouth Community Markets – 5 October 2025

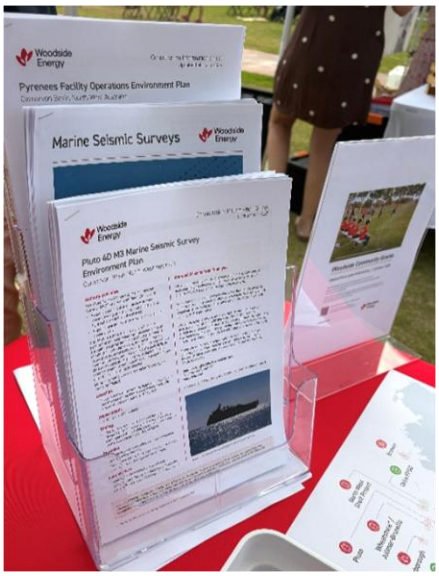
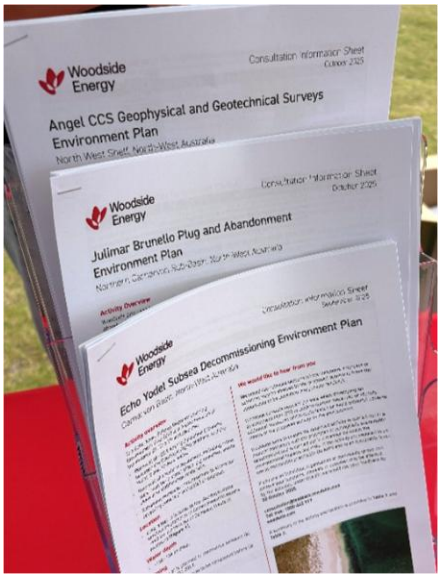
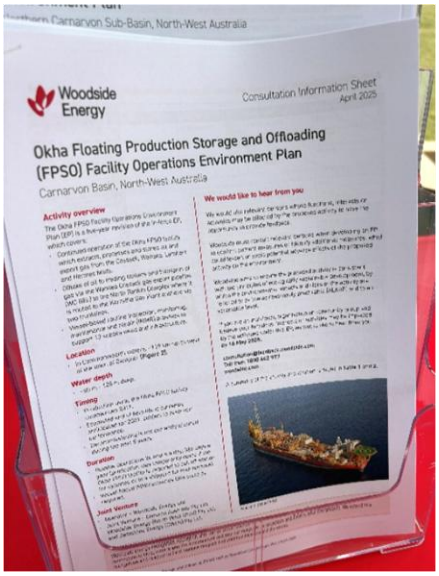
	Location: Exmouth
Activity	Exmouth Community Markets
Date	5 October 2025
Description of consultation	Woodside hosted a stall at the Exmouth Community Markets to engage community members on our activities. The stand was staffed by Woodside Environment and Corporate Affairs representatives. Information on Woodside's activities in the Exmouth region, details of Woodside's community grants program, and fact sheets about marine seismic surveys were available. Woodside also made available printed consultation information sheets on the Greater Western Flank Phase 4 Drilling and Subsea Installation EP.
Advertising and invitations	Woodside promoted the market stall on its North West Facebook page.
Estimated number of individuals / organisations consulted	Over 200 community members attended the event. Woodside spoke to many community members, recording approximately 20 conversations.
Summary of Feedback, Objection or Claim	
• Interest in Woodside's social contribution activities in Exmouth and potential support for health services infrastructure. • 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 investment in new energy products and lower carbon services. • Interest in industry's political influence. • General queries about Woodside's footprint in Exmouth and the two facilities visible from the coast (Pyrenees and Ngujima-Yin FPSOs). • General conversations about Woodside's activities in Western Australia, including the North West Shelf. • Questions relating to the current status of the Browse project and considerations for Scott Reef.	

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• General interest in Woodside's health, safety and environmental management measures and mitigations, particularly in relation to seismic activities and potential impacts to fauna.
Woodside'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).

Woodside stand	Facebook promotion
	

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Information sheets	Information sheets
	
Information sheets	**Information sheets**
	

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6.8 Community newsletters

6.8.1 Let's Talk – Our Plans, Your Say

6.8.1.1 Edition 6, October 2025

Woodside Energy

Let's Talk

Our Plans, Your Say

Edition 6 | October 2025



Goodwyn A Platform approximately 140 km north-west of Karratha.

The rundown

Goodwyn Area Infill Development Offshore Project Proposal gets the green light

Following NOPSEMA's acceptance of the Goodwyn Area Infill Development Offshore Project Proposal (GWA OPP), Woodside is planning to develop new gas wells about 140 km north-west of Karratha.

The development will make better use of space at the Goodwyn A platform by bringing in extra gas and condensate from up to 8 new wells.

This is a phased development expected to deliver first gas in 2027-2028.

Environment Plans (EPs) supporting the development include:

- Goodwyn Alpha Geophysical and Geotechnical Surveys (Rev 2)
- Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation – consultation closed 27 August 2025.

We currently anticipate consulting on a revision for the GWA Operations EP that will include the proposed new wells in the first half of 2026.

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 consultation@feedback.woodside.com

Dampier

- Dampier Beachside Markets Saturday, 18 October and 8 November 5:30pm to 8:30pm Hampton Oval, Dampier, WA, 6713

Exmouth

- Exmouth Community Markets Sunday, 5 October 8:00 am to 12:00 noon Federation Park, Exmouth, WA, 6707

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

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Community conversations

The way we engage is based on building trust and understanding to support long-term relationships.

We emphasise open and accessible communication and feedback on our activities. One way we do this is by inviting community to engage with Woodside at popular community events.

Woodside and our joint venture partners were pleased again to sponsor the City of Karratha's Red Earth Arts Festival (REAF) at The Quarter where we helped activate and transform the area into a hub of artistic and cultural activity.

This year's festival featured over 100 performances, workshops, and experiences. Over 9,200 people attended the four-day festival, with 90% of programming free to the community.

The main attraction was 'The Whale' installation, which invited viewers to operate the strings of a large whale puppet and its sea friends while listening to whale vocalisations – an immersive experience enjoyed by all ages.

Artists from Yinjaa-Barni Art Group painted and displayed art, welcoming the public to watch the creation of several pieces and engage in conversations.

A community concert featured roving entertainment, stage performances, music, food trucks and markets.

At our Woodside tent, we engaged with the Karratha community discussing Woodside's work in the North West, our EPs, current and proposed projects and we listened to community feedback.

Woodside, on behalf of the Scarborough Joint Venture, was also proud to support the new biennial Ningaloo Sky Festival in Exmouth recently. The three-day event showcased the region's vibrant culture, food and community.

A key event was a market day at Talanjee Oval featuring local artists and makers, roving entertainers, a kite show, animal petting farm and food trucks.

At our Woodside stand, we chatted with visitors about our EPs and Woodside's activities in the Exmouth region, and listened to people's feedback.



Ningaloo Sky Festival drone show.

A drone show highlighting stories of the region's Traditional Owners and a free community concert by iconic Aussie rock band Eskimo Joe capped off the day.

Other events included astronomy talks highlighting the star-filled Ningaloo night sky, unique dining experiences, sunrise yoga, cultural talks and a community movie night.

Woodsiders also met with the Exmouth Community Liaison Group to provide updates on relevant projects and activities.

Talking point

Pygmy blue whales: feeding discovery

In an Australian first, scientists have recorded where and when pygmy blue whales feed as they migrate along the WA coast, thanks to research co-funded by Woodside Energy.

Every year, many whale species and thousands of individual whales migrate through the offshore waters of WA's north-west.

Luke Smith, Woodside Head of Biodiversity and Science, says collaboration with researchers is helping us better understand these whale species and their annual migration.

"In recent years, we – together with our joint venture partners – have invested heavily in numerous whale research programs," Luke points out.

"We continue to deepen our understanding of these magnificent animals and their natural habitat."

One of our research programs focuses on pygmy blue whales, a species that belies its name and can measure up to 24 metres long and weigh 90 tonnes. They undertake an annual northern migration from south-east Australia up through offshore waters of WA to Indonesia before returning five to six months later.



Photo credit: Grace Russell, Centre for Whale Research.

The research led by the Australian Institute of Marine Science and the Centre for Whale Research, found the whales aren't just migrating but also feeding enroute to their Indonesian breeding grounds – something never previously recorded with telemetry in the north-west waters of WA.

Unlike humpback whales, commonly seen as they play and frolic near to shore on their annual migration along the WA coast, pygmy blues spend little time at the surface and migrate in deeper offshore waters. To understand this species we've turned to the latest technology.

Using satellite tags and dive loggers (think Fitbits for whales), scientists tracked nine pygmy blues as they searched for prey.

Previously, it was thought feeding only occurred at the Perth Canyon and Ningaloo but researchers documented them snacking on the go, too.

The whales were recorded performing deep dives with lunge feeding – a high-speed move where they engulf dense swarms of krill.

The findings are helping researchers deepen their understanding of the species' annual migration, while providing us with more knowledge to include in EPs, improving how we avoid or minimise potential impacts.

"As whale species continue to recover and whale numbers migrating through north-west Australia increase, we'll continue to develop technology and approaches to improve our management of whale interactions," reports Luke.

"It's crucial we further reduce potential impacts, support future project approvals and contribute to science along the way."

Luke believes we can continue to successfully co-exist in the marine environment while simultaneously contributing to the study of these complex, remarkable mammals.

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Consultation opportunities

Environment Plan	Activity Type	Location	Consultation Dates
Angel CCS Geophysical and Geotechnical Surveys - Update	Survey	~ 35 km from Dampier	October 2025
Echo Yodel Subsea Decommissioning	Decommissioning	~ 140 km north-west of Dampier	October 2025
NWS Phase 1 P&A and TPA03 Well Intervention EP - Update	Decommissioning	Closest well to shore is ~ 125 km north of Dampier	September to October 2025
Pluto 4D M3 Marine Seismic Survey	Survey	~ 28 km north-west of the Montebello Islands and 150 km north-west of Dampier	September to October 2025
Julimar & Brunello P&A	Decommissioning	~ 185 km west north-west of Karratha	August 2025
GWF-4 Drilling and Subsea Installation	Drilling and installation	~140 km north-west of Dampier	July to August 2025

Progress snapshot

Environment Plan	Activity Type	Date Accepted	Activity Status
Julimar Operations	Operations	7 July 2025	In progress
Pluto Operations	Operations	5 May 2025	In progress
Minerva Plug and Abandonment	Decommissioning	9 January 2025	In progress
Macedon Operations	Operations	24 December 2024	In progress
Ngujima-Yin Floating Production Storage and Offtake (FPSO) Operations	Operations	19 December 2024	In progress
Minerva Decommissioning and Field Management (State)	Decommissioning	27 November 2024	In progress
Minerva Decommissioning and Field Management (Commonwealth)	Decommissioning	14 October 2024	In progress
NWS and Julimar Exploration Wellhead Decommissioning	Decommissioning	3 July 2024	In progress
Goodwyn-Alpha Geophysical and Geotechnical (Rev 2)	Survey	30 May 2024	In progress

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: Woodsiders keen to chat with community at the Ningaloo Sky Festival.



You can view Commonwealth Environment Plans for approved activities and operations by visiting:
info.nopsema.gov.au/home/approved_projects_and_activities

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Okha FPSO, approximately 115 kilometres north-west of Dampier.

Let's talk about... FPSOs

Woodside has been producing oil from its Australian assets through Floating Production Storage and Offloading (FPSO) facilities since 1995. Woodside currently has three FPSOs in operation in North West Western Australia.

An FPSO facility is a vessel used in offshore oil and gas production, processing hydrocarbons from subsea wells, storing the oil onboard, and offloading it to tankers for transport. During normal operations, an FPSO is operated by 50 to 100 personnel onboard at any given time. These roles include production operators, marine crew, engineers, safety officers, catering staff, and support personnel.

Moored approximately 115 kilometres north-west of Dampier, the Okha FPSO has been producing oil and gas from the Cossack, Wanaea, Lambert, and Hermes oil fields. Crude oil is offloaded to bulk tankers, and LPG-rich gas is exported to the North Rankin Complex before being processed at the Karratha Gas Plant.

Woodside operates two offshore assets off Exmouth: the Ngujima-Yin and Pyrenees FPSO facilities.

The Ngujima-Yin FPSO is located over the Vincent oil field, 50 kilometres north-west of Exmouth. Ngujima-Yin is a Thalanjyi word meaning "to dream". The Greater Enfield Project, completed in 2018, involved developing several oil accumulations through a subsea tie-back to Ngujima-Yin. This project included a major refit of the FPSO, installation of subsea infrastructure, and the drilling of 12 development wells.

The Pyrenees FPSO commenced operations in 2010 and consists of six conventional oil fields located 45 kilometres north-west of Exmouth.

The Ningaloo region is recognised for its high ecological importance, boasting unique environmental, social, and cultural values, extending across 280 kilometers of coastline between Exmouth and Carnarvon. It is a global biodiversity hotspot and was inscribed on the World Heritage List in 2011.

To better understand and manage the environmental features of the region, Woodside has supported a range of multi-year projects through its environmental partnerships program.

These projects focus on iconic species and habitats across different ecosystems along the Ningaloo Reef and Exmouth Gulf. Woodside's social investment and science-funded projects contribute to conservation efforts, biodiversity education, and community engagement at local and regional scales.

You can read more about this significant region by **clicking here**

Scarborough's subsea infrastructure now in place

The Scarborough Energy Project has reached another exciting milestone–this time beneath the waves. The team has successfully completed the penultimate subsea installation campaign, marking a significant step toward first LNG cargo in the second half of 2026.

Approximately 375 km off the Pilbara coast, over 400 pieces of subsea equipment have now been assembled and installed in the Scarborough field, including the impressive 305-tonne Riser Base Manifold. With all critical infrastructure in place and tested, the project is now more than 86% complete (excluding Pluto Train 1 modifications) and ready for the hook-up and commissioning of the floating production unit (FPU) upon its arrival.

The Scarborough Offshore Facility and Trunkline (Operations) Environment Plan (EP) is now approved, setting out how Woodside will manage environmental risks and impacts associated with offshore operations. The EP covers activities such as FPU installation, commissioning, and ongoing operations, as well as inspection, maintenance, and repair of subsea infrastructure.

Read more about the Scarborough Energy Project by **clicking here**



This is the 80m long, 32" diameter rigid pipe spool which weighs approximately 230 tonnes and was fabricated in Henderson, Western Australia.

Join the conversation at **woodside.com/what-we-do/consultation-activities**

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6.8.2 Karratha Community Update

6.8.2.1 Edition Q2 – July 2025

Woodside Energy

Karratha Community Update

July 2025



Woodside and its joint venture partners were proud to support the Red Earth Arts Festival, as The Quarter Sponsor.

Stay up to date on our continued contribution to the local community Woodside North West

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We acknowledge the unique connection of the Traditional Custodians to land, waters and the environment where we operate in the City of Karratha. We extend this recognition and respect to First Nations peoples and communities around the world.



Meet the people of the North West Shelf Project (L-R): Haylee, Aaron and Narelle

Woodside welcomes proposed North West Shelf Project extension

The North West Shelf (NWS) Project has supplied energy to Australian and international customers since the 1980s, investing hundreds of millions of dollars into the local economy and community. It has pioneered the LNG industry in Australia and is a nationally significant asset.

The NWS Project is a major employer in and around Karratha, supporting the development of a local workforce through training and employment pathways and contracting opportunities throughout Western Australia.

After decades of processing only the NWS resources, the Karratha Gas Plant (KGP) now also processes gas for other resource owners, who pay a toll to use the facility. A transformation that enables this landmark facility to continue to supply energy to Western Australia and international markets for decades to come.

State Government approval for North West Shelf Project Extension was received in December 2024 after six years of assessment and appeals.

The Federal Government provided its proposed environmental approval for the North West Shelf Project Extension in May 2025 with proposed conditions. Consultation is now occurring with Government on the proposed conditions.

As part of the State Government approval in December 2024, the North West Shelf committed to a range of environmental management measures, including a significant reduction in air emissions and measures to manage greenhouse gas emissions and to reduce them over time.

In addition, meaningful consultation with Traditional Owners is occurring as part of these conditions, including complying with all air quality objectives and standards arising from the Murujuga Rock Art Monitoring Program.

We remain committed to protecting the Murujuga Cultural Landscape and support its World Heritage nomination. We believe long-term co-existence between cultural heritage and industry is possible when guided by credible science, Traditional Custodian leadership, and genuine collaboration.

Discover the ways the North West Shelf Project holds a special place for our people, the businesses we work with and the Pilbara community by scanning the QR code.

New members join Karratha Community Liaison Group

Woodside is committed to building strong relationships with the community. One way we do this is through our quarterly Community Liaison Group (CLG) meetings.

This month we were excited to welcome new members to the meetings following a review of the group's membership and call for public nominations to fill new community member positions on the CLG.

Meeting quarterly, the CLG is an important platform for Woodside to share information about our operations, gather feedback on current and future activities, and facilitate discussions on issues of importance to the community.

Our meetings cover a range of topics, including operational and project updates, social impacts, local content, environment plans and social investment.

If you're interested in finding out more about the CLG, contact us by email: northwestcommunities@woodside.com or keep an eye on our social media channels for updates.



Woodside's CLG meet quarterly to share information, gather feedback and facilitate discussions.

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Impact felt locally in Karratha

Impact Digi is a Pilbara-based Indigenous owned and operated marketing agency with close to a decade of experience working with Woodside Energy.

A full-service marketing agency, Impact Digi has built relationships with government, industry, Indigenous organisations and businesses of all sizes helping them to build brands and reach stakeholders.

"The past couple of years have been extra rewarding as our reputation has grown within Woodside and we're getting to work with team members from other areas of their business," said Impact Digi Managing Director, Tamara Bin Amat

Starting off by offering photography services when they first began, Impact Digi has transformed over time with a growing team, refined services and an expanded reach.

"Looking back, one of my favourite moments was when local Asset Manager for the Karratha Gas Plant, Breyden Lonnie presented our first ever award for Best Aboriginal Business at the 2015 Karratha and Districts Chamber of Commerce and Industry (KDCCI) Business Excellence Awards," said Tamara.

That recognition is continuing with Impact Digi recently winning the Best Small Business Award at the 2024 KDCCI Business Excellence Awards.



Tamara Bin Amat and Jason Miltrup with the Woodside team at EXA 2025 in Perth

Tamara and her team understand the importance of supporting local and contributing to their community.

"Working with Woodside has not only boosted our business but also our reputation, opening doors to new opportunities across the state," said Tamara.





Celebrating 20 Years of Corporate Volunteering at Woodside

This year marks another significant milestone for Woodside: 20 years of corporate volunteering.

We take pride in our long-standing commitment to investing in the communities where we operate, and where our employees live and work. In fact, 20 years ago, Woodside was one of the first companies in Australia to offer volunteering leave to our employees.

Woodside employees are entitled to 12 hours of volunteering leave each year, empowering them to make a meaningful difference in their communities and engage in a variety of activities. In Karratha this includes volunteering at local food banks, participating in beach clean-ups and mentoring young people in educational programs.

Introducing Danielle East. If you've been involved in Woodside volunteering in WA's Pilbara region, chances are you've met Dan.

Since joining Woodside in 2011, Dan has worked across many roles, but none showcase her passion better than coordinating volunteering opportunities for our teams in Karratha.

Dan's commitment to volunteering extends beyond coordination; she actively contributes her time and effort to help those in need. As a long-serving member of the Karratha State Emergency Service, Dan has been instrumental in responding to crises. Earlier this year, following the impact of Category 4 Tropical Cyclone Zelia, she was one of a team of volunteers that assisted a remote Aboriginal community by clearing fallen trees and addressing other emergency response requirements.

"Giving back to the community is in my DNA," Dan shares. "Being able to support my neighbours in need at a time of crisis is essential for me. And I'm grateful Woodside has volunteering programs in place, where I can put my hand up and jump in as and where I'm needed."

Last year alone, Woodside employees dedicated over 650 volunteer hours to community groups and not-for-profit organisations within the City of Karratha. As we celebrate two decades of corporate volunteering, we look forward to continuing our community engagement and making a positive impact, one volunteer hour at a time.

Stay up to date on our continued contribution to the local community Woodside North West

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L-R: Russell Waterman - The Salvation Army Relationship Manager - Corporate Partnerships, Danielle East - Woodside Energy Communities Adviser, Holly Thomas - Woodside Energy Manager NWS Production Planning and Warren Palmer - The Salvation Army State External Communications Manager.

North West Shelf Project supports community housing needs

The North West Shelf Project recently gifted two houses to vital local not-for-profit organisations in the Pilbara region.

This initiative underscores the Project's commitment to fostering community wellbeing and providing essential support to those in need.

One of the houses has been donated to Reach Us Pilbara, an organisation dedicated to providing cancer support services.

This new facility will enable Reach Us Pilbara to expand their services, offering a comforting space for individuals and families navigating the challenges of a cancer diagnosis. The house will serve as a sanctuary where patients can access support, counselling, and respite.

The second house has been gifted to the Salvation Army Karratha Women's and Children's Centre. This centre plays a crucial role in offering refuge and support to women and children escaping domestic violence situations. The additional space will allow the centre to accommodate more families, providing them with a safe and nurturing environment as they rebuild their lives.

By supporting these organisations, the North West Shelf Project aims to help address immediate community needs while contributing to the long-term resilience and wellbeing of the Pilbara community.

One hull of a milestone for Scarborough's FPU

The Scarborough Energy Project has achieved a major engineering milestone with the joining together of the topsides and hull for the Floating Production Unit (FPU).

Constructed separately at two different fabrication yards in China, the joining of the two mega-structures is a significant step forward for the Scarborough Energy Project as it progresses towards first LNG cargo, targeted for the second half of 2026.

The floatover required precise planning and extensive collaboration by all stakeholders. Teams from Woodside, McDermott, QMW and COSCO worked closely on the fabrication of the structures and on safely and successfully bringing them together.

Woodside Executive Vice President & Chief Operating Officer Australia Liz Westcott highlighted what it meant for Woodside and the Scarborough Energy Project, which is now over 82% complete.

"The floatover of the FPU is an engineering marvel and builds on the safe and successful fabrication of the topsides and hull.

"Manoeuvring two structures that each weigh more than 30,000 tonnes at sea is an exceptionally complex operation.



"I am proud of the Woodside and McDermott teams for the safe delivery of the FPU to the integration yard and the completion of this chapter of work. The FPU is a critical piece of infrastructure for this world-class project which continues to be delivered to the highest standard."

The remaining integration work for the FPU will continue at the fabrication yard in Yantai before sailaway to Australia.

Once complete the FPU will be moored 375km off the coast of Karratha. The Scarborough Energy Project is set to produce up to 8 million tonnes of LNG per year and contribute up to 225 terajoules a day of domestic gas supply into the Western Australian market.

Let's Talk

Our plans, Your say

Scan the QR code or head to woodside.com/consultation-activities to read our latest edition and Environment Plan consultation information.

We welcome feedback on your relevant functions, activities or interests. Alternatively, you can contact us at consultation@feedback.woodside.com or on 1800 442 977.

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6.8.2.2 Edition Q3 – October 2025

Karratha Community Update

October 2025

Woodside welcomes approval of North West Shelf Project Extension

The Australian Government's final decision to grant environmental approval for the North West Shelf Project Extension is positive news for Woodside Energy and Karratha as our host community.

The decision provides certainty for the ongoing operation of the North West Shelf Project.

For Karratha and surrounds, this has meant sustained employment, meaningful social contributions, a legacy built on responsible energy development and a deep-rooted connection with the local community.

Over its lifetime, the North West Shelf Project has paid more than A$40 billion in royalties and excise, supported thousands of Australian jobs and contributed over A$300 million to social investment initiatives and infrastructure support in the City of Karratha.

Importantly, the approval follows an extensive environmental assessment and appeal process and includes rigorous conditions to manage the protection of cultural heritage.

This includes conditions that require additional monitoring and management of air emissions to protect the Dampier Archipelago (including Burrup Peninsula or Murujuga).

Woodside is committed to protecting the Murujuga Cultural Landscape and we were a proud supporter of the World Heritage nomination and assessment process, led by Ngarda Ngarli, the Traditional Custodians of Murujuga, on the World Heritage listing.

The internationally peer-reviewed, best-practice science conducted by the Murujuga Rock Art Monitoring Program, led by Murujuga Aboriginal Corporation and Western Australian Department of Water and Environmental Regulation, confirms that with the right controls and collaboration, co-existence of industry and cultural heritage is not only possible, but already happening.



"Over its lifetime, the North West Shelf Project has paid more than A$40 billion in royalties and excise, supported thousands of Australian jobs and contributed over A$300 million to social investment initiatives and infrastructure support in the City of Karratha."

As we shape the future of the North West Shelf alongside our Pluto LNG operations and the development of the Scarborough Energy Project, our commitment to collaboration and consultation remains strong.

We will continue to work closely with our colleagues, partners, and neighbours.

I'm looking forward to supporting Woodside's future in Karratha, reflecting the values and aspirations of the place we have proudly called home for over four decades.

Derek Paulgaard
Asset Manager North West Shelf Onshore



Inspiring futures through work experience

We recently had the pleasure of hosting Programmed work experience students from Karratha Senior High School, Roebourne District High School and St Luke's College Karratha at Pluto LNG and Karratha Gas Plant.

The students had the opportunity to shadow our teams, gaining insights into day-to-day operations and exploring the diverse career pathways available right here in the Pilbara.

Thank you all participating students, we hope the experience sparked some new ideas for your future pathways.

Stay up to date on our continued contribution to the local community **Woodside North West**

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Community partnerships valued

On the evening of 13 August 2025, we had the privilege of celebrating the incredible contributions of our community partners at our annual Community Partner Sundowner, held at The Shelf, Red Earth Arts Precinct.

Our sundowner event was a heartfelt tribute to the people and organisations making a real difference across the Pilbara.

Hosted by Derek Paulgaard, Asset Manager – North West Shelf Onshore, the event featured inspiring reflections from Sophie Martin, One Tree Community Services Inc. sharing information about our award-winning Roebourne Pathways Program partnership and its impact on local youth and Stacey Giles, Reach Us Pilbara, highlighting vital cancer support services available to families in the region.

Thank you to everyone who joined us to recognise the incredible work happening across the City of Karratha.

The Woodside Community Grant Program opens in October, providing funding of up to $5,000 to community groups and not-for-profit organisations in the City of Karratha to support health, liveability, sustainability and environmental outcomes.













Building community connections: repurposing for a brighter future

Yurra and Woodside Energy made a collaborative contribution to the Roebourne Work Camp by donating 34 tonnes of scaffold boards.

During supplier visits, Local Content Manager, Julie Attwood, realised there was an opportunity to re-purpose redundant scaffold materials, no longer being used at Karratha Gas Plant.

The materials were welcomed by the men at the Department of Justice Roebourne Work Camp. They were used to make furniture for not-for-profit organisations and local community groups, helping participants develop employable skills, as well as providing benefits to Pilbara regional communities.

Some of the projects completed using these repurposed materials include; timber picnic benches for the Roebourne District Hospital, outdoor seating and cubby houses for local schools and daycares, and tables to display the work of local Aboriginal artists. These projects improve community spaces and connectivity, while providing a platform for artists to gain recognition and income.

Read more about the collaboration between Yurra, Woodside, and the Department of Justice and the positive impact on community by scanning the QR code.

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L-R: Woodside Manager Property and Services Tanya Vautier, Yurra Building Manager Tim Clune, Kevin Michel MLA, Thomas Building Regional Operations Manager Jason Strange, Woodside Senior Corporate Affairs Adviser Camille Vissouarn.

Woodside is building for the future: 30 new homes in Karratha

Woodside Energy (Karratha Services) Pty Ltd, has awarded contracts for the construction of an additional 30 new homes in Karratha for Woodside's residential employees. Under the award, 20 new homes will be built by Thomas Building and 10 by Traditional Owner business, Yurra Building, both locally based contractors.

Expected to be completed from mid-2026, the new houses will be owned by Woodside and are additional to the recent construction of 20 new homes under a 15-year build-to-lease agreement with Karratha Housing, a subsidiary of Yurra Building.

Awarding the construction contracts to Thomas Building and Yurra Building is part of Woodside's ongoing commitment to delivering business opportunities that boost jobs and support the local economy. The contracts include provisions for the employment of local apprentices and trainees.

Woodside Pluto Asset Manager Kate Bardill said the new contracts were part of the company's Karratha housing approach, which aimed to providing quality housing options for employees while balancing the needs of the local housing market.

"Woodside's approach to housing includes investment in new builds, the sale of older housing stock on the open market and support for local housing affordability initiatives such as the City of Karratha's Service Worker Accommodation program," said Kate.

Under Woodside's predominantly residential frontline workforce policy, approximately 75% of the company's employees working at its Karratha operations live locally.

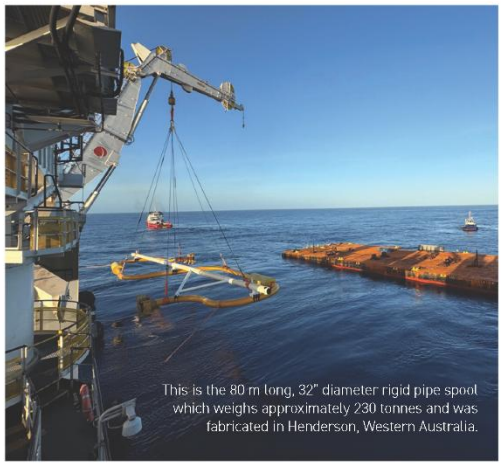
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REAF reflections

This year saw the continuation of Woodside's support for the City of Karratha's Red Earth Arts Festival (REAF). We were proud to once again sponsor 'REAF at The Quarter,' offering a suite of free, family-friendly activities, activating and transforming the area into a hub of artistic and cultural activity.

The main attraction of REAF at The Quarter was 'The Whale' installation; inviting viewers to interact with a large whale puppet and its sea friends while listening to whale vocalisations – an immersive experience enjoyed by all ages.

REAF is moving towards becoming a destination festival for the region, and Woodside and its joint venture partners are proud to support the continued provision of important and much-loved community events, livability initiatives and significant local government projects.

Artists from Yinjaa-Barni Art Group painted and displayed art on site, welcoming the public to watch the creation of several pieces and engage in conversations.

A community concert featured roving entertainment, stage performances, music, food trucks and the Karratha District Chamber of Commerce and Industry markets.

Attendees were treated to Maori cultural displays, Brazilian samba and Chinese dance while enjoying face painting, elaborately costumed stilt artists, Dr Hubble's bubble display, jazz music from the Perth Symphony Orchestra and a calming space at The Inclusive Movement's sensory tent.

Woodsiders enjoyed engaging with the diverse Karratha community discussing Woodside's work in the North West and listening to community feedback on our activities.

The festival finale featured First Lights - Bunggaliyarra Munggu, presented by Fremantle Biennale in collaboration with Juluwarlu Art Group and supported by Woodside and its Pluto Train 2 Joint Venture partners. Woodside is proud to support events like REAF, bringing the community together, strengthening local connections, and fostering a sense of collective pride.







Karratha Volunteer Fire & Rescue Service were Woodside Community Grant recipients, 2024

Woodside Community Grants

Applications open Wednesday, 1 October 2025

The Woodside Community Grants program is part of our commitment to help build local capacity and develop opportunities for community wellbeing.

If your club or organisation has a great idea or needs extra support, Woodside wants to hear from you. Grants of up to $5,000 are available to support community initiatives in the City of Karratha and the Shire of Exmouth.

Applications close Friday, 31 October 2025 and can be completed online at woodside.com/social-contribution

For more information, please email northwestcommunities@woodside.com

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Woodside Energy

Let's Talk

Our plans, Your say

Scan the QR code or head to woodside.com/consultation-activities to read our latest edition and Environment Plan consultation information.

We welcome feedback on your relevant functions, activities or interests. Alternatively, you can contact us at consultation@feedback.woodside.com or on 1800 442 977.

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6.8.2.3 Edition Q4 – December 2025

Karratha Community Update

December 2025

Scarborough Energy Project on track for start-up


Aerial view of Pluto Train 2 as at 25 October 2025.

As we approach start-up of the Scarborough Energy Project and commissioning of Pluto Train 2, Woodside and its joint venture partners continue to focus on managing impacts and delivering positive outcomes for the Karratha and Roebourne communities.

This approach has seen $215 million worth of contracts awarded to 170 Pilbara-based businesses, support for local employment and training initiatives and ongoing investment in programs, events and organisations that help build a thriving local community.

In 2026 we will continue to work to minimise the impact of our operations to the community as we commission Pluto Train 2 in preparation for the processing of Scarborough gas in the second half of the year.

Commissioning is a critical process in bringing new LNG processing facilities online. It involves initial testing and operation of equipment and systems to ensure correct installation and safe functioning. Our team takes a comprehensive approach to verifying all systems meet regulatory requirements while minimising environmental impacts wherever possible.

As we commission our Pluto Train 2 Project, you may notice an increase in flaring activity, including some periods of noise and visible dark smoke.

We are committed to proactively communicating planned activities as much as possible. As schedules are finalised, further updates will be communicated.

If you have questions on commissioning and flaring or would like more information, I invite you to view the Woodside Controlled Flaring animation here or contact Woodside's Community Line by calling 1800 634 988.

We look forward to continue to work with the Karratha and Roebounre communities during 2026.

Mike Price
Woodside Vice President Pluto Scarborough Asset

Stay up to date on our continued contribution to the local community Woodside North West

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Woodside Energy recognises Aboriginal and Torres Strait Islander peoples as Australia's first peoples.

We acknowledge the unique connection of the Traditional Custodians to land, waters and the environment where we operate in the City of Karratha.

We extend this recognition and respect to First Nations peoples and communities around the world.

Tim Tam bird spotted at bird watching and cultural heritage event

Woodside were pleased to co-host the annual Bird Watching and Cultural Heritage Community Event at Hearson Cove and Ngajarli last month.

The event aims to raise awareness of Pilbara coast shorebirds and the rich cultural heritage of the area.

About 70 people got up early to attend the sunrise event. Broome Bird Observatory staff provided an information session followed by migratory shorebird watching and the Murujuga Aboriginal Corporation (MAC) Rangers hosted guided tours of the incredible petroglyphs and UNESCO World Heritage recognised landscape..

A highlight of this year's event was a sighting of the Red Necked Stint. The bird is affectionately known as the Tim Tam bird as it weighs 21 grams, just a tiny bit more than the much-loved Australian chocolate biscuit.

Western Australia's Pilbara shorebirds undertake a remarkable migration journey of over 10,000 kilometres to breed in the northern hemisphere, sustained by our region's marine cuisine. Attendees gained insights into the birds' behaviour and learned about some of the threats and conservation efforts to help protect them.

Broome Bird Observatory Warden Jamie Van Jones said it was fantastic to see some of the incredible migratory birds that fly all the way from Russia and Siberia to return and feed on the Pilbara shoreline.



Over 70 community members attended the free event.

He offers advice, "Keep an eye out for these small shorebirds over summer and give them space to feed, as they will take off on migration back 10,000 to 13,000 km to the far North in March and April."

MAC commenced the event inviting MAC Senior Ranger and Ngarluma woman, Sarah Hicks to share powerful Acknowledgement of Country. She said, "It's great to see the number of people rocking up to this event and the diversity of people interested in the rock art and the shorebirds."

"The benefit of this event is that it brings people together and it builds understanding."

Woodside Energy was pleased to work collaboratively with co-hosts Pilbara Ports, Rio Tinto, Yara Pilbara, Perdaman, and the DBCA Parks and Wildlife Service, Murujuga Aboriginal Corporation Rangers and BirdLife Australia to deliver the event.

New members join Karratha Community Liaison Group



New CLG members Rachel Rainey and James Florisson.

Woodside is committed to building strong relationships with the community. One way we do this is through our quarterly Karratha Community Liaison Group (CLG) meetings.

The CLG is a forum for community stakeholders to provide feedback on Woodside's current and planned activities, as well as for Woodside and CLG members to discuss issues of common interest or concern.

The group meets four times per year and cover a range of topics, including operational and project updates, social impact management and opportunities, local content, environment plans and social contribution.

In collaboration with existing CLG members, this year we updated our CLG terms of reference to broaden membership and enhance communication channels between Woodside and the community.

This resulted in the appointment of two new community representatives, Rachel Rainey and James Florisson following a call for public nominations.

The new representatives add diversity to the group by bringing their views on the environment, conservation and recreational fisheries.

The CLG is an important platform for Woodside to share information about our operations, gather feedback on current and future activities, and facilitate discussions on issues of importance to the community.

Stay up to date on our continued contribution to the local community **Woodside North West**

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Congratulations to Dampier Surf Life Sporting Club, pictured accepting their award presented by Woodside Energy Asset Superintendent NWS Onshore Lis Hunt and event guest speaker Lord Ian Botham.



Yani Davis was awarded Woodside Energy Junior Sportsman of the Year.

Local athletes and associations recognised at Community Sports Awards

The City of Karratha Community Sports Awards in October brought together athletes, volunteers, and sporting associations to celebrate the achievements and community spirit that make local sport possible.

Woodside and its joint venture participants in the North West Shelf Project and Scarborough Energy Project were pleased to support the event through our City of Karratha Community Development Partnership. This year's event recognised outstanding contributions across nine categories, with more than 100 nominees reflecting the depth of talent and dedication in the region.

Among the evening's highlights, Yani Davis was named Woodside Energy Junior Sportsman of the Year, while the Dampier Surf Life Saving Club took home the Woodside Energy Sporting Club of the Year Award.

Woodside Project Manager Pluto Train 2, Rob MacKinnon said the awards night was a testament to the vital role sport plays in the City of Karratha, "Sport is integral to the Pilbara way of life, breaking down barriers, building friendships, and supporting both personal and community wellbeing."

"The awards are a great opportunity to celebrate the volunteers and clubs that are key to nurturing opportunities to be active, make friends, and excel."

For a full list of winners visit: Top sports stars recognised at Community Sports Awards | City of Karratha

Ngardimu reduce waste and build skills at Pluto Train 2

Woodside's Scarborough Energy Project is now over 91% complete (excluding Pluto Train 1 modifications) and is targeting first LNG in the second half of 2026. The project has the capacity to supply up to 225tjs a day of domestic gas to the WA domestic gas market.

But it isn't just critical energy that is being supplied by the Scarborough Energy Project.

Together with our contractors, we've invested over $215 million with more than 170 Pilbara-based businesses. Over $115 million in contracts have been awarded to 69 Australian Indigenous businesses since project inception across the Scarborough Energy Project's Pluto Train 2 and Pluto Train 1 modifications work scopes.

Bechtel, the engineering, procurement and construction contractor for Woodside's Pluto Train 2 Project, has partnered with Ngardimu, a joint venture led by Yindjibarndi-owned Yurra and Sims Metal.

Ngardimu has been engaged since July 2024 to deliver scrap metal collection and recycling services for the project.

To date, over 870 tonnes of recyclable materials from Pluto Train 2 have been redirected from landfill, while investment in local Indigenous communities has produced positive results by preparing individuals for employment in construction roles.

Since Bechtel commenced construction in Karratha, the Pluto Train 2 team has worked to ensure our project provides meaningful opportunities to support Pilbara Indigenous-led businesses and entrepreneurship.

Ngardimu has recently implemented a trainee program for employees gaining on-the-job metal recycling experience.



Ngardimu's business name comes from the Yindjibarndi language meaning "again and again".

"Through relationships with businesses like Ngardimu, Bechtel keeps finding new ways to support local communities while making our projects more sustainable" said Corey McGovern, Bechtel Senior Project Manager for Pluto Train 2.

The Scarborough Energy Project has generated thousands of jobs during the construction phase and around 600 direct jobs are expected to be created or sustained throughout operations. This includes about 70 residential positions in Karratha.

Paul Baker, Woodside Energy Pluto Expansion Project Manager says "We're pleased Bechtel are engaging Ngardimu. This work scope reflects Woodsides values: respect, environment and care for community."

"We strongly support local content, economic outcomes, positive social contributions and sustainable local supply chains which deliver direct benefits to our host communities."

Developing strong relationships with local suppliers and contractors is an important aspect of Woodside projects including the Scarborough Energy Project.

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Woodside Anniversary Grant upgrades Karratha Volunteer Fire and Rescue Service facility

In 2024, 10 community groups in Karratha and Roebourne were awarded grants of up to $100,000 as part of the Woodside Anniversary Grant Program.

The grants formed part of Woodside's continued contribution to the Karratha and Roebourne communities as it marked 70 years as a proud Australian company and four decades of safe and reliable operations in Karratha.

Karratha Volunteer Fire and Rescue Service (VFRS) was among the grant recipients, using its grant to transform its training facilities.

This included renovating an underutilised shed at the Karratha VFRS station to create a new training centre and space for crew debriefs. Installing air-conditioning in the facility also improved equipment storage conditions, ensuring firefighting gear remains in optimal condition and extending service life.

The new facility also provides a venue for community engagement and volunteer events, fostering connection and resilience among the brigade.

Karratha VFRS Secretary/Treasurer, Kate Kelly said the upgraded facility had already made a significant difference. "This support means we can provide a safe, climate-controlled space for training and welfare, ensuring our volunteers are ready to respond year-round. It's more than an upgrade - it's an investment in community resilience and the wellbeing of those who serve," she said.

Woodside Executive Vice President and Chief Operating Officer Australia Liz Westcott said Woodside and its joint venture partners were proud to support these valuable initiatives.

"Karratha is where our Western Australia story began and we understand that being a part of the community is centred on developing strong relationships and making meaningful contributions. We have done this for 40 years and look forward to continue supporting projects and programs that provide local solutions to local challenges."



Karratha Volunteer Fire and Rescue Service were recipients of a Woodside Anniversary Grant.

Supported by Woodside and its joint venture participants in the North West Shelf Project and Scarborough Energy Project, the initiative reflects a shared commitment to creating enduring value for host communities.

Read more about Woodside Anniversary Grant recipients here.

Season's Greetings

We wish you and your loved ones a peaceful holiday season. 2025 has been a year of progress and resilience, and we're grateful for your role in our journey.

Let's continue to shape the future of energy together in 2026.

Let's Talk

Our plans, Your say

Scan the QR code or head to woodside.com/consultation-activities to read our latest edition and Environment Plan consultation information.

We welcome feedback on your relevant functions, activities or interests. Alternatively, you can contact us at consultation@feedback.woodside.com or on 1800 442 977.

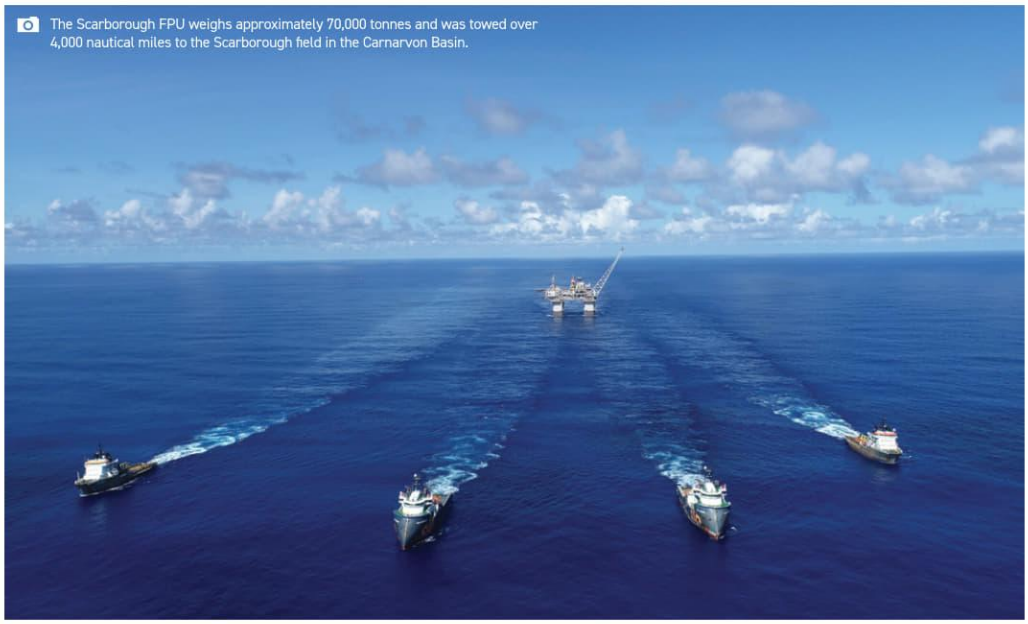
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6.8.2.4 Edition Q1 – March 2026

Karratha Community Update

Woodside Energy

March 2026



The Scarborough FPU weighs approximately 70,000 tonnes and was towed over 4,000 nautical miles to the Scarborough field in the Carnarvon Basin.

Scarborough sails towards start up

This year marks a defining year for Woodside as the Scarborough Energy Project, including our Pluto Train 2 and Pluto Train 1 Modifications Projects in Karratha, move through final construction, commissioning and start up phases.

Across the Scarborough Energy Project, progress continues to track strongly toward first LNG cargo in the fourth quarter of 2026. The development is now more than 94% complete (excluding Pluto Train 1 modifications) and has already delivered economic benefits to the Karratha and Roebourne communities. Once operating, it is expected to support long-term energy supply for Western Australia and the wider Asia-Pacific region.

Offshore, a major milestone was achieved early this year with the safe arrival of the Floating Production Unit (FPU) at the Scarborough field, 375 km off the coast of Karratha. Hook-up and commissioning activities are underway in preparation for production.

Onshore, work at Pluto Train 2 remains focused on piping and electrical installation, system testing and commissioning, ahead of introduction of Scarborough gas to site later in the year.

Meanwhile, the Pluto Train 1 Modifications Project has ramped up. These modifications will enable the processing of additional Scarborough gas through our existing LNG train at Pluto LNG. New modules are expected to arrive through Dampier Port over the coming months.

Collectively, these projects represent the most significant investment in the region in more than a decade.

Together with our contractors, we've invested more than A$260 million with 200 Pilbara-based businesses. A$149 million of that figure has been invested with Pilbara-based businesses engaged on the Pluto Train 2 Project.

As we approach the finish line and a future with two trains operating at the Pluto LNG Park, we will continue to focus on managing impacts and delivering positive outcomes for the Karratha and Roebourne communities.

Mike Price
Woodside Vice President Pluto Scarborough Asset

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We extend this recognition and respect to First Nations peoples and communities around the world.

Refreshed North West Shelf Visitor Centre

With the support of local Karratha contractors, last year the North West Shelf (NWS) Project Visitor Centre underwent a refresh to enhance the experience for visitors.

The Visitor Centre welcomes thousands of community members through its doors each year, from visitors to the region to school groups. It offers an opportunity to learn more about the NWS Project's history in Karratha, its operations and its ongoing role in supplying energy security in Western Australia and beyond.

Acting Asset Manager NWS Onshore, Perrine Lombart, said working closely with local contractors was a key focus in creating a modern visitor experience.

"We are proud to be part of the Karratha community, and the refreshed Visitor Centre allows us to share our story - from the history of Woodside and the NWS Project, to the important role we play in supporting the communities where we live and work."

The works brought together local contractors, including Birndirri, Impact Digi and C Signs, strengthening the NWS Project's contribution to the regional economy and prioritising local capability. Their involvement drew on longstanding experience of working in the Pilbara.

Jake Throssell, Construction Supervisor at Birndirri, said the project demonstrated the value of working closely with local contractors.

"Working with the Woodside team to deliver the Visitor Centre refresh was a positive experience and we are proud to have contributed to a space that visitors can enjoy for many years to come."

Jason Miltrup, Operations Manager at Impact Digi, said working with Woodside to redesign the Visitor Centre signage has been a great project for the team.

"We're proud to have played a role in transforming the space into a modern and engaging environment for visitors."

Cameron Inch, Director of C Signs, said the project was a valuable opportunity for local businesses.



Visitors are warmly welcome to experience the refreshed centre.

"Being part of the Visitor Centre refresh allowed us to bring the NWS Project's history and operations into focus and showcase the capabilities of our small business."

The Visitor Centre will be open from Tuesday, 7 April 2026, more details below:

Street Address:
Burrup Road, Burrup Peninsular, Dampier WA, 6713
Opening Times:
April - October
School term: 10am - 2pm, Tuesday and Wednesday
School holidays: 10am - 2pm, Tuesday - Friday

Follow the Woodside North West Facebook page for updates to opening hours here.

Woodside welcomes new apprentices and trainees


New starters at Woodside Training Academy.

Woodside are delighted to welcome the 2026 trainee and apprentice cohort across our North West operations.

This year, 23 Karratha-based recruits will be hosted at the Woodside Training Academy, 13 are local school leavers. Employed by Programmed Skilled Workforce, roles include service operator trainees, apprentices, pathway trainees and school-based trainees.

The new recruits now form part of a broader group of 63 apprentices and trainees developing their skills across Woodside's Karratha Gas Plant, Pluto LNG Park and Karratha Supply Facilities.

Reflecting our commitment to diversity, 47% of recruits this year are women and 52% are Indigenous, strengthening our future workforce and continuing our long-standing investment in local capability.

We can't wait to see where this journey takes our newest team-mates.

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Pluto LNG and flare maintenance underway



In 2026, Woodside is undertaking a series of important works at Pluto LNG as we prepare to integrate the exiting facility with the Scarborough Energy Project. This includes improvement works to our flare system and a major planned maintenance campaign, known as a turnaround, commencing in May 2026.

Together with the upcoming commissioning and start-up of the new Pluto Train 2 facilities later this year, these staged works support the safe and reliable operations of Pluto LNG.

The turnaround includes a planned shutdown of parts of the facility so essential inspections, repairs, and upgrades can be carried out safely. This work can't be done while the plant is operating. To make the systems safe to execute the maintenance and project scopes, hydrocarbons need to be removed. This is the primary source of flaring during a turnaround.

Alongside preparation for the turnaround, Woodside is carrying out improvement activities on Pluto LNG's flare systems as part of our regular maintenance program. These works will help ensure the facility continues to operate safely and reliably, improve how gas is burned in the flare and reduce smoke where possible. It also ensures the flare system is ready to support future operations.

Flare improvement works are being completed in stages and are expected to continue in the first half of 2026. A testing stage is required to confirm systems are operating as intended before returning to normal operations.

Increased flaring is expected at Pluto LNG during these activities, particularly during system testing and restart works. This may include larger flames, increased noise, and occasional visible smoke, which is managed and reported in line with regulatory requirements.

Woodside adheres to regulatory requirements governing emissions, including those from flaring activities, and we implement robust monitoring to minimise environmental impacts.

To learn more about flaring, we invite you to view a short animation by scanning the QR code. You can also contact the Woodside Community Information Line on 1800 634 988.

Learn more about Woodside controlled flaring here.

Locals land a solid catch with new artificial reef

Recreational fishers in Dampier and Karratha have something to get excited about, with Recfishwest and Woodside Energy successfully installing a new artificial reef near Rosemary Island. The project has been years in the making with aims to boost local marine life and create a high-quality fishing destination for Pilbara residents and visitors.

The reef is made up of 48 purpose-built concrete modules, transported and lowered into place in December 2025. Within days, the first marine species began moving in. Acting EVP and COO Australia, Breyden Lonnie said the project reflects Woodside's commitment to supporting the region.

"Woodside is excited to collaborate with Recfishwest and the local fishing community to bring this new reef to life," he said. "The reef is expected to provide a productive marine habitat for diverse species of algae and corals, supporting an abundance of fish life."

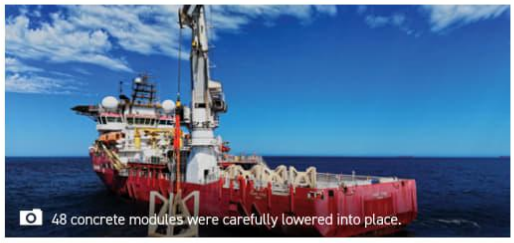
Situated in approximately 35 metres of water and roughly 30 kilometres from the Dampier boat ramp, the reef's modules have been engineered with complex internal spaces that encourage coral growth, protect juvenile fish and support larger species such as spanish mackerel, cobia, emperor, cod and even sailfish. For local fishers it is expected to become a new fishing hotspot.

It's not all about fishing action. The reef is also expected to support local tourism and economic activity. Similar artificial reefs like Exmouth's King Reef, have shown how previously barren seafloor can transform into thriving ecosystems supporting more than 150 species within a few years.

The Dampier Artificial Reef is a true community effort, delivered with support from the WA Government, the City of Karratha, Traditional Owners and local fishing clubs.



Dampier Artificial Reef coordinates.



Recfishwest will provide updates as the reef continues to establish. For now, Pilbara anglers can look forward to a fresh fishing hotspot right on Dampier's doorstep.

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 for the reef.

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Murujuga Ranger vessel Nyamina sets sail

Representatives from Murujuga Aboriginal Corporation (MAC) Rangers and Circle of Elders, State Government and Woodside Energy joined together recently to celebrate the launch of the new Murujuga Ranger vessel, the Nyamina.

Named after the dugongs that inhabit Murujuga Sea Country, the Nyamina is a custom-built 5.8 metres rigid-hulled inflatable boat, designed for inshore waters and safe landing and unloading on beaches.

The vessel was funded by the State Government via Lotterywest and Woodside Energy, which contributed support towards the vessel, additional camera equipment and two years of operating costs.

Guided by the Murujuga Circle of Elders, the vessel will support ongoing collaboration between Rangers, government agencies and researchers in the management of Sea Country. It also provides the opportunity for Rangers to gain diverse skills and qualifications, including coxswain certification.

MAC Chairperson Peter Hicks said "The launch of this vessel is a proud moment for Murujuga, our Rangers, and for the ongoing care of our World Heritage listed Murujuga Cultural Landscape, which extends across the Burrup Peninsula, the islands of the Dampier Archipelago, and Sea Country."

Matthew Turnbull, General Manager Scarborough Business shares Woodside's pride in co-funding the vessel, supporting Ranger-led management of Murujuga and long-term outcomes for cultural heritage and Country. He says "MAC Rangers play a critical role in protecting cultural heritage, monitoring Country and supporting research across the World Heritage Listed Murujuga Cultural landscape."



Photo credit: Murujuga Aboriginal Corporation.

"The launch of Nyamina gives the Rangers greater capability to manage Sea Country and to continue this important work safely and independently."

Watch the official launch on MAC's YouTube here.

KGP sets new record for lowest flaring

In 2025, Woodside achieved record low flaring performance at Karratha Gas Plant with flared quantities less than 10% of their peak in 2013.

This success reflects years of continuous improvement, which Matt Ladner, Senior Emissions and Production Optimisation Engineer, credits to a strong culture focused on emissions reduction, safety and reliability.

"It's a testament to the dedication of our engineering and operations teams who have embedded low-flaring practices into daily routines and decision making," says Matt.

"The record has been a result of a reliable plant and playing the long game in identifying and implementing flare reduction opportunities," explains Matt.

Flaring targets are set each year based on planned maintenance activities and expected plant reliability.

In 2025, Woodside implemented solutions to reduce our daily flaring by removing permanent gas supply to the flare, as well as optimised LNG plant maintenance and equipment restart improvements.

Woodside Community Grants

Applications now open

The Woodside Community Grants program is part of our commitment to help build local capacity and develop opportunities for community wellbeing.

If your club or organisation has a great idea or needs extra support, Woodside wants to hear from you. Grants of up to $5000 are available to support community initiatives in the City of Karratha, Shire of Exmouth and Town of Onslow.



Applications close Tuesday, 31 March 2026.

Find out more about Woodside Community Grants here.
For more information, please email northwestcommunities@woodside.com

woodside.com

Woodside Energy

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APPENDIX G OIL SPILL PREPAREDNESS AND RESPONSE STRATEGY SELECTION AND EVALUATION

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Woodside Energy

Oil Spill Preparedness and Response Mitigation Assessment for Greater Western Flank Phase 4 Drilling and Subsea Installation Environment Plan

Corporate HSE

Hydrocarbon Spill Preparedness

April 2026
Revision 0

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TABLE OF CONTENTS

EXECUTIVE SUMMARY **8**

1 INTRODUCTION **11**

1.1 Overview 11
1.2 Purpose 11
1.3 Scope 11
1.4 Oil spill response document overview 11

2 RESPONSE PLANNING PROCESS **17**

2.1 Response planning process outline 19
2.1.1 Response Planning Assumptions 20
2.2 Environment plan risk assessment (credible spill scenarios) 21
2.2.1 Hydrocarbon characteristics 24
2.3 Hydrocarbon spill modelling 24
2.3.1 Stochastic modelling 24
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) **34**

3.1 Identified sensitive receptor locations 34
3.2 Identify Response Protection Areas (RPAs) 35

4 NET ENVIRONMENTAL BENEFIT ANALYSIS (NEBA) **37**

4.1 Pre-operational / Strategic NEBA 38
4.2 Stage 1: Evaluate data 38
4.2.1 Define the scenario(s) 38
4.3 Stage 2: Predict Outcomes 38
4.4 Stage 3: Balance trade-offs 38
4.5 Stage 4: Select Best Response Options 38
4.5.1 Determining potential response options 38

5 HYDROCARBON SPILL ALARP PROCESS **45**

5.1 Monitor and evaluate 46
5.1.1 Response need based on predicted consequence parameters 46
5.1.2 Environmental performance based on need 47
5.2 Source control and well intervention 49
5.2.1 Response need based on predicted consequence parameters 49
5.2.2 Environmental performance based on need 50
5.3 Source Control via vessel Shipboard Oil Pollution Emergency Plan (SOPEP) 52
5.3.1 Environmental performance based on need 52
5.4 Subsea Dispersant Injection 53
5.4.1 Response need based on predicted consequence parameters 53
5.4.2 Environmental performance based on need 55
5.5 Surface Dispersant Application 57
5.5.1 Response need based on predicted consequence parameters 57
5.5.2 Environmental performance based on need 59
5.6 Containment and Recovery 61
5.6.1 Response need based on predicted consequence parameters 61

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5.6.2 Environmental performance based on need 63
5.7 Shoreline Protection and Deflection 65
5.7.1 Response need based on predicted consequence parameters 65
5.7.2 Environmental performance based on need 66
5.8 Shoreline Clean-up 68
5.8.1 Response need based on predicted consequence parameters 68
5.8.2 Environmental performance based on need 73
5.9 Oiled wildlife response (including hazing) 75
5.9.1 Response need based on predicted consequence parameters 75
5.9.2 Environmental performance based on need 78
5.10 Waste Management 79
5.10.1 Response need based on predicted consequence parameters 79
5.10.2 Environmental performance based on need 80
5.11 Operational and Scientific monitoring 81
5.11.1 Response need for Shoreline Clean-Up Assessment (SCAT) based on predicted consequence parameters 82
5.11.2 Summary – Operational and Scientific monitoring 83
5.11.3 Environmental performance based on need 84
5.12 Incident Management System (IMS) 86
5.12.1 Incident action planning 86
5.12.2 Operational NEBA process 86
5.12.3 Consultation engagement process 86
5.12.4 Environmental performance based on need 87
5.13 Measurement criteria for all response techniques 88
6 ALARP EVALUATION 92
6.1 Monitor and evaluate – ALARP Assessment 92
6.1.1 Monitor and evaluate – Control Measure Options Analysis 92
6.1.2 Selected Control Measures 93
6.2 Source Control – ALARP Assessment 94
6.2.1 ROV Intervention 94
6.2.2 Debris clearance and/or removal 94
6.2.3 Capping stack 95
6.2.4 Relief Well drilling 96
6.2.5 Source Control – Control Measure Options Analysis 103
6.2.6 Activation/Mobilisation – Control Measure Options Analysis 104
6.2.7 Deployment Options Analysis 106
6.2.8 Selected Control Measures 108
6.3 Source Control via Vessel SOPEP – ALARP Assessment 109
6.3.1 Source Control via Vessel SOPEP – Control Measure Options Analysis 109
6.3.2 Selected control measures 109
6.4 Subsea Dispersant Injection – ALARP Assessment 110
6.4.1 Subsea Dispersant Injection timing 110
6.4.2 Response Planning: Loss of well containment (CS-01) 110
6.4.3 Subsea Dispersant Injection – Control Measure Options Analysis 112
6.4.4 Selected Control Measures 113
6.5 Surface Dispersant Application – ALARP Assessment 114
6.5.1 Existing capability – Surface Dispersant Application 114

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6.5.2 Response Planning: GWF-4 Drilling and Subsea Installation loss of well containment scenario (CS-01) 115
6.5.3 Surface Dispersant Application – Control measure options analysis 117
6.5.4 Selected Control Measures 118
6.6 Containment and Recovery – ALARP Assessment 119
6.6.1 Existing Capability – Containment and Recovery 119
6.6.2 Response Planning: GWF-4 Drilling and Subsea Installation loss of well containment scenario (CS-01) 119
6.6.3 Containment and Recovery – Control Measure Options Analysis 121
6.6.4 Selected Control Measures 122
6.7 Shoreline Protection and Deflection – ALARP Assessment 123
6.7.1 Existing Capability – Shoreline Protection and Deflection 123
6.7.2 Response Planning: GWF-4 Drilling and Subsea Installation loss of well containment scenario (CS-01) – Shoreline Protection and Deflection 123
6.7.3 Shoreline Protection and Deflection – Control Measure Options Analysis 128
6.7.4 Selected Control Measures 129
6.8 Shoreline Clean-up – ALARP Assessment 130
6.8.1 Existing Capability – Shoreline Clean-up 130
6.8.2 Response planning: GWF-4 Drilling and Subsea Installation – Shoreline Clean-up 130
6.8.3 Shoreline Clean-up – Control measure options analysis 131
6.8.4 Selected Control Measures 132
6.9 Oiled Wildlife Response – ALARP Assessment 133
6.9.1 Existing Capability – Wildlife Response 133
6.9.2 Oiled Wildlife Response - Control Measure Options Analysis 133
6.9.3 Selected control measures 134
6.10 Waste Management – ALARP Assessment 135
6.10.1 Existing Capability – Waste Management 135
6.10.2 Waste Management - Control Measure Options Analysis 135
6.10.3 Selected control measures 136
6.11 Operational and Scientific Monitoring – ALARP Assessment 137
6.11.1 Existing Capability – Operational and Scientific Monitoring 137
6.11.2 Operational and Scientific Monitoring – Control Measure Options Analysis 137
6.11.3 Selected Control Measures 139
6.11.4 ALARP and Acceptability Summary 140

7 ENVIRONMENTAL RISK ASSESSMENT OF SELECTED RESPONSE TECHNIQUES 141
7.1 Identification of impacts and risks from implementing response techniques 141
7.2 Analysis of impacts and risks from implementing response techniques 141
7.3 Evaluation of impacts and risks from implementing response techniques 142
7.4 Treatment of impacts and risks from implementing response techniques 144

8 ALARP CONCLUSION 146

9 ACCEPTABILITY CONCLUSION 147

10 REFERENCES 148

11 GLOSSARY AND ABBREVIATIONS 151
11.1 Glossary 151
11.2 Abbreviations 153

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ANNEX A: NET ENVIRONMENTAL BENEFIT ANALYSIS DETAILED OUTCOMES ...155

ANNEX B: MONITOR AND EVALUATE ACTIVATION AND TERMINATION CRITERIA 157

ANNEX C: GWF-4 DRILLING AND SUBSEA INSTALLATION OSM ACTIVITY SPECIFIC ASSESSMENT 160

C.1 Determine if the activity OSM Planning Area fits within the Combined OSM Planning Area 160

C.2 Determine activity-specific monitoring priorities 160

C.3 Mobilisation and timing of OMP and SMP implementation 172

C.4 Determine the OSM resourcing requirements and assess capability for the activity 173

ANNEX D: TACTICAL RESPONSE PLANS.....181

FIGURES

Figure 1-1: Woodside hydrocarbon spill document structure.....13
Figure 2-1: Response planning and selection process.....18
Figure 2-2: Response planning assumption – timing, resourcing and effectiveness 20
Figure 2-3: Locations of CS-01, CS-02, CS-03 and CS-04.....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 2-6: GWF-4 Drilling and Subsea Installation (CS-01) – Day 1-6 – Surface oil concentration 33
Figure 3-1: Identify Response Protection Areas (RPAs) flowchart.....34
Figure 4-1: Net Environmental Benefit Analysis (NEBA) flowchart 37
Figure 5-1: Example screenshot of the CEM dashboard.....89
Figure 5-2: Example screenshot for the SCAT role.....89
Figure 6-1: GWF-4 Drilling and Subsea Installation process for sourcing relief well MODU 96
Figure 6-2: Source control and well intervention response strategy deployment timeframes for GWF-4 Drilling and Subsea Installation wells at the Wilcox Prospect.....98
Figure 6-3: Source control and well intervention response strategy deployment timeframes for GWF-4 Drilling and Subsea Installation Yodel Updip well 99
Figure 6-4: Timeline showing safety case revision timings alongside other relief well preparation activity timings for GWF-4 Drilling and Subsea Installation wells at the Wilcox Prospect.....101
Figure 6-5: Timeline showing safety case revision timings alongside other relief well preparation activity timings for GWF-4 Drilling and Subsea Installation Yodel Updip well 101

TABLES

Table 0-1: Summary of the key details for assessment..... 8
Table 1-1: Hydrocarbon Spill preparedness and response – document references 14
Table 2-1: Petroleum Activities Program credible spill scenarios.....22
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: Example Deterministic modelling data 26
Table 2-4: Surface hydrocarbon thresholds for response planning.....27
Table 2-5: Surface hydrocarbon viscosity thresholds 30
Table 2-6: Worst case credible scenario modelling results.....31
Table 3-1: Response Protection Areas (RPAs) from deterministic modelling.....36
Table 4-1: Response technique evaluation – Loss of Well Containment (LOWC) (CS-01 and CS-02).....40
Table 4-2: Response technique evaluation – vessel collision (CS-03 and CS-04) 43
Table 5-1: Environmental Performance – Monitor and evaluate 47
Table 5-2: Response Planning Assumptions – Source Control 49
Table 5-3: Environmental Performance – Source Control 50
Table 5-4: Response Planning Assumptions – Subsea Dispersant Injection 54
Table 5-5: Environmental Performance – Subsea Dispersant Injection 55
Table 5-6: Response Planning Assumptions – Surface Dispersant Application 58

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Table 5-7: Environmental Performance - Surface Dispersant Application....59
Table 5-8: Response Planning Assumptions – Containment and Recovery....61
Table 5-9: Environmental Performance – Containment and Recovery....63
Table 5-10: Response Planning Assumptions – Shoreline Protection and Deflection....65
Table 5-11: Environmental Performance – Shoreline protection and deflection....66
Table 5-12: Response Planning Assumptions – Shoreline Clean-up....69
Table 5-13: Shoreline Clean-up techniques and recommendations....70
Table 5-14: Environmental Performance – Shoreline Clean-up....73
Table 5-15: Key at-risk species potentially in Response Protection Areas and open ocean....76
Table 5-16: WAOWRP Guide for rating wildlife impact of an oil spill (DBCA, 2022)....76
Table 5-17: Environmental Performance – Oiled Wildlife Response (OWR)....78
Table 5-18: Response Planning Assumptions – Waste Management....79
Table 5-19: Environmental Performance – Waste Management....80
Table 5-20: Joint industry OSM plans relevant to the Petroleum Activity activities....82
Table 5-21: Response Planning Assumptions – SCAT....82
Table 5-22: Operational and scientific monitoring....84
Table 5-23: Environmental Performance – Incident Management System....87
Table 6-1: ROV timings....94
Table 6-2: Relief well drilling timings....97
Table 6-3: Safety case revision conditions and assumptions....102
Table 6-4: Response Planning – Subsea Dispersant Injection (based on CS-02)....110
Table 6-5: Existing Capability – Surface Dispersant Application....114
Table 6-6: GWF-4 Drilling and Subsea Installation loss of well containment scenario (CS-01) – Release volumes....115
Table 6-7: GWF-4 Drilling and Subsea Installation (CS-01) – Treatable hydrocarbons....115
Table 6-8: GWF-4 Drilling and Subsea Installation (CS-01)– Response Planning Need....116
Table 6-9: Existing Capability – Containment and Recovery....119
Table 6-10: GWF-4 Drilling and Subsea Installation loss of well containment scenario (CS-01) – Release volumes....119
Table 6-11: GWF-4 Drilling and Subsea Installation loss of well containment scenario (CS-01) – Treatable hydrocarbons....120
Table 6-12: GWF-4 Drilling and Subsea Installation loss of well containment scenario (CS-01) – Response Planning Need....120
Table 6-13: Response Planning – Shoreline Protection and Deflection (CS-01)....123
Table 6-14: Indicative Tactical response plan, aims and methods for identified RPAs....124
Table 6-15: Response Planning – Shoreline Clean-up....130
Table 7-1: Analysis of risks and impacts....142

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EXECUTIVE SUMMARY

On behalf of the North West Shelf Joint Venture (NWSJV), Woodside Energy Limited (Woodside) has developed its oil spill preparedness and response position for the Greater Western Flank Phase 4 (GWF-4) Drilling and Subsea Installation, 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 Scenario	Credible Scenario-01 (CS-01): A surface/ subsea release of PYA-01 condensate from a loss of well integrity in the Wilcox Prospect at a water depth of 72 m 19˚ 59' 53.8" S 115˚ 29' 38.44" E [1] 707,729 m^3 over 70 days [2] of PYA-01 Condensate 3% residual component totalling 21,232 m^3	Section 2.2
	Credible Scenario-02 (CS-02): Unplanned loss of well containment from the Yodel Updip development well at a water depth of 132 m 19° 45' 4.365" S 115° 43' 44.79" E [1] 993,860 m^3 over 76 days of Yodel-3 Condensate. 2.50% residue totalling 24,847 m^3	
	Credible Scenario-03 (CS-03): Hydrocarbon release due to a vessel collision within Montebello Marine Park 20˚03'1.44"S, 115˚31'35.04"E Instantaneous release of 1,000 m^3 of Marine Diesel [3] 5 % residual component totalling 50 m^3	
	Credible Scenario-04 (CS-04): Hydrocarbon release due to a vessel collision close to GDA05 well 19˚45'10.681"S, 115˚52'42.898"E Instantaneous release of 1,000 m^3 of Marine Diesel [4] 5 % residual component totalling 50 m^3	

[1] Based on more recent engineering design, the primary top-hole locations of four of the five Petroleum Activity wells have been refined, noting locations remain within 200 metres of the locations used for modelling purposes.

[2] Modelling for a loss of well integrity in the Wilcox Prospect was originally undertaken in 2023 based on a preliminary estimated relief well duration of 77 days resulting in a release of circa 745,012 m^3. Contemporary studies estimate that a relief well could be executed within 70 days (including mobilisation of a MODU from South East Asia) releasing circa 707,729 m^3. Given the decreased duration and volume, the existing modelling is deemed conservative and therefore additional modelling was not required.

[3] Modelling for a release of 2,000 m^3 MDO was available within 6.6 km of the Wilcox Prospect area, and closer to shore than the Operational Area for this activity. It was originally undertaken in 2021 using NOPSEMA's contemporary modelling thresholds. The largest tank of the vessel proposed for the activity is circa 1,000 m^3, 50% smaller than the modelled volume (2,000 m^3). Given that spill risk parameters and geographic location for this activity fall within the envelope of the existing modelling, it is an appropriate surrogate and therefore additional modelling was not required.

[4] Modelling for a release of 1,000 m^3 MDO was available within title WA-5-L (one of the northern Operational Areas for this activity). It was originally undertaken in 2020 using NOPSEMA's contemporary modelling thresholds. The largest tank of the vessel proposed for the activity is also 1,000 m^3. Given that spill risk parameters and geographic location for this activity align with the existing modelling, it is an appropriate surrogate and therefore additional modelling was not required.

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<table>
<tr><td>Hydrocarbon Properties</td><td>PYA-01 Condensate

PYA-01 condensate is a mixture of volatile and persistent hydrocarbons with high proportions of volatile and semi-volatile components. In favourable evaporation conditions, about 48% of the oil mass should evaporate within the first 12 hours (BP < 180°C); up to a further 19% could evaporate within the first 24 hours (180°C < BP < 265°C); and a further 30% should evaporate over several days (265°C < BP < 380°C). Approximately 3% of the oil is shown to be persistent.

Yodel-3 Condensate

Yodel-3 Condensate (API 54.4) is composed of hydrocarbons that have a wide range of boiling points and volatilities at atmospheric temperatures, and which would begin to evaporate at different rates on exposure to the atmosphere. Evaporation rates will increase with temperature, but in general about 63.1% of the oil mass should evaporate within the first 12 hours (BP < 180°C); a further 25.3% should evaporate within the first 24 hours (180°C < BP < 265°C); and a further 9.1% should evaporate over several days (265°C < BP < 380 °C). Approximately 2.5% of the oil is shown to be persistent

MDO

In general, about 6% of the MDO 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 (50 m³).</td><td>Section 6 of the EP

Appendix A of the Oil Pollution First Strike Plan</td></tr>
<tr><td>Modelling Results</td><td>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 100 replicate simulations were completed for CS-01 and CS-02and 200 for CS-03 and CS-04, 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 (25 -50 simulations per quarter).

Deterministic modelling

Deterministic modelling was then undertaken for scenario CS-01 as the worst-case credible scenarios (WCCS) to establish the following for response planning purposes:

• Minimum time to commencement of oil accumulation at any shoreline receptor (at a threshold of 100 g/m^2)
• Maximum cumulative oil volume accumulated at any individual shoreline receptor (at concentrations in excess of 100 g/m^2)
• Maximum cumulative oil volume accumulated across all shoreline receptors (at concentrations in excess of 100 g/m^2)

<table>
<tr><th></th><th>CS-01: Hydrocarbon release at Wilcox Prospect. 707,729 m^3 of PYA-01 Condensate over 70 days</th><th>CS-02: Hydrocarbon release at Yodel Updip development well. 993,860 m^3 of Yodel-3 Condensate over 76 days</th><th>CS-03: Instantaneous hydrocarbon release due to a vessel collision of 1,000 m^3 of MDO</th><th>CS-04: Instantaneous hydrocarbon release due to a vessel collision of 1,000 m^3 of MDO</th></tr>
<tr><td>Modelling type:</td><td>Deterministic</td><td>Stochastic</td><td>Stochastic</td><td>Stochastic</td></tr>
<tr><td>Minimum time to floating hydrocarbon contact with the offshore edge(s) of any shoreline receptor</td><td>13 hours at Montebello Islands MP (Q3_012)</td><td>7 hours at Rankin Bank</td><td>1 hour at Montebello MP</td><td>N/A – no floating contact at 10 g/m^2</td></tr>
</table>
</td><td>Section 2.3</td></tr>
</table>

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	polygon (at a concentration of 10 g/m^2)					
	Minimum time to shoreline contact (above 100 g/m^2)	15 days at Montebello Islands including Montebello Islands MP and Hermite Island. (Q3_012) (15 m^3)	NA – no shoreline contact at 100 g/m²	NA – no shoreline contact at100 g/m²	NA – no shoreline contact at100 g/m²	
	Largest volume ashore at any single Response Protection Area (RPA) (above 100 g/m^2)	42 m^{3}at Muiron Islands and MMA. (Q3_012) (27.5 days)	NA – no shoreline contact at 100 g/m²	NA – no shoreline contact at 100 g/m²	NA – no shoreline contact at100 g/m²	
	Largest total shoreline accumulation (above 100 g/m^2) all shorelines	42 m^3 at Muiron Islands and MMA. (Q3_012) (27.5 days)	NA – no shoreline contact at 100 g/m²	NA – no shoreline contact at 100 g/m²	NA – no shoreline contact at 100 g/m²	
	Minimum time to entrained hydrocarbon contact with the offshore edges of any receptor polygon (at a threshold of 10 ppb)	1 hour at Montebello MP	5 hours at Rankin Bank	1 hour at Montebello MP	18 hours at Rankin Bank	
Net Environmental Benefit Analysis	Monitor and evaluate, source control, subsea dispersant injection, surface dispersant spraying, containment and recovery, protection and deflection, shoreline clean-up, 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 aacceptable level for the risk presented in Section 2, without the implementation of considered additional, alternative or improved control measures.					Section 7

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1 INTRODUCTION

1.1 Overview

On behalf of the North West Shelf Joint Venture (NWSJV), Woodside Energy Limited (Woodside) has developed its oil spill preparedness and response position for the GWF-4 Drilling and Subsea Installation, 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 GWF-4 Drilling and Subsea Installation Environment Plan (EP)
- Hydrocarbon Spill Australia Regulatory Framework[5]
- The GWF-4 Drilling and Subsea Installation Oil Pollution Emergency Plan (OPEP) including
  - Oil Pollution First Strike Plan (FSP)
  - Operational and Scientific Monitoring Bridging Implementation Plan (OSM BIP)[6]
  - 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 3.2 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 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.

[5] In accordance with Regulation 56 of the Environmental Regulations, references to the Hydrocarbon Spill Australia Regulatory Framework 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 using the following link: https://docs.nopsema.gov.au/A1282743

[6] 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 using the following link: https://docs.nopsema.gov.au/A1282743

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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.

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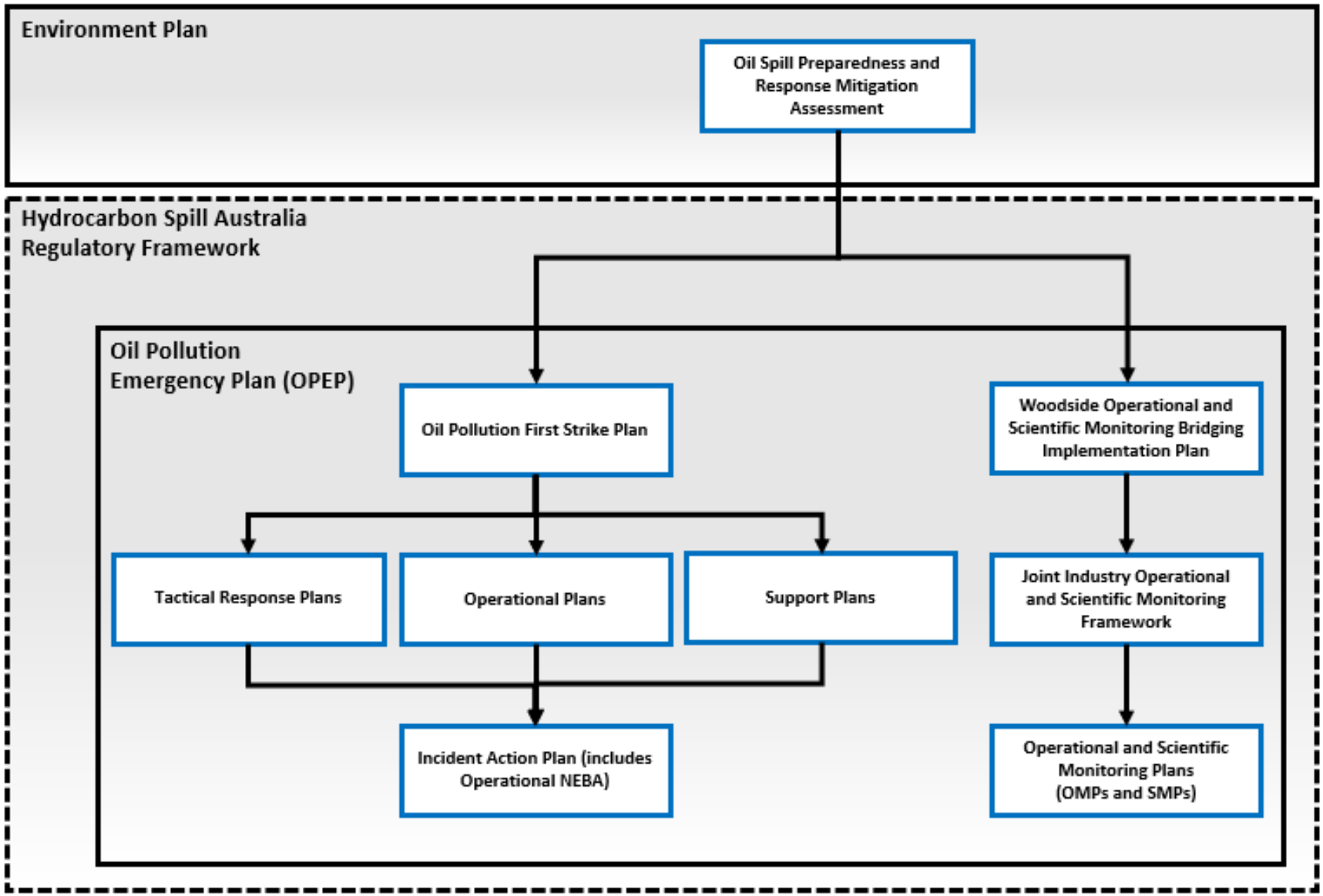


Figure 1-1: Woodside hydrocarbon spill document structure

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Table 1-1: Hydrocarbon Spill preparedness and response – document references

Document	Document overview	Stakeholders	Relevant information	Document subsections (if applicable)
GWF-4 Drilling and Subsea Installation Environment Plan (EP)	Demonstrates that potential adverse impacts on the environment associated with the GWF-4 Drilling and Subsea Installation (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.	NOPSEMA Woodside internal	EP Section 4 (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 [5]	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 GWF-4 Drilling and Subsea Installation (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.	
GWF-4 Drilling and Subsea Installation 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	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	

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Document	Document overview	Stakeholders	Relevant information	Document subsections (if applicable)
	Incident Management Team (IMT).		modelling, aerial surveillance and oil spill tracking buoy details.	
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 Source Control Emergency Response Planning Guideline Vessel Shipboard Oil Pollution Emergency Plan (SOPEP) Subsea dispersant injection Surface Dispersants Containment and Recovery Protection and deflection Shoreline clean-up Oiled wildlife response
Operational and Scientific Monitoring (OSM) Bridging Implementation Plan [6]	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 (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	

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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.	For full list of relevant Tactical Plans for the GWF-4 Drilling and Subsea Installation oil spill response, refer to **ANNEX D: 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 Accommodation & Catering Plan – Australia Transport Management Plan – Australia 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

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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 GWF-4 Drilling and Subsea Installation 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.

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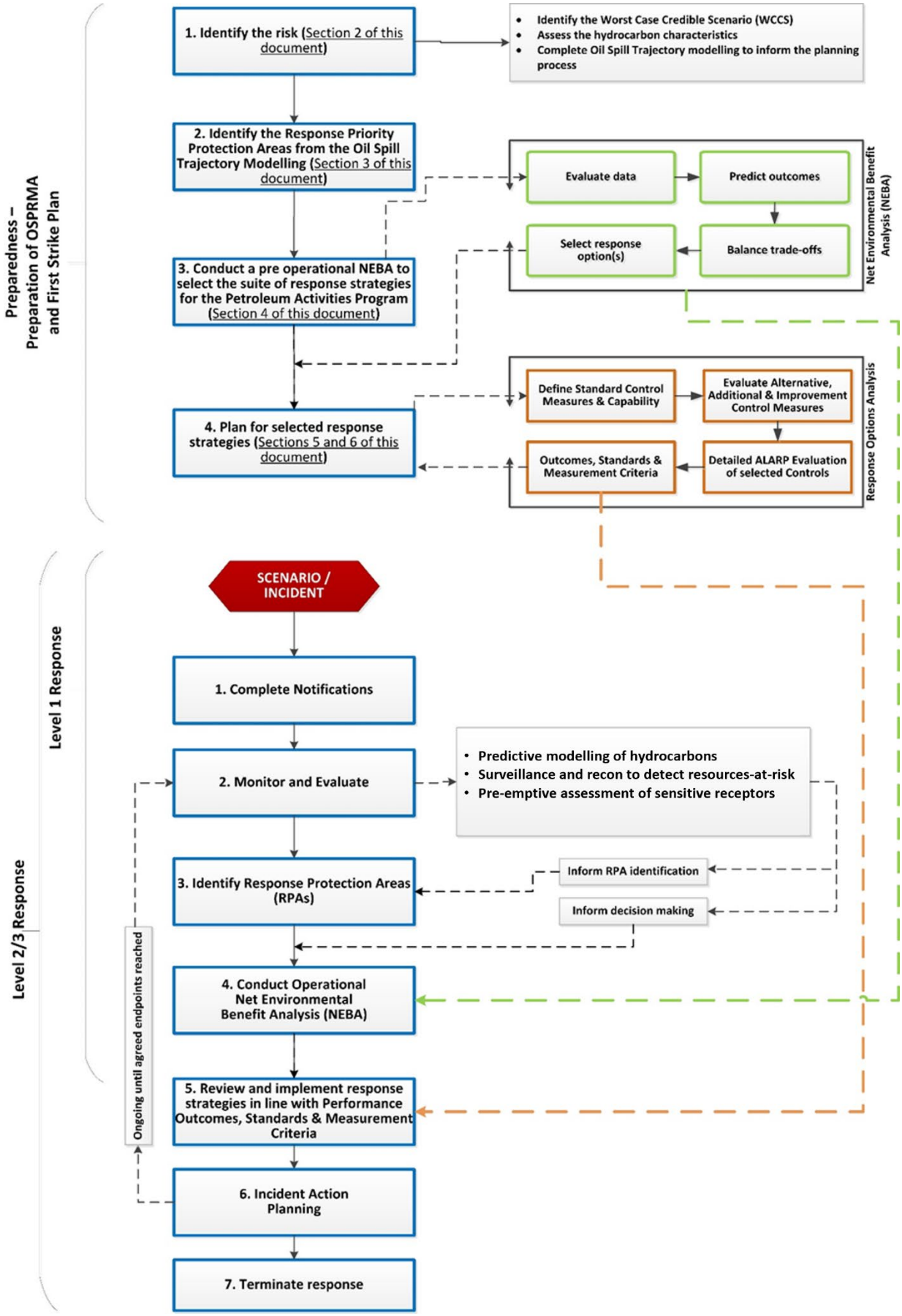


Figure 2-1: Response planning and selection process

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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

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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.

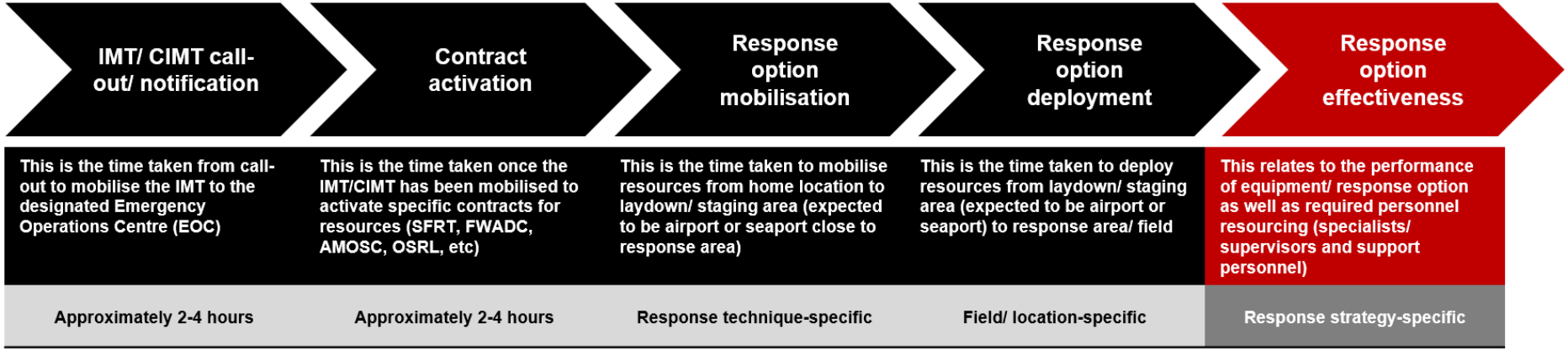


Figure 2-2: Response planning assumption – timing, resourcing and effectiveness

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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. Three 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 loss of well containment scenarios (CS-01 and CS-02) have been modelled and are considered to determine the WCCS for response planning purposes. Modelling of the CS-01 has confirmed that the WCCS will result in shoreline accumulation and floating hydrocarbons at feasible response thresholds.

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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)	Incident level	Hydrocarbon type	Residual proportion	Residual volume (m^3)
Credible Spill Scenario-01 (CS-01)	Yes	Hydrocarbon release caused by a well loss of containment (surface/ subsea release) at a water depth of 72 m	707,729 m^3 over 70 days [2]	3	PYA-01 Condensate	3 %	21,232 m^3 or 303 m^3 per day
Credible Spill Scenario-02 (CS-02)	Yes	Hydrocarbon release caused by a well loss of containment (surface/ subsea release) at a water depth of 132 m	993,860 m^3 over 76 days	3	Yodel-3 Condensate	2.50%	24,847 m^3 or 327 m^3 per day
Credible Spill Scenario-03 (CS-03)	No	Surface hydrocarbon release caused by vessel collision within Montebello Marine Park	1,000 m^3 [3]	2	MDO	5%	50 m^3
Credible Spill Scenario-04 (CS-04)	No	Surface hydrocarbon release caused by vessel collision close to GDA05 well	1,000 m^3 [4]	2	MDO	5%	50 m^3

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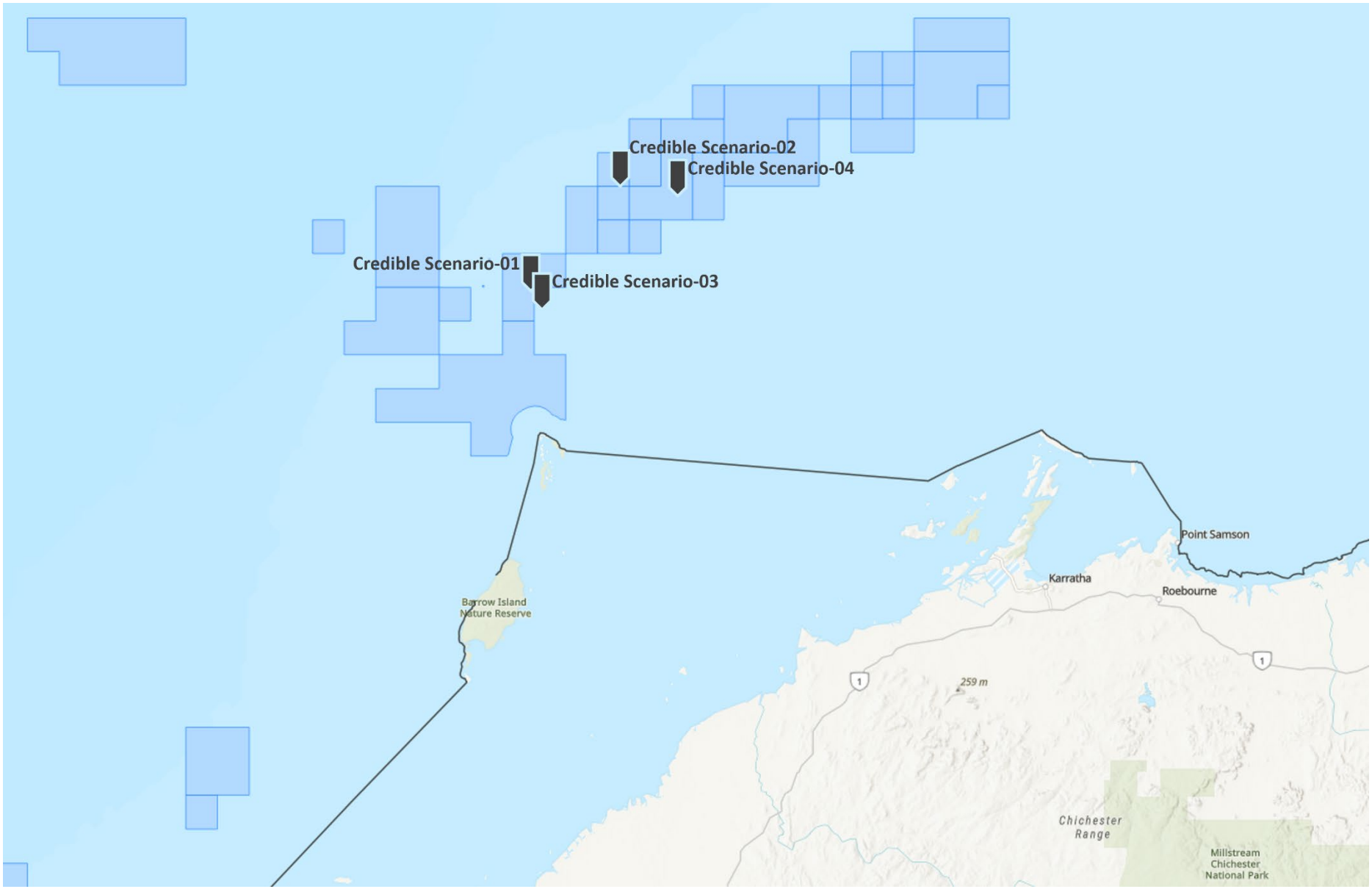


Figure 2-3: Locations of CS-01, CS-02, CS-03 and CS-04

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2.2.1 Hydrocarbon characteristics

Hydrocarbon characteristics, including modelled weathering data and ecotoxicity, are included in Section 6 of the EP.

PYA-01 Condensate

PYA-01 condensate is a mixture of volatile and persistent hydrocarbons with high proportions of volatile and semi-volatile components. In favourable evaporation conditions, about 48% of the oil mass should evaporate within the first 12 hours (BP < 180 °C); up to a further 19% could evaporate within the first 24 hours (180 °C < BP < 265 °C); and a further 30% should evaporate over several days (265 °C < BP < 380 °C). Approximately 3% of the oil is shown to be persistent.

Yodel-3 Condensate

Yodel-3 Condensate (API 54.4) is composed of hydrocarbons that have a wide range of boiling points and volatilities at atmospheric temperatures, and which would begin to evaporate at different rates on exposure to the atmosphere. Evaporation rates will increase with temperature, but in general about 63.1% of the oil mass should evaporate within the first 12 hours (BP < 180 °C); a further 25.3% should evaporate within the first 24 hours (180 °C < BP < 265 °C); and a further 9.1% should evaporate over several days (265 °C < BP < 380 °C). Approximately 2.5% of the oil is shown to be persistent

Marine Diesel Oil (MDO)

Marine diesel is a mixture of volatile and persistent hydrocarbons with low proportions of highly residual components. In general, about 6% of the MDO 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 (50 m^3).

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 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.

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A total of 100 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 (25 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)
Condensate	10	10	1,000	100
Diesel	10	10	1,000	100
Operational and scientific monitoring assessment (see ANNEX C)				
All hydrocarbon types	1	10	10	10

2.3.2 Deterministic modelling

Woodside uses deterministic modelling results to evaluate risks and impacts and response capability requirements. These results are provided in both shapefile and data table format with each row of the data table representing a 1 km^2 cell. This cell size has been used as it represents the approximate area a single containment and recovery operation or surface dispersant operation (single sortie or vessel spraying) can effectively treat in one ten (10) hour day. Smaller cell sizes have been considered but would not change the response need as the potential distance between cells would not allow multiple cells to be treated per day by response operations. Additionally, a 1 km^2 cell is expected to allow averaging of threshold concentrations and mass across the spatial extent to represent a conservative approach (patches of oil and windrows) to response planning that simulates monitor and evaluate feedback in a real event.

Deterministic modelling was carried out on CS-01 as the WCCS and used for response planning purposes. A sample of the deterministic results is provided below as an indication of the data format and content.

- Column A and B provide the latitude and longitude of the cell
- Column C is the elapsed time since the release occurred
- Column D represents the average concentration across the cell in g/m2
- Column E represents the viscosity of the hydrocarbon in centistokes (cSt) at sea surface temperature
- Column F and G represents the mass of hydrocarbon across the entire cell in kg and tons respectively.

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Table 2-3: Example Deterministic modelling data

Latitude	Longitude	Time_hour	Conc_gm^2	Visc_cSt	Mass_kg	Mass_tons
A	B	C	D	E	F	G
-20.000258	115.470380	6	2.945560	28.259384	2947.502851	2.945560
-19.991226	115.470380	6	6.128163	25.917292	6132.562399	6.128163
-20.000258	115.479935	6	49.300703	17.704011	49333.163023	49.300703
-20.000258	115.489490	6	206.066086	1.938434	206201.503754	206.066086
-20.009291	115.403493	12	2.283731	44.490824	2285.124302	2.283731
-20.000258	115.403493	12	6.393756	48.859937	6398.029566	6.393756
-20.009291	115.413048	12	4.601684	44.030422	4604.486465	4.601684

The deterministic modelling data provides an indication of the response need by displaying the potential surface area and volume treated or recovered by response operations. Existing capability is reviewed to approximate the surface area and volumes that can be treated or removed and a range of alternate, improved and additional options to reduce risks and impacts to ALARP are considered.

Woodside recognises no single response technique will treat all available subsea or surface oil and a combination of response techniques will be required for the identified scenario. Even with the significant resources available to Woodside through existing capability and third-party resources, the primary offshore response techniques of surface dispersant application and containment and recovery will only treat or recover a minor proportion (<30%) of the available surface hydrocarbons based on previous response experience.

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 operational and scientific monitoring (OSM) are used to predict and assess environmental impacts, however they do not appropriately represent the thresholds at which an effective response can be implemented. Additional response thresholds are used for response planning and to determine areas where response techniques would be most effective. The deterministic modelling is then used to assess the nature and scale of a response.

In the event of an actual response, existing deterministic modelling would be reviewed for suitability and additional modelling would be conducted using real-time data and field information to inform IMT decisions.

The deterministic spill modelling outputs are presented at response planning thresholds for surface hydrocarbons for the WCCS. Surface spill concentrations are expressed as grams per square metre (g/m^2) (Section 2.2). The thresholds used are derived from oil spill response planning literature and industry guidance and are summarised below.

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2.3.3.1 Surface hydrocarbon concentrations

Table 2-4: 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[7]	Code 3 – Dull metallic colours	5 to 50
50	Predicted minimum floating oil threshold for containment and recovery and surface dispersant application [8]	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 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 (Ipieca, 2015a).

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 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

[7] 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.

[8] 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.

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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).

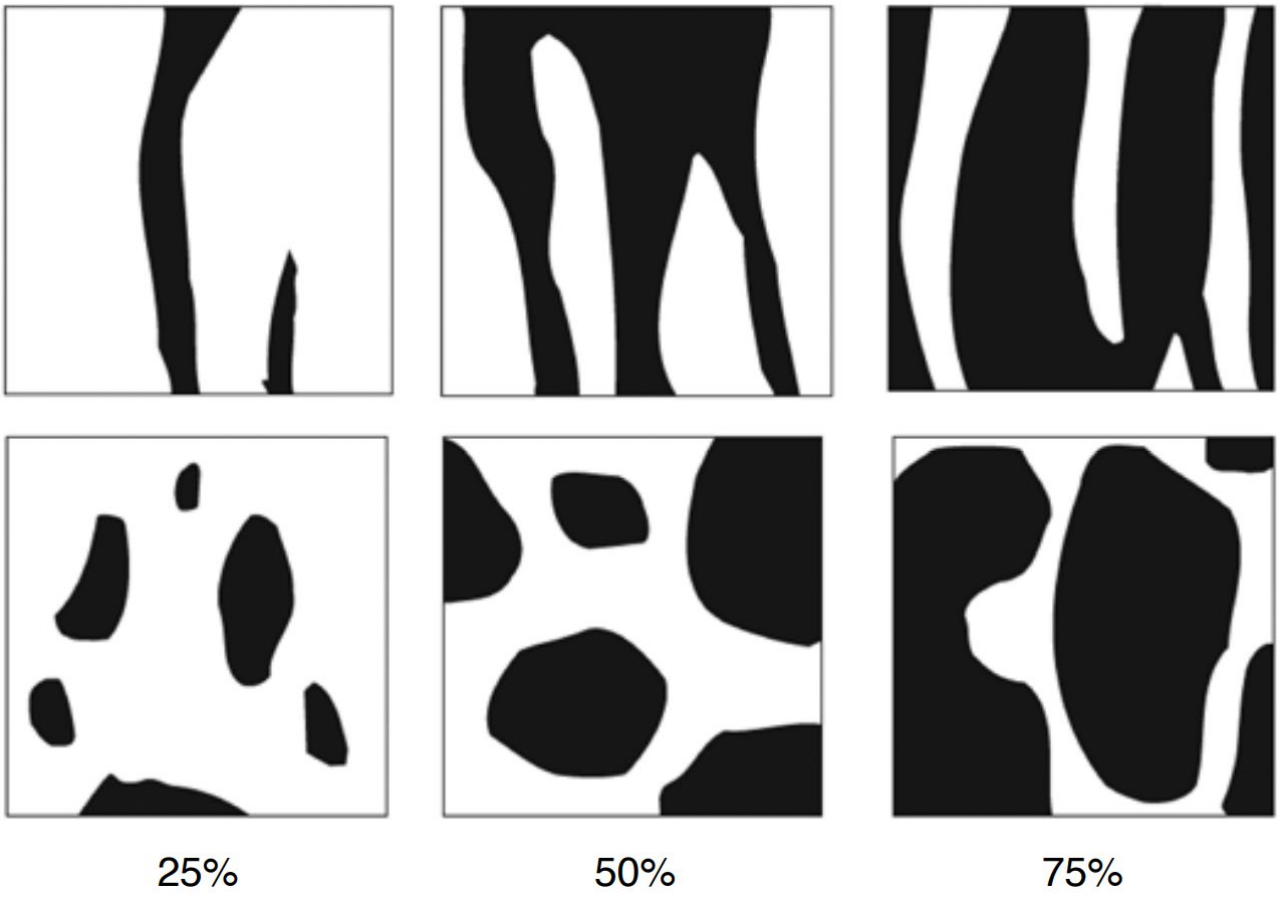


Figure 2-4: Proportion of total area coverage (AMSA, 2014)

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.

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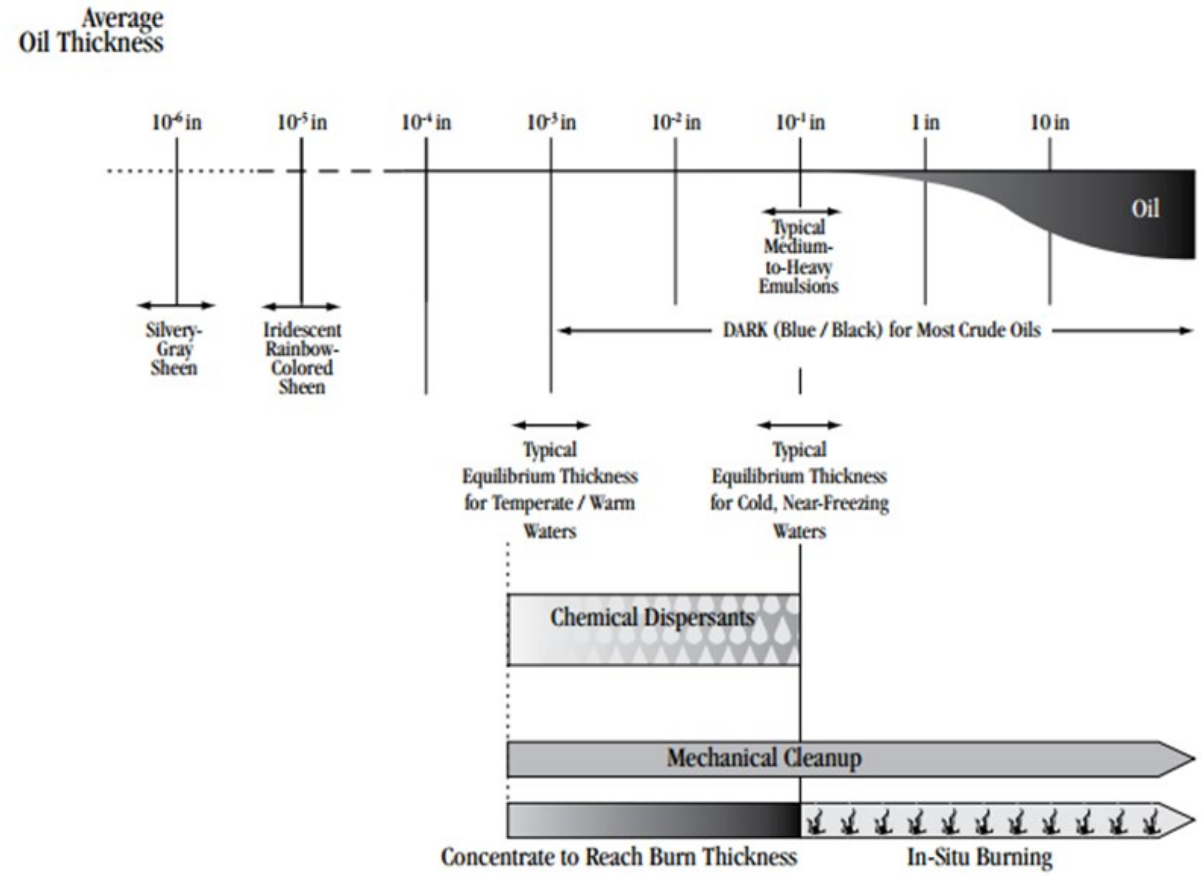


Figure 2-5: Oil thickness versus potential response options (from Allen & Dale 1996)

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) have been utilised by Woodside in deterministic modelling to identify the most likely locations for surface dispersant application and containment and recovery operations.

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2.3.3.2 Surface hydrocarbon viscosity

Table 2-5: 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 2-6).

2.3.4 Spill modelling results

Details of the scenario and modelling inputs are included along with deterministic results in Table 2-6.

The selected deterministic runs used to represent the WCCS are:

- Minimum time to floating hydrocarbon contact with the offshore edge(s) of any shoreline receptor polygon (at a threshold of 10 g/m^2).
- Minimum time to commencement of hydrocarbon accumulation at any shoreline receptor (at a threshold of 100 g/m^2).
- Maximum cumulative hydrocarbon volume accumulated at any individual shoreline receptor (at a threshold of 100 g/m^2).
- Maximum cumulative hydrocarbon volume accumulated across all shoreline receptors (at a threshold of 100 g/m^2).
- Minimum time to entrained hydrocarbon contact with the offshore edges of any receptor polygon (at a threshold of 10 ppb).

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Table 2-6: Worst case credible scenario modelling results

Scenario description	Results				
	CS-01 (WCCS)		CS-02	CS-03	CS-04
WCCS – total volume released Refer to Section 2.1.1 for detailed hydrocarbon characteristics	A surface/ subsea release of PYA-01 condensate from a loss of well integrity in the Wilcox Prospect at a water depth of 72 m 707,729 m^3 over 70 days [2]		A surface/ subsea release of Yodel-3 condensate from a loss of well integrity at the Yodel Updip development well at a water depth of 132 m 993,860 m^3 over 76 days	Surface hydrocarbon release caused by due to a vessel collision within Montebello Marine Park Instantaneous release of 1,000 m^3 [3]	Surface hydrocarbon release caused by due to a vessel collision close to GDA05 well. Instantaneous release of 1,000 m^3 [4]
WCCS – residual volume remaining post-weathering	3% residual component of 21,232 m^3		2.50% residue totalling 24,846.5 m^3	5% residue or 50 m^3	5% residue or 50 m^3
Location	19˚59'53.8"S, 115˚29'38.44"E [1]		19° 45' 4.365" S, 115° 43' 44.79" E [1]	20˚03'1.44"S, 115˚31'35.04"E	19˚45'10.681"S, 115˚52'42.898"E
Modelling results	**From deterministic**		**From stochastic**	**From stochastic**	**From stochastic**
Surface area of hydrocarbons (>50 g/m^2)	**Week 1** 1 km^2 on day 1 10 km^2 on day 2 19 km^2 on day 3 1 km^2 on day 4 1 km^2 on day 5	**Week 2** 6 km^2 on day 10 12 km^2 on day 11 18 km^2 on day 12 28 km^2 on day 13 31 km^2 on day 14 Daily area peaks at 45 km^2 on day 15.	Area data not available from stochastic modelling – floating oil at 50 g/m^2 is present at 7 hours at Rankin Bank only	N/A – no floating hydrocarbons at this threshold	N/A – no floating hydrocarbons at this threshold
Surface area of hydrocarbons (>50 g/m^2 and <10,000 cSt)	**Week 1** 1 km^2 on day 1 10 km^2 on day 2 19 km^2 on day 3 1 km^2 on day 4 1 km^2 on day 5	**Week 2** 6 km^2 on day 10 12 km^2 on day 11 18 km^2 on day 12 28 km^2 on day 13 31 km^2 on day 14 Daily area peaks at 45 km^2 on day 15.	Area data not available from stochastic modelling – floating oil at 50 g/m^2 is present at 7 hours at Rankin Bank only	N/A – no floating hydrocarbons at this threshold	N/A – no floating hydrocarbons at this threshold
Minimum time to floating hydrocarbon contact with the offshore edge(s) of any shoreline receptor polygon (at a concentration of 10 g/m^2)	13 hours to contact at Montebello Islands MP (Q3_012)		7 hours at Rankin Bank	1 hour at Montebello MP	N/A – no floating hydrocarbons at this threshold
Minimum time to commencement of hydrocarbon accumulation at any shoreline receptor (at a concentration of 100 g/m^2)	15 days to contact at Montebello Islands including Montebello Islands MP and Hermite Island (Q3_012) (15 m^3)		NA – no shoreline contact at 100 g/m²	NA – no shoreline accumulation above 100 g/m²	NA – no shoreline accumulation above 100 g/m²
Maximum cumulative hydrocarbon volume accumulated at any individual shoreline receptor (at a concentration of 100 g/m^2).	42 m^3 to contact at Muiron Islands and MMA (Q3_012) (27.5 days)		NA – no shoreline contact at 100 g/m²	NA – no shoreline accumulation above 100 g/m²	NA – no shoreline accumulation above 100 g/m²
Maximum cumulative hydrocarbon volume accumulated across all shoreline receptors contacted by accumulated hydrocarbons (at a concentration of 100 g/m^2)	42 m^3 to contact at Muiron Islands and MMA (Q3_012) (27.5 days)		NA – no shoreline contact at 100 g/m²	NA – no shoreline accumulation above 100 g/m²	NA – no shoreline accumulation above 100 g/m²
Minimum time to entrained hydrocarbon contact with the offshore edges of any receptor polygon (at a threshold of 10 ppb)	1 hour at Montebello MP		5 hours at Rankin Bank	1 hour at Montebello MP	18 hours at Rankin Bank
The full list of response protection areas (RPAs) predicted from modelling is available in Table 3-1					

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From the above modelling results in Table 2-6, deterministic run Q3_012 for CS-01 is deemed to be the worst case and has been used as the basis for response planning for this Petroleum Activity.

The map below displays the predicted surface concentration of oil at 0-50 g/m^2 (BAOAC Code 1-3 sheen - light grey), 50–200 g/m^2 (BAOAC Code 4 – discontinuous true oil colour - brown) and 200 g/m^2 and above (BAOAC Code 5 – continuous true oil colour - black) over the initial 6 days of the WCCS (CS-01). Beyond day 6the subsea release continues with daily surface oil presenting in similar locations, concentrations and viscosity.

CS-03 and CS-04 are MDO scenarios for which the use of containment and recovery and surface dispersant application are not appropriate and therefore no maps are included for these scenarios.

As shown in the figure below, and from analysis of the deterministic results, modelling predicts the following:

- The subsea release is predicted to result in sufficient surface concentrations for effective surface dispersant (>50 g/m^2 and <10,000 cSt) and containment and recovery operations (>50 g/m^2) from day 1 of the modelled scenario. Floating hydrocarbons are not predicted to exceed the maximum feasible viscosity of 10,000 cSt for feasible surface dispersant application for the duration of the spill event.
- Surface dispersant application would only be applied where the application criteria is met i.e. within the pre-defined Zone of Application as illustrated in Figure 2-6.
- Response operations cannot be implemented if the safety of response personnel cannot be guaranteed. Safety circumstances that limit the execution of this control measure include volatile concentrations of hydrocarbons in the atmosphere, high winds (>20 knots), waves and/or sea states (>1.5m waves) and high ambient temperatures.

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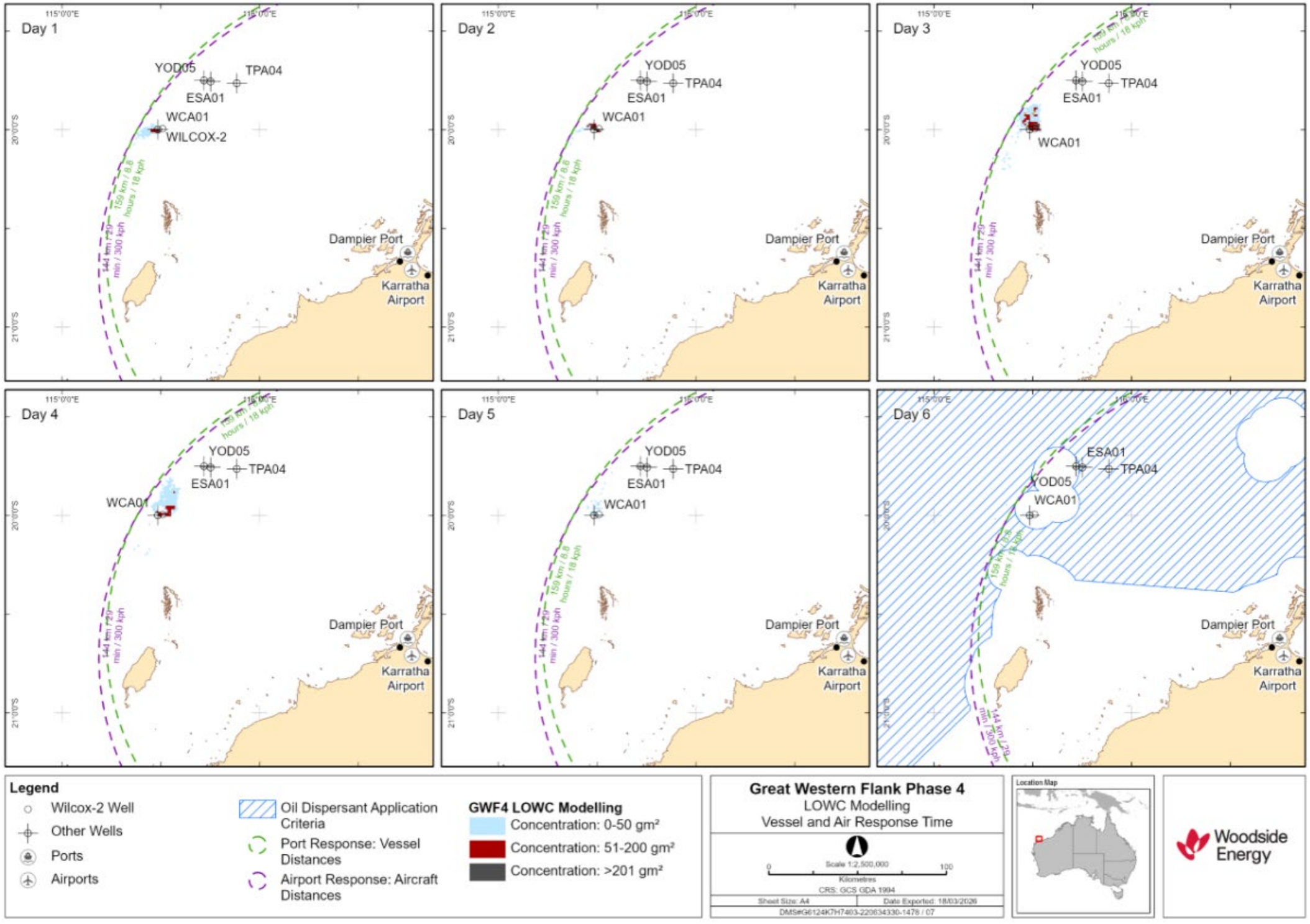


Figure 2-6: GWF-4 Drilling and Subsea Installation (CS-01) – Day 1-6 – Surface oil concentration

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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.

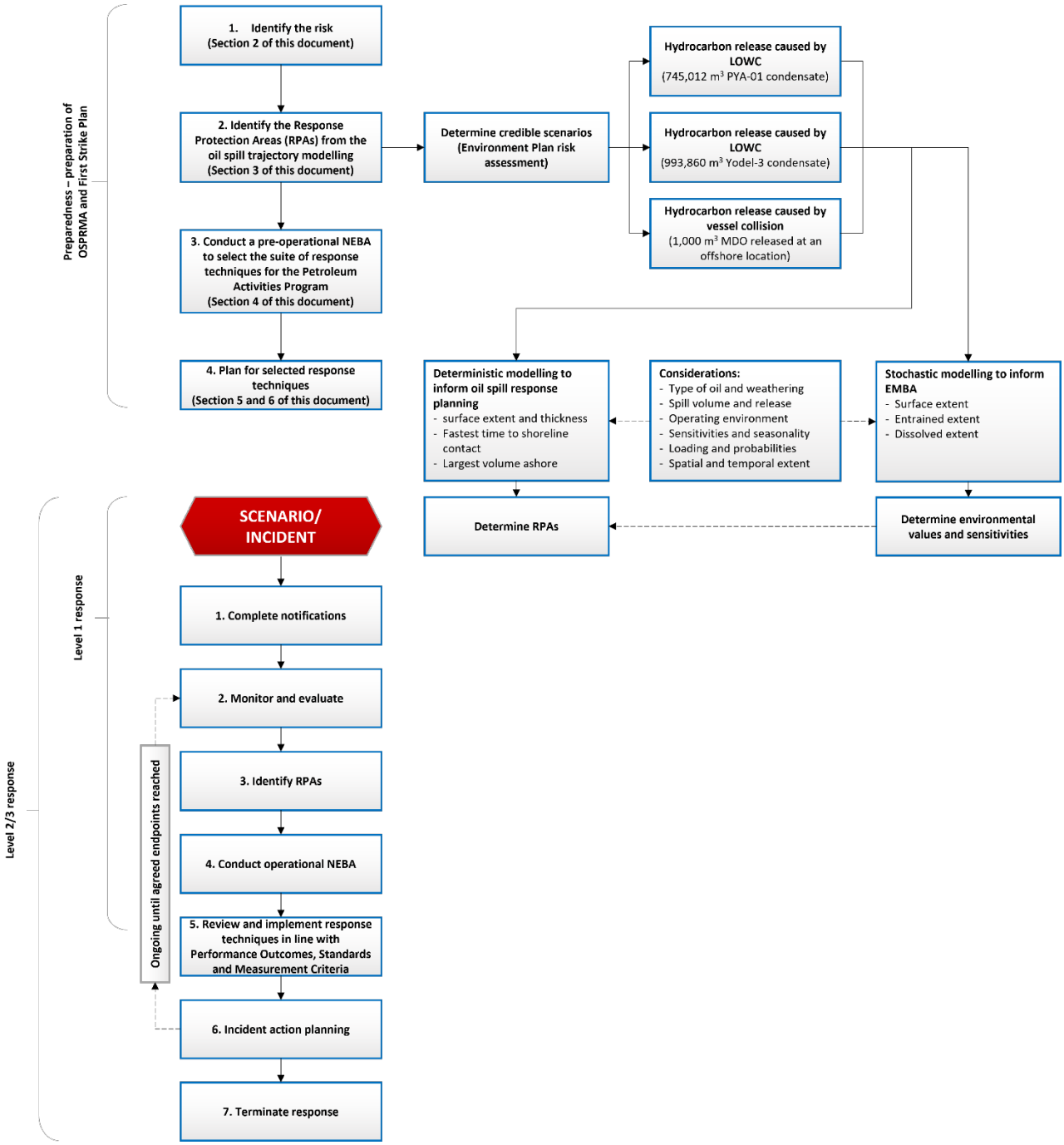


Figure 3-1: Identify Response Protection Areas (RPAs) flowchart

3.1 Identified sensitive receptor locations

Section 6of the EP includes the list of sensitive receptor locations that have been identified by stochastic modelling as meeting the requirements outlined below:

- receptors with the potential to incur surface, entrained or shoreline accumulation contact above environmental impact thresholds

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- 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 have been 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). It is important to note that the figures outlined in Table 3-1 are the combined results of the individual worst-case runs and do not indicate a single worst case credible scenario (where the timings and volumes are all expected from one release).

From the identified sensitive receptors described in Section 6 of the EP, only those which a shoreline response could feasibly be conducted (accumulation > 100 g/m^2 for shoreline assessment and/or contact with surface slicks >10 g/m^2 for monitor and evaluate) have been selected for response planning purposes. While not discounting other sensitivities, these RPAs have been used as the basis for demonstrating the capability to respond to the nature and scale of a spill from the WCCS and prioritising response techniques.

Table 3-1 outlines locations which were identified from the modelling runs for the WCCS but does not constitute the full list of Priority Protection Areas (PPAs) potentially contacted from stochastic modelling (as per EMBA definition) (see Section 6 of the EP). Other PPA outliers were identified from the modelling and have been included in the assessment of capability in Sections 5 and 6.

Additional sensitive receptors are presented the existing environment description (Section 4 of the EP) and impact assessment section (Section 6 of the EP) for each respective spill scenario. The pre-operational NEBA (Section 4) considers the results from the stochastic modelling to allow consideration of all feasible response techniques are considered in the planning phase, therefore additional receptors are also included in the pre-operational NEBA.

The RPAs identified in Table 3-1 are used to plan for the nature and scale of a shoreline response.

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Table 3-1: Response Protection Areas (RPAs) from deterministic modelling

Response protection area	Conservation status	IUCN protection category	CS-01	
			Minimum time to shoreline contact (above 100 g/m^2) in days [9]	Maximum shoreline accumulation (above 100 g/m^2) in m^3 [10]
Montebello Islands including Montebello Islands MP and Hermite Island	State Marine Park Australian Marine Park	IUCN IA – Strict Nature Reserve IUCN VI – Multiple Use Zone IUCN II and IV – Recreational Use Zone IUCN II – Marine National Park Zone	15.0 days (15 m^3)	15 m^3 (15.0 days)
Southern Pilbara Islands at Thevenard Island including NR	State Marine Park Australian Marine Park	IUCN IV – Recreational Use Zone	18.1 days (2 m^3)	2 m^3 (18.1 days)
Muiron Islands and Muiron MMA	Muiron Islands Marine Management Area	IUCN IA – Strict Nature Reserve IUCN VI – Multiple Use Zone	27.5 days (42 m^3)	42 m^3 (27.5 days)
Exmouth including Ningaloo State MP and Ningaloo Coast WH	Australian Marine Park World Heritage Area WA State Marine Park	Recreational Use Zone – IV General Use Zone – II Sanctuary Zone - IA	29.8 days (17 m^3)	17 m^3 (29.8 days)

[9] This volume and time represent the first time to contact on defined shoreline polygon and the maximum volume ashore for that 24 hour period.
[10] This volume and time represent the maximum volume ashore on defined shoreline polygon for any 24 hour time period

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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 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 in the planning/preparedness process and would also be followed in a response.

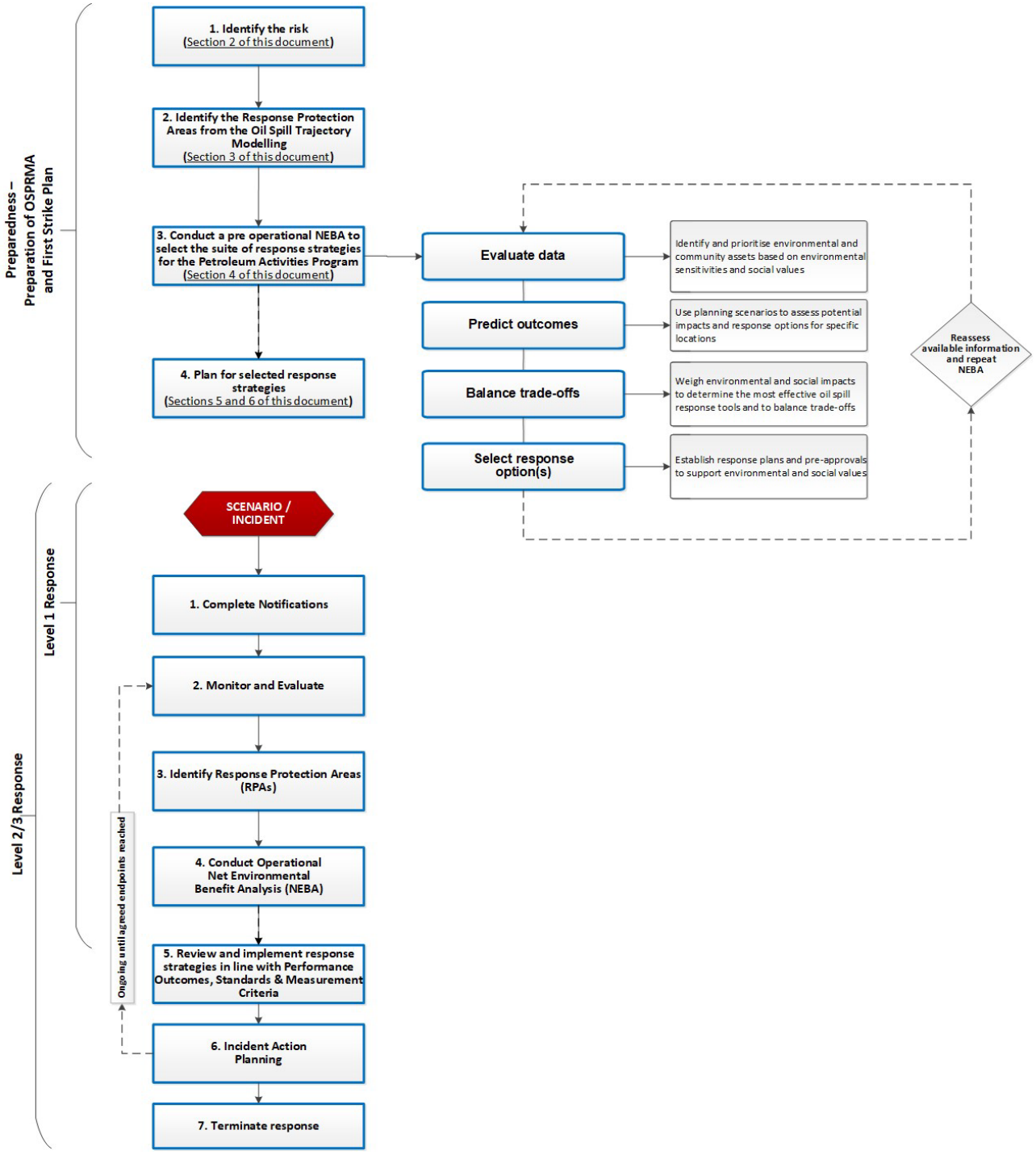


Figure 4-1: Net Environmental Benefit Analysis (NEBA) flowchart

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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 2.3.1.1) and the surface concentrations (Section 2.3.3.1) from the deterministic 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.

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 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 are then used to assess the feasibility/effectiveness and scale of the response. Modelling results are available in **Table 2-6** and **Table 3-1**.

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

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- Source control
  - Remotely operated vehicle (ROV) intervention
  - debris clearance and/or removal
  - capping stack
  - relief well drilling
- Source control via vessel 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.

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Table 4-1: Response technique evaluation – Loss of Well Containment (LOWC) (CS-01 and CS-02)

Response Technique	Effectiveness	Feasibility	Decision	Rationale for the decision
Hydrocarbon: PYA-01 Condensate and Yodel-03 Condensate				
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 condensate 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 blowout preventer (bop) intervention using ROV and hotstab	Controlling a loss of well containment at source via BOP intervention would be the most effective way to limit the quantity of hydrocarbon entering the marine environment.	In the event of the worst-case scenario with a loss of well containment during drilling operations, ROV operations to locally operate the BOP would be attempted.	Yes	The use of source control intervention via ROV may be feasible (depending on local concentration of atmospheric volatiles) and would reduce 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.	Woodside will have a source control emergency response plan (SCERP) which will cover the GWF-4 drilling and subsea installation activity. Though all capping stack deployment technologies are unproven, in the event of a loss of well containment, and where deployment is feasible, the use of a proven subsea deployment method such as a heavy lift vessel, would be attempted as this is more commonly used in industry, is a more reliable and, in turn, ALARP approach. If environmental conditions permit (wind speed, wave height, current and plume radius), deployment of a capping stack would be attempted with a heavy lift vessel. Woodside maintains several frame agreements with various vessel service providers and maintains the ability to call off services with a capping stack and debris clearance agreement. The location of suitable vessels for capping stack deployment is monitored monthly. The supply arrangements and reliability to achieve the required mobilisation time will be revalidated prior to spud. Consideration to mobilise the capping stack from the supplier on a suitable vessel but then hand over to another vessel to conduct the capping activity will also be made to meet response time frames. A site-specific landing force analysis, through computational fluid dynamic (CFD) modelling, will be undertaken prior to commencement of the activity to confirm the ability to land the capping stack on either a Xmas tree or BOP.	Potentially	Conventional/vertical capping stack deployment with a heavy lift vessel will be attempted at the discretion of the vessel master on the day, giving due regard to the safety of the vessel and crew. Circumstances that limit the safe execution of this control measure include shallow water depths, lower explosive limit (LEL) concentrations, volatile concentrations of hydrocarbons in the atmosphere, weather window, waves and/or sea states and high ambient temperatures.
Source control via relief well drilling	A release of condensate will be over approximately 70 days [2] (CS-01) or 76 days (CS-02). Relief well drilling is one of the primary options to stop the release.	For a spill from the Petroleum Activity wells, relief well drilling will be a feasible means of stopping a loss of well containment event. Relief well drilling is a widely accepted and utilised technique.	Yes	Relief well drilling will be the main technique employed to control a loss of well containment event.
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.	SSDI may potentially provide a net environmental benefit where its use would reduce hydrocarbons reaching surface waters in order to lessen exposure of surface-dwelling organisms, reduce shoreline contact and, under certain circumstances, facilitate access to the wellhead for execution of other source control techniques. At certain times SSDI 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) or where water depths are <100 m. SSDI would only be permitted and/or appropriate where favourable metocean conditions are present, in appropriate water depths, a net environmental benefit can be demonstrated e.g. minimising surface expression or shoreline accumulations, and where the plume would be predicted to remain within the pre-defined Zone of Application (ZoA) illustrated in Figure 2 6. The ZoA is based on the following criteria: • 10 km from Commonwealth Marine Parks (excluding 'Multiple Use Zones') • 10 km from State Marine Parks • 10 km from Heritage List areas • >20 m water depth • 4 km from State Waters	Potentially	SSDI may be appropriate where its use is required to facilitate access to the wellhead for execution of other source control techniques and in suitable water depths. SSDI would only be permitted and/or appropriate where favourable metocean conditions are present, a net environmental benefit can be demonstrated, and where the plume would be predicted to arise in, and remain within, the pre-defined ZoA. Safety risks associated with responding in close proximity to a release of volatile hydrocarbons from the wellhead must also be considered.

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Response Technique	Effectiveness	Feasibility	Decision	Rationale for the decision
Hydrocarbon: PYA-01 Condensate and Yodel-03 Condensate				
		• Within the Mainland Australian EEZ • Avoiding sensitive reefs and shoals 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). The use of SSDI would therefore need to be assessed for appropriateness based on the release conditions in the event of a loss of well containment.		
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.	Surface dispersant application may potentially provide a net environmental benefit where its use would reduce the volume of shoreline oiling 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). Modelling predicts that the spatial and temporal extent of floating oil reaching the required threshold (>50 g/m^2) for surface dispersant to be effective is present from day 1. Figure 2-6 illustrates surface concentrations present from days 1-6. Thereafter, the subsea release continues with daily surface oil presenting in similar locations, concentrations and viscosities. Use of surface dispersant would only be appropriate where favourable metocean conditions are present, a net environmental benefit can be demonstrated e.g. minimising shoreline accumulations, and where application is undertaken within the pre-defined ZoA as illustrated in Figure 2-6. The ZoA is based on the following criteria: • 10 km from Commonwealth Marine Parks (excluding 'Multiple Use Zones') • 10 km from State Marine Parks • 10 km from Heritage List areas • >20 m water depth • 4 km from State Waters • Within the Mainland Australian EEZ • Avoiding sensitive reefs and shoals	Potentially	Should surface oil reach the minimum required threshold (>50 g/m^2) during a spill event, dispersant application may be considered appropriate and acceptable where the pre-defined ZoA criteria is met, as illustrated in Figure 2-6, and only where a net environmental benefit can be demonstrated at the time of the incident. Modelling predicts that floating oil reaching the required minimum threshold (>50 g/m^2) for feasible dispersant application may be present during an ongoing loss of well containment event. Safety risks associated with responding in close proximity to a release of volatile hydrocarbons must also be considered.
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 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.	Modelling predicts that the spatial and temporal extent of floating oil reaching the required threshold (>50 g/m^2) for feasible containment and recovery operations to be feasible is present from day 1. Figure 2-6 illustrates surface concentrations present from days 1-6. Thereafter, the subsea release continues present daily floating hydrocarbons in similar locations, concentrations and viscosities. Corralling volatile hydrocarbons such as condensates is not generally recommended as it may lead to unsafe conditions for response personnel, however, in the event that metocean and volatile levels are appropriate and safe operations can be guaranteed, this response may be considered.	Potentially	Where safe metocean and volatile conditions can be guaranteed, containment and recovery may be an effective response technique where hydrocarbon thickness of BAOAC 4-5 with a 50-100% coverage of 100-200 g/m^2 is present. Modelling predicts that floating oil reaching the required minimum threshold (>50 g/m^2) for containment and recovery to be feasible may be present during an ongoing loss of well containment event. Safety risks associated with corralling volatile hydrocarbons must also be considered.

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Response Technique	Effectiveness	Feasibility	Decision	Rationale for the decision
Hydrocarbon: PYA-01 Condensate and Yodel-03 Condensate				
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.	If real-time monitor and evaluate activities indicate surface hydrocarbons are 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). For CS-01, deterministic modelling predicts first shoreline accumulation from floating surface hydrocarbon will occur on Day 15.0 (15 $m^{3)}$ at Montebello Islands including Montebello Islands MP and Hermite Island allowing adequate time to deploy this technique. Protection strategies can be used for targeted protection of sensitive resources. Access to sensitive areas may cause more negative impact than benefit.	Yes	RPAs predicted to be contacted are based on modelling outputs and thus may differ under the prevailing conditions of a real event. If RPAs are deemed to be at risk, based on real-time modelling during a spill event, shoreline protection and deflection techniques will be employed to minimise hydrocarbon accumulation providing net environmental benefit.
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.	If real-time monitor and evaluate activities 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). For CS-01, deterministic modelling predicts first shoreline accumulation from floating surface hydrocarbon will occur on Day 15.0 (15 m^{3}) Montebello Islands including Montebello Islands MP and Hermite Island allowing adequate time to deploy this technique. Confirm, through shoreline assessment, 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.	Yes	Response Protection Areas predicted to be contacted are based on modelling outputs and thus may differ under the prevailing conditions of a real event. If RPAs are at risk, based on real-time modelling during a spill event, shoreline clean-up techniques will be deployed to expedite clean-up of the impacted sites. Removal of hydrocarbons will help shorten the recovery window unless shoreline type is of a sensitive nature. This technique can help prevent remobilisation of hydrocarbon and impact on shorelines.
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.	In the event that wildlife is 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. Due to the likely volatile atmospheric conditions surrounding a Pluto Condensate spill, response options may be limited to hazing to ensure the safety of response personnel.	Yes	This technique may prevent impact to and/or treat oiled wildlife providing net environmental benefit.

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Table 4-2: Response technique evaluation – vessel collision (CS-03 and CS-04)

Response Technique	Effectiveness	Feasibility	Decision	Rationale for the decision
Hydrocarbon: MDO				
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 instantaneous 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.	Whilst modelling predicts that floating oil will reach the minimum feasible threshold at which to commence surface dispersant application (>50 g/m^2) within Montebello MP, this technique is not suitable for MDO spills as this hydrocarbon is prone to rapid spreading and evaporation and are not considered effective when applied on thin surface films such as marine diesel 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 marine diesel is unnecessary as the diesel will rapidly evaporate and 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) within Montebello MP 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.	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

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Response Technique	Effectiveness	Feasibility	Decision	Rationale for the decision
		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.		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 threshold. 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 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.
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/m2.	A marine diesel spill would be prone to rapid spreading and evaporation and the modelling predicts that no shoreline receptors will be contacted at threshold – 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 a recoverable threshold and 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.

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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* (2024) 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/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

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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[4] (OSM-BIP) (see Section 5.11). This plan includes the process for the CIMT to mobilise resources depending on the nature and scale of the spill.

The proximity of Dampier/ Karratha 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/ Karratha. However, in the unlikely event of an extended spill with potential to impact receptors further afield, monitoring activities may also be mobilised from Dampier/ Karratha.

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 monitoring and evaluate (>10 gm^2) is predicted at Montebello MP within 1 hour (CS-03).
- The shortest timeframe that shoreline contact from floating oil is predicted is 15.0 days (CS-01).
- The time to contact for oil at concentrations of entrained hydrocarbons greater than 100 ppb at shoreline receptors is 1 hour at Montebello MP (CS-01 and 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 may extend up to 76 days (CS-02) with response operations extending to 2-3 months based on the predicted time to complete shoreline clean-up operations (CS-01).

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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 5.13)**
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 Monitoring & evaluate 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 Monitoring & evaluate techniques.	1, 3B, 4
		3.6	Satellite Imagery services available and employed during response	1, 3C, 4
4	Aerial surveillance	4.1	Two trained aerial observers available to be deployed by day 1 from resource pool.	1, 2, 3B, 3C, 4
		4.2	One 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
		4.4	Unmanned Aerial Vehicles/Systems (UAV/UASs) to support Shoreline Contamination Assessment Technique (SCAT), containment and recovery and surface dispersal and pre-emptive assessments as contingency if required.	1, 2
5	Pre-emptive assessment of sensitive receptors	5.1	10 days prior to any predicted impact/ Within [X] days/hours], in agreement with WA DoT (for Level 2/3 incidents), deployment of 2 specialists from resource pool in establishing the status of sensitive receptors.	1, 2, 3B, 3C, 4

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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 5.13)**
		5.2	Daily reports provided to IMT on the status of the receptors to prioritise Response Protection Areas (RPAs) and maximise effective utilisation of resources.	1, 3B, 4

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.

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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 drilling operations. This scenario would result in an uncontrolled flow from the well as outlined in the EP. In the event of a loss of well containment, the primary response would be source control and well intervention.

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Woodside is a signatory to a MoU between Australian offshore operators to provide mutual aid to facilitate and expedite mobilising a MODU and drilling a relief well, if a LOWC incident were to occur. The MoU commits the signatories to share rigs, equipment, personnel and services to assist another operator in need.

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 one of the following interventions can be made:
  - Direct intervention by ROV to close BOP
  - Closure of the Tubing Retrievable Safety Valve (TRSV)
  - Capping stack (where deployment is feasible)
  - A relief well is drilled and first attempt at well kill within 70 days[2] (CS-01) or 76 days (CS-02)
- 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 extend up to 76 days (CS-02) with response operations extending to 2-3 months based on the predicted time to complete shoreline clean-up operations (CS-01)..

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 would be ROV intervention followed by relief well drilling for the Petroleum Activity wells. The following approaches outline Woodside's hierarchy for relief well drilling; • Primary – Review internal drilling programs and MODU availability to source an appropriate rig operating within Australia with an approved Safety Case; • Alternate – Source and contract a MODU through AEP MOU that is operating within Australia with an approved Safety Case; • Contingency – Source and contract a MODU outside Australia with an approved Australian Safety Case

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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 5.13)**
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	Frame agreements with ROV providers in place to be mobilised upon notification. ROV equipment deployed within 7 days.	1, 3B, 3C
		7.2	Source control vessel will have the following minimum specifications: • active heave compensated crane, rated to at least 150 T in shallower water and 250 T in deeper water. • at least 90 m in length • deck has water/electricity supply deck capacity to hold at least 110 T of capping stack.	1, 3B, 3C
		7.3	Identify source control vessel availability within 24 hours and begin contracting process. Vessel mobilised to site for deployment within 16 days for conventional capping.	1, 3B, 3C
		7.4	ROV available on MODU ready for deployment within 48 hours to attempt initial BOP well intervention.	1, 3B, 3C
		7.5	Hot Stab and/or well intervention attempt made using ROV and SFRT within 48 hours.	1, 3B, 3C
		7.6	Capping stack on suitable vessel mobilised to site within 16 days. Deployment and well intervention attempt will be made once plume size is acceptable and safety and metocean conditions are suitable.	1, 3C
		7.7	Contract in place for access to equipment and staff to assist with the mobilisation, deployment, and operation of well intervention equipment.	1, 3B, 3C
		7.8	MODU mobilised to site for relief well drilling within 21 days for a locally available rig and up to 36 days for a rig from outside of the region.	1, 3C
		7.9	First well kill attempt completed within 70 days[2] (CS-01) or 76 days (CS-02).	1, 3B, 3C
		7.10	Open communication line(s) to be maintained between IMT and infield operations to confirm awareness of progress against plan(s).	1, 3A, 3B
		7.11	Relief Well Peer review undertaken during well design which includes screening and identification of suitable MODU(s) with in-force Australian safety cases for relief well drilling.	1, 3C
		7.12	Monthly monitoring of the availability of MODUs through existing market intelligence including current Safety Case history, to meet specifications for relief well drilling. Titleholders of suitable MODUs notified.	3C
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 for installation support vessels (ISVs) require vessels to maintain in-force safety case approvals covering ROV operations and provide support in the event of an emergency.	1, 3B, 3C
		8.3	MODU and vessel contracts include clause outlining requirement for support in the event of an emergency	1, 3C

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9	Safety Case	9.1	Woodside will prioritise MODU or vessel(s) for 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
		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

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 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.

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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 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 6.8 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.

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5.4 Subsea Dispersant Injection

Subsea dispersant injection involves the deployment of a subsea dispersant manifold with associated equipment to inject chemical dispersant directly into the oil plume in the event of a loss of well containment. As it may take some time to mobilise subsea dispersant equipment, surface dispersants may be used in the interim to treat oil that makes it to the surface.

The use of subsea dispersants has similar benefits to surface dispersant application including a potential reduction in the volume of hydrocarbons that reach the shoreline thereby reducing impacts to sensitive receptors. In addition to these benefits, subsea dispersant application may facilitate access to the wellhead in order to undertake other source control techniques and reduce volatile organic compound (VOC) levels during surface response operations, reducing risks and hazards to responders. 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).

SSDI would only be permitted and/or appropriate where favourable metocean conditions are present and where the plume would be predicted to arise and remain within the pre-defined ZoA illustrated in Figure 2-6 and Section 4 of the Greater Western Flank Phase 4 Drilling and Subsea Installation Oil Pollution First Strike Plan. The ZoA is based on the following criteria:

- 10 km from Commonwealth Marine Parks (excluding 'Multiple Use Zones')
- 10 km from State Marine Parks
- 10 km from Heritage List areas
- >20 m water depth
- 4 km from State Waters
- Within the Mainland Australian EEZ
- Avoiding sensitive reefs and shoals

Where SSDI is deemed appropriate, Woodside will monitor the effectiveness of the ongoing operation via water column monitoring in accordance with the Woodside OSM-BIP, Joint Industry OSM Framework (AEP, 2021) and OMP: Subsea dispersant injection effectiveness assessment (AEP, 2021).

The *Subsea Dispersants Operational Plan* details the mobilisation and resource requirements for dispersant operations including the logistics, support and facility arrangements to manage the movement of personnel and resources.

5.4.1 Response need based on predicted consequence parameters

The following statements identify the key parameters upon which a response need can be based:

- The maximum volume of subsea hydrocarbons released is predicted to be approximately 13,865 m^3 (CS-01) and 14,310 m^3 (CS-02) on day 1 decreasing to 7,200 m^3 per day (CS-01) and 11,829 m^3 per day (CS-02) during weeks 10-11 when the wells are predicted to be killed.
- Ability to treat a large proportion of the daily hydrocarbon release volumes.
- A subsea dispersant injection system with sufficient coiled tubing for water depth.
- Arrangements for support organisations who provide specialist services, including subsea plume monitoring, 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 extend up to 76 days (CS-02) with response operations extending to 2-3 months based on the predicted time to complete shoreline clean-up operations (CS-01).

In addition, a number of assumptions are required to estimate the response need for Subsea Dispersant Injection. These assumptions have been described in the table below.

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Table 5-4: Response Planning Assumptions – Subsea Dispersant Injection

Response Planning Assumptions	
Safety considerations	Subsea dispersant 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. Personnel safety issues may include: • hydrocarbon gas and/or liquid exposure • high winds, waves and/or sea states • high ambient temperatures.
Technique	**Application parameters[11]**
Subsea Dispersant Injection	The predicted performance range for SSDI is based on: • total rate of subsea released oil available for SSDI • subsea inspection (ROV) observing oil release and technique safe for deployment • dispersant to oil application at 1:60-1:100 (used to determine the volume of dispersant required) • predicted dispersant effectiveness of 80% of contacted subsea oil (based upon industry research).
SSDI operation	1 SSDI operation includes: 1 suitable vessel (specifications as per SFRT and Subsea Dispersant Injection Operational Plan) • subsea dispersant delivery system • work class ROV with ancillaries and hydraulic power unit (HPU) • dispersant pump • down hole line/ coiled tubing • trained ROV operator(s) • trained subsea specialists • water column monitoring sensors.
Dispersant delivery (per operation)	Lower – 60 m^3 per 24 hours Upper – 75 m^3 per 24 hours
Dispersant Effectiveness	Dispersant testing is available for NWS Condensate (Leeder Analytical [formerly SGS Leeder Consulting], 2012) which has a residue of 3% and similar characteristics to PYA-01 Condensate and Yodel-3 Condensate (which have residues of 3% and 2.5% respectively). This testing indicates that average dispersant efficiency (%) for oil age will be: • 51% (0 hrs) • 72% (0.25 hrs) • 59% (2 hrs) • 37% (4 hrs) • 35% (8 hrs) • 37% (24 hrs) This data is based on a range of weathering results and four National Plan OSCA approved dispersants that will be the most likely dispersant used by Woodside.

[11] Performance ranges outlined are indicative for response planning purposes. Where actual figures and concentrations exist based on deterministic modelling or laboratory results, these will be used for response and capability planning.

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5.4.2 Environmental performance based on need

Table 5-5: Environmental Performance – Subsea Dispersant Injection

Environmental Performance Outcome		To reduce consequences to surface and shoreline receptors and increase the bioavailability of hydrocarbons for microbial breakdown.		
Control measure		**Performance Standard**		**Measurement Criteria (Section 5.13)**
10	Subsea spraying	10.1	Contract in place to provide Subsea Dispersant equipment resources (via SFRT)	1, 3B, 3C, 4
		10.2	Oceaneering support staff available all year round, via contract, to assist with the mobilisation, deployment, and operation of the SFRT equipment.	
		10.3	Subsea Dispersant vessel will have the following minimum specifications: • Compensated seabed crane up to 36 mt • Mobilised to site for deployment within 12 days.	1, 3A, 3C, 4
		10.4	Per day dispersant log completed to record quantity of dispersants applied	1, 3A, 3B
		10.5	Contract in place to provide SSDI and debris clearance equipment and trained personnel	1, 3B, 3C, 4
		10.6	Contract in place to provide water column monitoring equipment and trained personnel.	1, 3B, 3C, 4
11	Support vessels	11.1	Access to 24/7 vessel tracking software to monitor availability of suitable vessels to meet specifications for subsea dispersant injection.	3C, 4
		11.2	Vessel frame agreements require suitable vessels to maintain in-force Safety Case approvals covering ROV operations and provide support in the event of an emergency.	1, 3B, 3C
12	Dispersant	12.1	Year-round access to 5,000 m^3 of dispersant located globally which is ready to be mobilised within 48 hours under activation of GDS membership.	1, 3A, 3B, 3C, 4
		12.2	Year-round access to additional dispersant stockpiles via memberships with OSRL and AMOSC.	
13	Management of environmental risks	13.1	OSCA approved dispersants will be prioritised for use	1
		13.2	Subsea dispersant injection efficacy monitoring will be conducted in accordance with the Woodside OSM-BIP and OM4: Dispersant Effectiveness and Fate Assessment (AEP, 2021)	1, 3A, 3B, 3C

The resulting subsea dispersant injection capability has been assessed against the WCCS. The maximum volume of subsea hydrocarbon released is estimated to be approximately 12,912 m^3 per day during week 1 decreasing to 6,984 m^3 per day during weeks 11 and 12 when the well is predicted to be killed (CS-01) and, for CS-02, a constant release rate of 13,872 m^3 per day for the duration of the incident.

Dispersant efficacy testing on NWS Condensate, which has similar characteristics and a similar residual component (3%) to PYA-01 Condensate and Yodel-3 Condensate, predicts it will be amenable to dispersant with an approximate range of effectiveness from 35-72% (Leeder Analytical [formerly SGS Leeder Consulting], 2012).

As described in Section 4.5.1 and Section 5.4, use of SSDI will only be appropriate under certain conditions. If deemed appropriate during a real loss of well containment event, the SSDI capability currently available provides the capacity to treat 3,000 m^3 to 7,500 m^3 of subsea hydrocarbons per day with the application of 60-75 m^3/day of dispersant by Day 12. The release rates for some of the Petroleum Activity wells may initially exceed the indicated capacity but will decrease during the modelled release period. SSDI is considered a potential response technique for the subsea loss of well control scenarios where appropriate plume and release conditions are met, in appropriate water depths, the plume arises within the ZoA and a net environmental benefit can be demonstrated.

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Under optimal conditions, during the subsea release period, the subsea dispersant capability has the following expected performance(s):

- entrained hydrocarbon concentrations in the water column are predicted to increase at most subsurface receptor locations, with dispersant application from the trapping of treated entrained hydrocarbons at a lower depth (from subsea dispersant application) due to the greatly reduced droplet size and therefore reduced buoyancy.
- the scope of the Frame Agreement Vessel Safety Case includes a range of subsea activities that would cover the requirement for SSDI operations such as subsea manifold installation, commissioning, cargo transfer (including bulk liquids), operating as a stable platform for activities including ROV operations, and accommodation support alongside or within the 500 m safety zone of an existing facility which may be in production.
- an SSDI vessel can be activated and mobilised within 12 days. Detailed breakdown of this timing is included in Section 6.4. Whilst Woodside will make every endeavour to accelerate the activities to reduce this timeframe, Woodside believes that the timeframe outlined is appropriate and realistic to ensure these activities can be completed reliably.
- 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 6.4.

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5.5 Surface Dispersant Application

Surface dispersant application may reduce surface hydrocarbons and therefore prevent, or reduce the scale of, shoreline contact. Priority would be placed on treating high volume surface hydrocarbons closest to the release location as this is where high surface concentrations are predicted, and dispersant application is expected to achieve the greatest environmental benefit (refer to Annex A).

At certain times its use 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).

Surface dispersant application would only be permitted and/or appropriate where favourable metocean conditions are present and where the plume would be predicted to remain within the pre-defined Zone of Application (ZoA) illustrated in Figure 2-6 and Section 4 of the GWF-4 Drilling and Subsea Installation Oil Pollution First Strike Plan. The ZoA is based on the following criteria:

- 10 km from Commonwealth Marine Parks (excluding 'Multiple Use Zones')
- 10 km from State Marine Parks
- 10 km from Heritage List areas
- >20 m water depth
- 4 km from State Waters
- Within the Mainland Australian EEZ
- Avoiding sensitive reefs and shoals

Weathering of the hydrocarbons would reduce dispersant efficacy. During a protracted response, surface hydrocarbons may become heavily weathered, viscosity may increase above feasible treatment levels (10,000 cSt) or, alternatively, may spread below effective response thresholds. Surface dispersant application is weather and sea–state dependent. Periods of downtime can be expected.

Where surface dispersant application is deemed appropriate, Woodside will conduct dispersant effectiveness monitoring in accordance with the Woodside OSM-BIP, Joint Industry OSM Framework (AEP, 2021) and OMP: Surface chemical dispersant fate and effectiveness assessment (AEP, 2021). This assessment is conducted after the initial shake jar test or aerial test spray and is based on the SMART protocol (NOAA, 2006).

5.5.1 Response need based on predicted consequence parameters

The following statements identify the key parameters upon which response need is based for each scenario:

- Within week 1, surface hydrocarbons meeting minimum threshold concentration (>50 g/m^2) and maximum viscosity parameters (<10,000 cSt) for feasible surface dispersant application are predicted to peak on day 3 at 19 km^2 (2,737 m^3) (deterministic model: Q3_12). This may reduce to ~82 m^3 post weathering.
- Within week 2, surface hydrocarbons meeting minimum threshold concentration (>50 g/m^2) and maximum viscosity parameters (<10,000 cSt) for feasible surface dispersant application are predicted to peak on day 14 at 31 km^2 (5,296 m^3) (deterministic model: Q3_12). This may reduce to ~159 m^3 post weathering.
- The subsea release continues with daily surface oil presenting in similar locations, concentrations and viscosity with an overall peak on day 15 of 45 km^2 and 6,995 m^3. This may reduce to ~210 m^3 post weathering.
- Surface dispersant application is not appropriate for spills of MDO (CS-03 and CS-04).
- The duration of the spill may extend up to 76 days (CS-02) with response operations extending to 2-3 months based on the predicted time to complete shoreline clean-up operations (CS-01).
- Arrangements for support organisations who provide specialist services (dispersant spray aircraft, logistics services for mobilizing dispersant and Air Attack Supervisors) or resources (dispersants and transfer pumping systems) and 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.

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- Defined Zone of Application (ZoA) to reduce environmental consequences on subsea receptors – see Figure 2 6. The broader ZoA is also included in Section 4 of the GWF-4 Drilling and Subsea Installation Oil Pollution First Strike Plan.

In addition, a number of assumptions are required to estimate the response need for Surface Dispersant Application. These assumptions have been described in the table below.

Table 5-6: Response Planning Assumptions – Surface Dispersant Application

Response Planning Assumptions	
Safety considerations	Surface dispersant 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. Personnel safety issues may include: • hydrocarbon gas and/or liquid exposure • high winds, waves and/or sea states • high ambient temperatures.
Technique	**Application parameters [12]**
Surface Dispersant Application (combined vessel and aircraft)	The predicted performance range for surface dispersant application is based on; • remaining surface oil available for surface dispersant application following weathering, • monitor and evaluate activities observing surface oil at minimum BAOAC 4 (discontinuous true oil colour) or BAOAC 5 (continuous true oil colour), • safe for deployment, within range of vessels and aircraft, • dispersant to oil application at 1:20-1:25 (based on uniform surface oil 100 g/m^2 and 50 litres/hectare application rate) allows for 3-4 km^2 per aircraft per day, • predicted dispersant effectiveness of 35-72% for contacted surface oil, and • spraying encounter rate of approximately 50-75% (50-25% of dispersant sprayed does not contact surface oil)
Physical properties	Surface threshold: • Lower – 50 g/m^2 (equates to 100 g/m^2 with approximately 50% coverage and/or 200 g/m^2 with approximately 25% coverage) • BAOAC 4 – Discontinuous true oil colour – lower threshold 50 g/m^2 • Optimum – 100 g/m^2 (equates to >100 g/m^2 with approximately 100% coverage and/or 200 g/m^2 with approximately 50% coverage) • BAOAC 5 – Continuous true oil colour – lower threshold 200 g/m^2 Viscosity: • Optimum – <5,000 cSt at sea surface temperature • Upper – 10,000 cSt at sea surface temperature
Dispersant Effectiveness	Dispersant testing is available for NWS Condensate (Leeder Analytical [formerly SGS Leeder Consulting], 2012) which has a residue of 3% and similar characteristics to PYA-01 Condensate and Yodel-3 Condensate (which have residues of 3% and 2.5% respectively). This testing indicates that average dispersant efficiency (%) for oil age will be: • 51% (0 hrs) • 72% (0.25 hrs) • 59% (2 hrs) • 37% (4 hrs) • 35% (8 hrs) • 37% (24 hrs) This data is based on a range of weathering results and four National Plan OSCA approved dispersants that will be the most likely dispersant used by Woodside.

[12] Performance ranges outlined are indicative for response planning purposes. Where actual figures and concentrations exist based on deterministic modelling or laboratory results, these will be used for response and capability planning.

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5.5.2 Environmental performance based on need

Table 5-7: Environmental Performance - Surface Dispersant Application

Environmental Performance Outcome		To reduce consequences to surface and shoreline receptors and increase the bioavailability of hydrocarbons for microbial breakdown.		
Control measure		**Performance Standard**		**Measurement Criteria (Section 5.13)**
14	Aerial spraying	14.1	1 aircraft with minimum payload of 1,850 litre payload mobilised to site within 4 hours of activation. 1 additional aircraft mobilised to site within another 20 hours of activation. 2 additional aircraft mobilised to site within 48 hours of activation.	1, 3B, 3C, 4
		14.2	1 high-capacity aircraft with minimum payload of 10 m^3 available to spray within 48 hours.	
		14.3	FWADC to complete a minimum of 3 sorties per day and high-capacity aircraft to complete a minimum of 2 sorties per day	1
		14.4	Per sortie spray log completed to record where dispersants were applied	1, 3A, 3B
15	Vessel spraying	15.1	2 offtake support vessels from integrated fleet will undertake dispersant trials within 24 hours of the release as per first strike plan.	1, 3A, 3B, 3C, 4
		15.2	Two offtake support vessels will be available for deployment to spray dispersant for the duration of the response.	3A, 3C, 4
		15.3	Up to 2 vessels spraying per day within 48 hours. An additional 2 vessels spraying within 72 hours.	1, 3C
		15.4	Per day spray log completed to record where dispersants were applied	1, 3A, 3B
16	Dispersant	16.1	Year-round access to 5,000 m^3 of dispersant located globally which is ready to be mobilised on activation of GDS membership within 24-48 hours.	1, 3A, 3B, 3C, 4
		16.2	Year-round access to additional dispersant stockpiles via memberships with OSRL and AMOSC.	
		16.3	OSCA approved dispersants prioritised for surface and subsea use	1, 3A, 3B, 3C, 4
		16.4	Only apply surface dispersants within the Zone of Application and on BAOAC 4 and 5	
17	Management of Environmental Risks	17.1	Surface dispersants will only be applied in the Zone of Application and on BAOAC 4 and 5 oil.	1
		17.2	OSCA approved dispersants will be prioritised for use	
		17.3	Surface dispersant efficacy monitoring will be conducted in accordance with the Woodside OSM-BIP and OM4: Dispersant Effectiveness and Fate Assessment (AEP, 2021)	1, 3A, 3B, 3C

The resulting surface dispersant response capability following ALARP evaluation has been assessed against the WCCS and surface release scenario.

- Surface concentration, viscosity and mass vary for each time step based on spreading and weathering algorithms within the model. Woodside has reviewed the deterministic modelling data for the applicable scenario (CS-01) to determine the response need and required capability for surface dispersant application as a response technique (see Figure 2-6).
  - Deterministic modelling (Q3_12) predicts that surface hydrocarbons within threshold concentration (>50 g/m^2) and viscosity parameters (<10,000 cSt) available for surface dispersant

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application are predicted to peak within week 1 (day 3) at 19 km^2 (2,737 m^3) (~82 m^3 post weathering) and, within week 2 (day 14) at 31 km^2 (5,296 m^3) (~159 m^3 post weathering).

  - The subsea release continues with daily surface oil presenting in similar locations, concentrations and viscosity with an overall peak on day 15 of 45 km^2 and 6,995 m^3 (~210 m^3 post weathering).

- Within 24 hours, Woodside has available 1-2 FWADC aircraft capable of dispersing 28 m^3 to 112 m^3 surface oil and covering an area of 3 km^2 to 8 km^2, plus 1 surface dispersant application vessel capable of dispersing 36 m^3 to 72 m^3 oil covering an area of ~1 km^2.
- Within 48 hours, Woodside has access to 2-4 FWADC and 1 high-capacity aircraft per day for the duration of the spill with a capability of dispersing 67 m^3 to 1,414 m^3 surface oil and covering an area of 6 km^2 to 20 km^2 per day.
- Further to this, surface dispersant vessel availability increases to 2 by day 2, 4 by day 3 and 6 by day 6. Each vessel is capable of dispersing 36 m^3 to 72 m^3 oil covering an area of ~1 km^2 per day. For the capability available, this is therefore estimated to be 142 m^3 to 840 m^3 covering 4 km^2 to 6 km^2 by day 6.
- As described in surface dispersant application will only be appropriate within the ZoA. If dispersant operations are required and feasible, details of capability from week 2 to month 3 are included in Section 6.5.
- Surface dispersant application would target the thickest parts (BAOAC 4-5) at the leading edge of the surface slick and as close to the spill source as is feasible. This approach aims to mitigate the spread of the oil and maximise dispersant effectiveness thus reducing shoreline accumulations.
- At times, the capability will be limited by safety or logistics including number of airframes permitted in the airspace simultaneously.

More detail regarding capability need is included at Section 6.5 together with consideration of potential alternative, additional and improved control measures. Where control measures have been selected and implemented, they are also included in Section 6.5.

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5.6 Containment and Recovery

Containment and recover is used to reduce damage to sensitive resources by the physical containment and mechanical removal of hydrocarbons from the marine environment. It has a lower capacity for removing surface oil than the application of dispersant but avoids potential additional impacts created by the resulting increase in entrained hydrocarbons in the water column.

Weathering and spreading of hydrocarbons will significantly reduce containment and recovery effectiveness. In the event of an ongoing loss of well control, modelling predicts fresh hydrocarbons reaching the surface may be heavily weathered and present in small discrete patches. Containment and recovery is also weather and sea–state dependent. Periods of downtime can be expected.

Wind direction in the vicinity of the Petroleum Activity is predominantly easterly between May and June and south-westerly in the October to February period. Average wind speeds at the modelled release location are predicted to be 5.1-7.1 m/s (Beaufort ~3-4) with year-round maximum speeds of 25.5 m/s (Beaufort ~9.8) (RPS modelling input data, 2023). Industry guidance indicates that maximum wind speeds for safe and effective containment and recovery operations are ~10 m/s (20 knots, Beaufort ~5) (Ipieca, 2015b) therefore, at times, it is expected that open water containment and recovery operations would not be a feasible response technique. However, Containment and recovery may be available for deployment nearshore and priority would be given to being prepared to deploy units if the conditions are met.

The *Containment and Recovery Operational Plan* details the mobilisation and resource requirements for response operations including the logistics, support and facility arrangements to manage the movement of personnel and resources.

5.6.1 Response need based on predicted consequence parameters

The following statements identify the key parameters upon which response need is based:

- Within week 1, surface hydrocarbons meeting minimum threshold concentration (>50 g/m^2) for feasible containment and recovery operations are predicted to peak on day 3 at 19 km^2 (2,737 m^3) (deterministic model: Q3_12). This may reduce to ~82 m^3 post weathering.
- Within week 2, surface hydrocarbons meeting minimum threshold concentration (>50 g/m^2) for feasible containment and recovery operations are predicted to peak on day 14 at 31 km^2 (5,296 m^3) (deterministic model: Q3_12). This may reduce to ~159 m^3 post weathering.
- The subsea release continues with daily surface oil presenting in similar locations and concentrations with an overall peak on day 15 of 45 km^2 and 6,995 m^3. This may reduce to ~210 m^3 post weathering.
- Containment and recovery is not appropriate for spills of MDO (CS-03 and CS-04).
- The duration of the spill may extend up to 76 days (CS-02) with response operations extending to 2-3 months based on the predicted time to complete shoreline clean-up operations (CS-01).
- Arrangements for support organisations who provide specialist services (logistics services for mobilising equipment, trained Offshore Supervisors and waste disposal) and/or resources (vessels, containment and recovery equipment, transfer pumping systems) 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.

In addition, a number of assumptions are required to estimate the response need for Containment and Recovery. These assumptions have been described in the table below.

Table 5-8: Response Planning Assumptions – Containment and Recovery

Response Planning Assumptions	
Safety considerations	Containment and recovery 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. Personnel safety issues may include: • hydrocarbon gas and/or liquid exposure • high winds, waves and/or sea states • high ambient temperatures.
Technique	**Predicted performance range**

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	(% of surface oil volume available predicted to be recovered by response technique)	
Containment and recovery	Lower	5%
	Upper	10%
	The predicted performance range for containment and recovery is based on; • remaining surface oil available for containment and recovery following weathering • monitor and evaluate activities observing surface oil at minimum BAOAC 4 (discontinuous true oil colour) or BAOAC 5 (continuous true oil colour) • safe for deployment, within range of vessels and aircraft • encounter rate of approximately 50-75% (50-25% of surface coverage is not surface oil)	
Response Capability details		
Containment and recovery operation	One containment and recovery operation includes; • 2 x suitable vessels (vessel specifications as per Marine Operations Plan) • 1 x boom system (min 800 mm overall height and approximately 200 m length) with all required ancillaries) or • 1 x suitable vessel (vessel specifications as per Marine Operations Plan) • 1 x single ship system (min 800 mm overall height and approximately 200 m length) with all required ancillaries) and • 1 x skimmer (min 20 m^3/hr) with all required ancillaries • Temporary storage (min 100 m^3) • 1-2 x trained supervisor per operation • 8-10 x support personnel per operation	
Physical properties	Surface Threshold • Lower – 50 g/m^2 (equates to 100 g/m^2 with approximately 50% coverage and/or 200 g/m^2 with approximately 25% coverage) – BAOAC 4 – discontinuous true oil colour – lower threshold 50 g/m^2 • Optimum – 100 g/m^2 (equates to >100 g/m^2 with approximately 100% coverage and/or 200 g/m^2 with approximately 50% coverage) – BAOAC 5 – Continuous true oil colour – lower threshold 200 g/m^2	
Expected effectiveness	• One containment and recovery operation is expected to be able to contain and recover approximately 11.25 – 67.5 m^3 per day. This figure is based on a 5 hr (lower) to 10 hr (upper) operational day which allows for transit to the Petroleum Activity location, change out of temporary waste storage equipment/ decanting (if required) and transit time between discreet oil patches.) • Based on the following assumptions: – boom system with 70 m opening = 0.07 km – vessel moving at 0.7 kn = 1.3 km/h – area covered per hour = 0.07 km x 1.3 km = 0.09 km^2 – area covered per day (lower) = 0.09 km^2 x 5 hours = 0.45 km^2 / day – area covered per day (upper) = 0.09 km^2 x 10 hours = 0.9 km^2 / day – recovery per day (lower) = 0.45 km^2 x 50 g/m^2 x 50% coverage = 11.25 m^3/ 5-hour day – recovery per day (upper) = 0.9 km^2 x 100 g/m^2 x 75% = 67.5 m^3/ 10-hour day Increased surface oil concentration may result in increased recovery capacity providing other conditions and oil properties remain suitable for containment and recovery. For planning purposes, conservative concentrations outlined above have been used.	

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5.6.2 Environmental performance based on need

Table 5-9: Environmental Performance – Containment and Recovery

Environmental Performance Outcome		To reduce consequences to surface and shoreline receptors.		
Control measure		**Performance Standard**		**Measurement Criteria (Section 5.13)**
18	Vessel-based recovery systems	18.1	Woodside maintains an integrated fleet of vessels, including vessels with at least 10 t bollard pull. Additional vessels can be sourced through existing contracts/frame agreements	1, 3A, 3B, 3C, 4
		18.2	2 containment and recovery operations would be deployed within 48 hours.	
		18.3	2 additional containment and recovery operations using 3rd party provider resources would be deployed by day 4.	
		18.4	Each operation will have internal or added 100 m^3 of liquid waste storage onboard.	
19	Response teams	19.1	Deployment of 2 containment and recovery teams would be available by day 2, and 6 containment and recovery teams available by day 5.	1, 2, 3A, 3B, 3C, 4
		19.2	Deployment team will be comprised of: • 1-2 trained specialists per operation • 8-10 personnel for support • Personnel sourced through resource pool	1, 2, 3B, 4
		19.3	Teams will segregate liquid and solid wastes at the earliest opportunity.	
		19.4	Open communication line to be maintained between IMT and infield operations to ensure awareness of progress against plan(s)	1, 3A, 3B
20	Response systems	20.1	Rapid sweep systems and active boom systems to be prioritised for mobilisation in the event of a response.	1, 3C
21	Management of Environmental Impact of the response risks	21.1	The boom will be monitored and maintained to ensure trapped fauna are released as early as possible, with Containment and Recovery activities occurring in daylight hours only.	1
		21.2	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	
		21.3	Shallow draft vessels will be used to access remote shorelines to minimise the impacts associated with seabed disturbance on approach to the shorelines	

The resulting containment and recovery capability following ALARP evaluation has been assessed against the WCCSs:

- Surface concentration and mass vary for each time step based on spreading and weathering algorithms within the model. Woodside has reviewed the deterministic modelling data for the applicable scenarios (CS-01) to determine the response need and required capability for containment and recovery operations as a response technique (see Figure 2-6).
  - Deterministic modelling (Q3_12) predicts that surface hydrocarbons meeting minimum threshold concentration (>50 g/m^2) for feasible containment and recovery operations are predicted to peak within week 1 (day 3) at 19 km^2 (2,737 m^3) (~82 m^3 post weathering) and, within week 2 (day 14) at 31 km^2 (5,296 m^3) (~159 m^3 post weathering).

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  - The subsea release continues with daily surface oil presenting in similar locations and concentrations with an overall peak on day 15 of 45 km^2 and 6,995 m^3 (~210 m^3 post weathering).

- Within 24 hours, Woodside has available 1 containment and recovery operation capable of recovering up to 68 m^3 surface oil covering an area of 1 km^2. Availability of containment and recovery operations increases to 2 by day 2, 3 by day 3, 4 by day 4, and 6 by day 5. Thus, by day 5, the recovery capacity is estimated to be up to 405 m^3 covering an area of 6 km^2.
- Containment and recovery operations would target the thickest parts (BAOAC 4-5) at the leading edge of the surface slick and as close to the spill source as is feasible. This approach aims to mitigate the spread of the oil and maximise encounter rate in order to reduce potential shoreline accumulations.
- The efficiency of this response technique will decrease significantly as the slick moves, breaks into wind-rows and weathers resulting in less surface concentrations available for effective offshore recovery.
- At times, the capability will be limited by safety or logistics including number of available vessels and/or maintenance of feasible safe simultaneous operations (SIMOPS).
- More detail regarding capability need is included at Section 6.6 together with consideration of potential alternative, additional and improved control measures. Where control measures have been selected and implemented, they are also included in Section 6.6.

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5.7 Shoreline Protection and Deflection

The placement of containment, protection or deflection booms on and near a shoreline is a response technique to reduce the potential volume of hydrocarbons contacting or spreading along shorelines, which may reduce the scale of shoreline clean-up. Hydrocarbons contained by the booms would be collected where practicable.

Shorelines would be protected where accessible via vessel or shore. Where hydrocarbon contact has already occurred, there may still be value in deploying protection equipment to limit further accumulations and preventing remobilisation of stranded hydrocarbons.

Shoreline protection and deflection equipment would be mobilised to selected locations, where the following conditions were met:

- Sea-states and hydrocarbon characteristics are safe to deploy protection and deflection measures,
- Oil trajectory has been identified as heading towards identified RPAs.

5.7.1 Response need based on predicted consequence parameters

The following statements identify the key parameters upon which the response need can be based:

- The shortest timeframe that shoreline contact from floating oil above threshold is predicted to be 15.0 days (CS-01) at Montebello Islands including Montebello Islands MP and Hermite Island (15 m^3).
- Pre-emptive assessment and shoreline assessments will be mobilised prior to shoreline contact at 100 g/m^2, which occurs on day 15.0 (CS-01) at Montebello Islands including Montebello Islands MP and Hermite Island.
- The duration of the spill may extend up to 76 days with response operations extending to 2-3 months based on the predicted time to complete shoreline clean-up operations (CS-01).
- .
- Arrangements for support organisations who provide specialist services (trained personnel, protection and deflection equipment) and/or resources and should be tested regularly.
- Tactical Response Plans (TRPs) for Response Protection Areas (RPAs) along with other relevant plans, procedures and support documents need to be in place for Operational and Support Sections. These should be reviewed and updated regularly.

In addition, a number of assumptions are required to estimate the response need for Shoreline Protection and Deflection. These assumptions have been described in the table below.

Table 5-10: Response Planning Assumptions – Shoreline Protection and Deflection

Response Planning Assumptions	
Safety considerations	Shoreline protection and deflection 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. Personnel safety issues may include: • hydrocarbon gas and/or liquid exposure • safe for deployment and conditions within range of vessels • high ambient temperatures.
Shoreline Protection and Deflection	One Shoreline Protection and Deflection operation may include; • Quantity of shoreline sealing boom (as outlined in TRP) • Quantity of fence or curtain boom (as outlined in TRP) • 1-2 trained supervisors • 8-10 personnel/ labour hire Specific details of each operation would be tailored to the Tactical Response Plan implemented (where available).

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5.7.2 Environmental performance based on need

Table 5-11: Environmental Performance – Shoreline protection and deflection

Environmental Performance Outcome		To stop hydrocarbons encountering particularly sensitive areas		
Control measure		**Performance Standard**		**Measurement Criteria (Section 5.13)**
22	Response teams	22.1	In liaison with WA DTMI (for Level 2/3 incidents), relevant Tactical Response Plans (TRPs) will be identified in the First Strike plan for activation 5 days prior to a predicted impact.	1, 3A, 3C, 4
		22.2	In liaison with WA DTMI (for Level 2/3 incidents), mobilise teams to RPAs 5 days prior to a predicted impact. Teams to contaminated RPAs comprised of: • 1-2 trained specialists per operation • 8-10 personnel/labour hire • Personnel sourced through resource pool.	1, 2, 3B, 3C, 4
		22.3	In liaison with WA DTMI (for Level 2/3 incidents), 1 operation mobilised 5 days prior to a predicted impact at each identified RPA. Expected to be 2 RPAs within 18 days. (operation as detailed above)	1, 3A, 3B, 4
		22.4	12 trained personnel available within 24 hours sourced through resource pool.	1, 2, 3A, 3B, 3C, 4
		22.5	Open communication line to be maintained between IMT and infield operations to confirm awareness of progress against plan(s)	1, 3A, 3B
		22.6	The safety of shoreline response operations will be considered and appropriately managed. During shoreline operations: • All personnel in a response will receive an operational/safety briefing before commencing operations • Gas monitoring and site entry protocols will be used to assess safety of an operational area before allowing access to response personnel	1, 3B, 4
23	Response equipment	23.1	Equipment mobilised from closest stockpile 5 days prior to a predicted impact.	1, 3A, 3C, 4
		23.2	Supplementary equipment mobilised from AMOSC and State stockpiles 5 days prior to a predicted impact.	1, 3C, 4
		23.3	Supplementary equipment mobilised from OSRL 5 days prior to a predicted impact.	
		23.4	Woodside maintains integrated fleet of vessels. Additional vessels can be sourced through existing contracts/frame agreements	1, 3A, 3C, 4
24	Management of Environmental Impact of the response risks	24.1	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	1
		24.2	Shallow draft vessels will be used to access remote shorelines to minimise the impacts associated with seabed disturbance on approach to the shorelines	

The resulting shoreline protection and deflection capability has been assessed against the WCCS. The range of techniques provide an ongoing approach to shoreline protection and deflection at identified RPAs.

Under optimal conditions, during the subsea and surface releases the capability available exceeds the need identified. It indicates that, the shoreline protection and deflection capability have the following expected performance:

- Deterministic modelling predicts first shoreline impact at Montebello Islands including Montebello Islands MP and Hermite Island (15 m^3) on day 15.0 (CS-01).
- Existing capability allows for mobilisation and deployment of shoreline protection operations within 24 hours (if required). Given shoreline contact at RPAs is not predicted until Day 15.0 at Montebello Islands including Montebello Islands MP and Hermite Island, the existing capability is considered sufficient to mobilise and deploy protection at RPAs prior to hydrocarbon contact, guided by the ongoing monitor and evaluate activities.

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- The most significant constraint on expanding the scale of response operations is the availability of accommodation and transport services in the region between Exmouth and Port Hedland, and the management of response generated waste. From previous assessment of accommodation in this region, Woodside estimates that current accommodation can cater for a range of 500-700personnel per day for an ongoing operation.
- TRPs have been developed for all identified RPAs excepting international locations.
- 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 6.7.

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5.8 Shoreline Clean-up

Shoreline clean-up may be undertaken using a broad range of techniques when floating hydrocarbons contact shorelines. The timing, location and extent of shoreline clean-up activities can vary from one scenario to another, depending on the hydrocarbon type, sensitivities and values contacted, shoreline type and access, degree of oiling, and area oiled.

Shoreline clean-up is typically undertaken as a three-phase process:

- phase one (gross contamination removal) involving the collection of bulk oil, either floating against the shoreline or stranded on it
- phase two (moderate to heavy contamination removal) involving removal or in-situ treatment of shoreline substrates such as sand or pebble beaches, and
- phase three (final treatment or polishing) involving removal of the remaining residues of oil.

As phase one typically involves recovery of floating and pooled oil, and phase three removes minor volumes, they have not been considered in the assessment of response need for the scenarios identified.

The *Shoreline Clean-up Operational Plan* details the mobilisation and resource requirements for a shoreline clean-up operation including the logistics, support and facility arrangements to manage the movement of personnel and resources.

The *Shoreline Clean-up Operational Plan* includes the process for the IMT to mobilise resources depending on the nature and scale of the spill. Woodside would activate and mobilise trained and competent personnel in shoreline assessment before or following shoreline contact at response thresholds.

Shoreline clean-up consists of different manual and mechanical recovery techniques to remove hydrocarbons and contaminated debris from a shoreline; this is to minimise ongoing environmental contamination and impact. The National Plan also provides guidance on shoreline clean-up techniques as outlined in National Plan Guidance *Response assessment and termination of cleaning for oil contaminated foreshores* (NP-GUI-025) (AMSA 2015).

5.8.1 Response need based on predicted consequence parameters

The following statements identify the key parameters upon which the response need can be based:

- The shortest timeframe that shoreline contact from floating oil above threshold is predicted to be 15.0 days (CS-01) at Montebello Islands including Montebello Islands MP and Hermite Island (15 m^3). Shoreline accumulation peaks at approximately 42 m^3 in Week 4
- Pre-emptive assessment and shoreline assessments will be mobilised prior to shoreline contact at 100 g/m^2, which occurs on day 15.0 (CS-01) at Montebello Islands including Montebello Islands MP and Hermite Island.
- The duration of the spill may extend up to 76 days (CS-02) with response operations extending to 2-3 months based on the predicted time to complete shoreline clean-up operations (CS-01).
- Following Shoreline Assessment and agreement of prioritisation with WA Department of Transport and Major Infrastructure and Major Infrastructure, clean-up operations would commence until agreed termination criteria are reached.
- Arrangements for support organisations who provide specialist services (trained personnel, protection and deflection equipment) and/or resources and should be tested regularly.
- Tactical Response Plans (TRPs) for Response Protection Areas (RPAs) along with other relevant plans, procedures and support documents need to be in place for Operational and Support Sections. These should be reviewed and updated regularly.

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In addition, a number of assumptions are required to estimate the response need for shoreline clean-up. These assumptions have been described in the table below.

Table 5-12: Response Planning Assumptions – Shoreline Clean-up

Response planning assumptions: Shoreline clean-up	
Safety considerations	Shoreline clean-up 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. Personnel safety issues may include: • hydrocarbon gas and/or liquid exposure • waves and/or sea states, tidal cycle and intertidal zone limits • presence of wildlife • high ambient temperatures.
Manual shoreline clean-up operation (Phase 2)	One, manual shoreline clean-up operation (Phase 2) may include: • 1–2 x trained supervisor • 8–10 x personnel/ labour hire • Supporting equipment for manual clean-up including rakes, shovels, plastic bags etc.
Physical properties	Surface Threshold • Lower – 100 g/m^2–100% coverage of 'stain' – cannot be scratched off easily on coarse sediments or bedrock – Expected trigger to undertake detailed shoreline survey • Optimum – 250 g/m^2 – 25% coverage of 'coat' – can be scratched off with a fingernail on coarse sediments – Expected trigger to commence clean-up operations
Efficiency **(m^3 oil recovered per person per day)**	Manual shoreline clean-up (Phase 2) – approximately 0.25–1 m^3 oil recovered per person per 10-hour day is based on moderate to high coverage of oil (100 g/m^2–1000 g/m^2) with manual removal using shovels/rakes, etc. from studies of previous response operations and exercises

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Table 5-13: Shoreline Clean-up techniques and recommendations

Technique	Description	Shoreline type		Application
		Recommended	Not recommended	
Natural recovery	Allowing shoreline to self-clean; no intervention undertaken.	Remote and inaccessible shorelines for personnel, vehicles and machinery. Other clean-up techniques may cause more damage than allowing the shoreline to naturally recover. Natural recovery may be recommended for areas with mangroves and coral reefs due to their sensitivity to disturbance from other shoreline clean-up techniques. High-energy shorelines: where natural removal rates are high, and hydrocarbons will be removed over a short timeframe.	Low-energy shorelines: these areas tend to be where hydrocarbon accumulates and penetrates soil and substrates.	May be employed, if the operational NEBA identifies that other clean-up techniques will have a negligible or negative environmental impact on the shoreline. May also be used for buried or reworked hydrocarbons where other techniques may not recover these.
Manual recovery	Use of manpower to collect hydrocarbons from the shoreline. Use of this form of clean-up is based on type of shoreline.	Remote and inaccessible shorelines for vehicles and machinery. Areas where shorelines may not be accessible by vehicles or machinery and personnel can recover hydrocarbons manually. Where hydrocarbons have formed semi-solid to solid masses that can be picked up manually. Areas where nesting and breeding fauna cannot or should not be disturbed.	Coral reef or other sensitive intertidal habitats, as the presence of a response may cause more environmental damage then allowing them to recover naturally. For some high-energy shorelines such as cliffs and sea walls, manual recovery may not be recommended as it may pose a safety threat to responders.	May be used for sandy shorelines. Buried hydrocarbons may be recovered using shovels into small carry waste bags, but where possible the shoreline should be left to naturally recover to prevent any further burying of hydrocarbons (from general clean-up activities).

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Technique	Description	Shoreline type		Application
		Recommended	Not recommended	
Sorbents	Sorbent boom or pads used to recover fluid or sticky hydrocarbons. Can also be used after manual clean-up to remove any residues from crevices or from vegetation.	When hydrocarbons are free-floating close to shore or stranded onshore. As a secondary treatment method after hydrocarbon removal and in sensitive areas where access is restricted.	Access for deploying and retrieving sorbents should not be through soft or sensitive habitats or affect wildlife.	Used for rocky shorelines. Sorbent boom will allow for deployment from small shallow draught vessels, which will allow deployment close to shore where water is sheltered and to aid recovery. Sorbents will create more solid waste compared with manual clean-up, so will be limited to cleaning rocky shorelines.
Vacuum recovery, flushing, washing	The use of high volumes of low-pressure water, pumping and/or vacuuming to remove floating hydrocarbons accumulated at shorelines.	Suited to rocky or pebble shores where flushing can remobilise hydrocarbons (to be broken up) and aid natural recovery. Any accessible shoreline type from land or water. May be mounted on barges for water-based operations, on trucks driven to the recovery area, or hand-carried to remote sites. Flushing and vacuum may be useful for rocky substrate. Medium- to high-energy shorelines where natural removal rates are moderate to high. Where flushed hydrocarbons can be recovered to prevent further oiling of shorelines.	Areas of pooled light, fresh hydrocarbons may not be recoverable via vacuum due to fire and explosion risks. Shorelines with limited access. Flushing and washing not recommended for loose sediments. High-energy shorelines where access is restricted.	High volume low pressure (HVLP) flushing and washing into a sorbent boom could be used for rocky substrate, if protection booming has been unsuccessful in deflecting hydrocarbons from these areas.
Sediment reworking	Movement of sediment to surf to allow hydrocarbons to be removed from the sediment and move sand via heavy machinery.	When hydrocarbons have penetrated below the surface. Recommended for pebble/cobble shoreline types. Medium- to high-energy shorelines where natural removal rates are moderate to high.	Low-energy shorelines as the movement of substrate will not accelerate the natural cleaning process. Areas used by fauna which could potentially be affected by remobilised hydrocarbons.	Use of wave action to clean sediment: appropriate for sandy beaches where light machinery is accessible.

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Technique	Description	Shoreline type		Application
		Recommended	Not recommended	
Vegetation cutting	Cutting vegetation to prevent oiling and reduce volume of waste and debris.	Vegetation cutting may be recommended to reduce the potential for wildlife being oiled. Where oiling is restricted to fringing vegetation.	Access in bird-nesting areas should be restricted during nesting seasons. Areas of slow-growing vegetation.	May be used on shorelines where vegetation can be safely cleared to reduce oiling.
Cleaning agents (OSCA)	Application of chemicals such as dispersants to remove hydrocarbons.	May be used for manmade structures and where public safety may be a concern.	Natural substrates and in low-energy environments where sufficient mixing energy is not present.	Not recommended for shorelines. Could be used for manmade structures such as boat ramps.

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5.8.2 Environmental performance based on need

Table 5-14: Environmental Performance – Shoreline Clean-up

Environmental Performance Outcome		To remove bulk and stranded hydrocarbons from shorelines and facilitate shoreline amenity habitat recovery.		
Control measure		**Performance Standard**		**Measurement Criteria (Section 5.13)**
25	Shoreline responders	25.1	In liaison with WA DTMI (for Level 2/3 incidents), deployment of shoreline clean-up teams to contaminated RPAs comprised of: • 1-2 trained specialists per operation • 8-10 personnel/labour hire • Personnel sourced through resource pool within 24 hours of request from the IMT.	1, 2, 3A, 3B, 3C, 4
		25.2	Relevant Tactical Response Plans (TRPs) will be identified in the First Strike Plan for activation 5 days prior to a predicted impact.	1, 3A, 3C, 4
		25.3	Clean-up operations for shorelines in line with results and recommendations from SCAT outputs	1, 3A, 3B
		25.4	All shoreline clean-up sites will be zoned and marked before clean-up operations commence to prevent secondary contamination and minimise the mixing of clean and oiled sediment and shoreline substrates.	
		25.5	In liaison with WA DTMI (for Level 2/3 incidents), mobilise and deploy up to 1 shoreline clean-up operations to each contaminated RPA 24 hours prior to a predicted impact.	1, 2, 3A, 3C, 4
		25.6	In liaison with WA DTMI (for Level 2/3 incidents), mobilise and deploy up to 1 shoreline clean-up operations by day 15 and 1 additional operation by day 18.	
		25.7	The safety of shoreline response operations will be considered and appropriately managed. During shoreline clean-up operations: • All personnel in a response will receive an operational/safety briefing before commencing operations • Gas monitoring and site entry protocols will be used to assess safety of an operational area before allowing access to response personnel	1, 3B, 4
		25.8	Open communication line to be maintained between IMT and infield operations to ensure awareness of progress against plan(s)	1, 3A, 3B
26	Shoreline clean up equipment	26.1	Contract in place with 3rd party providers to access equipment.	1, 3A, 3C, 4
		26.2	Equipment mobilised from closest stockpile (detail in activity specific ALARP) 5 days prior to predicted impact.	
		26.3	Supplementary equipment mobilised from AMOSC and State stockpiles 5 days prior to predicted impact.	1, 3C, 4
		26.4	Supplementary equipment mobilised from OSRL 5 days prior to predicted impact.	
27	Management of Environmental Impact of the response risks	27.1	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	1
		27.2	Shallow draft vessels will be used to access remote shorelines to minimise the impacts associated with seabed disturbance on approach to the shorelines	

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Environmental Performance Outcome		To remove bulk and stranded hydrocarbons from shorelines and facilitate shoreline amenity habitat recovery.		
Control measure		**Performance Standard**		**Measurement Criteria (Section 5.13)**
		27.3	Vehicular access will be restricted on dunes, turtle nesting beaches an in mangroves.	
		27.4	Shoreline access route (foot, car, vessel and helicopter) with the least environmental impact identified will be selected by a specialist in SCAT operations.	
		27.5	Removal of vegetation will be limited to moderately or heavily oiled vegetation.	
		27.6	Oversight by trained personnel who are aware of the risks.	
		27.7	Trained unit leaders brief personnel prior to operations of the environmental risks of presence of personnel on the shoreline.	

The resulting shoreline clean-up capability has been assessed against the WCCS. The range of techniques provide an ongoing approach to shoreline clean-up at identified RPAs. Woodside's capability can cover all required shoreline clean-up operations for the Petroleum Activity.

The shoreline clean-up capability has the following expected performance (if required during a response):

- Deterministic modelling predicts first shoreline impact at Montebello Islands including Montebello Islands MP and Hermite Island (15 m^3) on day 15.0 (CS-01).
- Existing capability allows for mobilisation and deployment of 1 shoreline clean-up operation within 24 hours (if required). Within 48 hours, Woodside can mobilise up to 15 response operations comprising its team of trained response personnel from Karratha (the 'Burrup Response Team'), Woodside's personnel/ labour hire contract, and appropriate shoreline response equipment. This capability increases to 20 operations by day 4 and would also include team leads from Woodside, AMOSC, AMOSC Core Group and/or OSRL together with existing personnel/ labour hire contracts. As detailed in Table 5-12, teams would comprise 1 supervisor with 8 personnel/ labour hire up to 2 supervisors with 10 personnel/ labour hire. Each individual within a team is predicted to be able to remove 0.25 m^3 to 1 m^3 oil/ oiled waste per day dependent upon the nature of the shoreline oiling.
- Assessment of response capability indicates that for a worst-case scenario the actual teams required would meet the available capability and the response would be completed by end month 2-3.
- Woodside has considered deployment of additional personnel to undertake shoreline clean-up operations but is satisfied that the identified level of resource is balanced between cost, time and effectiveness.
- The most significant constraint on expanding the scale of response operations is the availability of accommodation and transport services in the region between Exmouth and Dampier and management of response generated waste. From previous assessment of accommodation in Exmouth and Dampier, Woodside estimates that current accommodation can cater for a range of 500-700 personnel per day for an ongoing operation.
- TRPs have been developed for all identified RPAs excepting international locations.

More detail regarding capability need is included at Section 6.8 together with consideration of potential alternative, additional and improved control measures. Where control measures have been selected and implemented, they are included in Section 6.8.

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5.9 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.

5.9.1 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 5-15 outlines the wildlife response areas for this activity. At the time of a spill, identification and allocation of wildlife RPA's 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 [Environment Plan name].

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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 5-15: Key at-risk species potentially in Response Protection Areas and open ocean

Species	Montebello MP	Montebello Islands and Hermite Island	Southern Pilbara Islands at Thevenard Island including NR	Muiron Islands and Muiron MMA	Exmouth including Ningaloo State MP and Ningaloo Coast WH	Montebello Shoals	Tryal Rock
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:

- Floating oil at >10 g/m^2 is predicted at Montebello MP within 13 hours (CS-01).
- The shortest timeframe for shoreline accumulation at response thresholds (>100 g/m^2) is predicted to be 15.0 days at Montebello Islands including Montebello Islands MP and Hermite Island (15 m^3).
- 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 5-16).

Table 5-16: 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*.

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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.

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, 20022b).

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.

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5.9.2 Environmental performance based on need

Table 5-17: 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 5.13)**
28	Wildlife response arrangements	28.1	Oiled Wildlife Operational Plan in place and utilised during a response to plan, coordinate, implement and terminate operations	1, 3A, 4
		28.2	Initiate a wildlife first strike response within 24 hours of confirmed or imminent wildlife contact as directed by OMP: Marine Fauna Assessment and in liaison with DBCA.	1
29	Wildlife response equipment	29.1	Maintain contract with AMOSC for immediate access to oiled wildlife response equipment.	1, 3C, 4
		29.2	Maintain contract with OSRL to access additional oiled wildlife response equipment.	1, 3C, 4
30	Wildlife responders	30.1	Two Oiled Wildlife Team Members to supervise the oiled wildlife operations who have completed an OWR Management course.	1, 2, 3B
		30.2	Maintain contract with AMOSC for immediate access to trained oiled wildlife response specialists	1, 3B, 3C
		30.3	Maintain contract with OSRL to access additional trained OWR specialists	1, 3B, 3C
		30.4	Open communication line to be maintained between IMT and infield operations to ensure awareness of progress against plan(s).	1, 3A, 3B
31	Management of environmental impacts of response risks	31.1	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 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 at identified RPAs.

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 and RPAs 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.

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5.10 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 containment and recovery, shoreline clean-up and wildlife response, and/or
- Solids/semi-solids (oily solids, garbage, contaminated materials) and debris (e.g. seaweed, sand, woods, and plastics) collected during containment and recovery, shoreline clean-up and 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.

5.10.1 Response need based on predicted consequence parameters

Table 5-18: Response Planning Assumptions – Waste Management

Response planning assumptions: Waste management	
Waste loading per m^3 oil recovered (multiplier)	Containment and Recovery – approximately 10x multiplier for oily waste generated by containment and recovery operations
	Shoreline clean-up (manual) – approximately 5-10x multiplier for oily solid and liquid wastes generated by manual clean-up.
	Oiled wildlife response – approximately 1 m^3 of oily solid and liquid waste generated for each wildlife unit cleaned

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5.10.2 Environmental performance based on need

Table 5-19: 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 5.13)**
32	Waste Management	32.1	Contract with waste management services for transport, removal, treatment and disposal of waste	1, 3A, 3B, 3C, 4
		32.2	Access to at least 675 m^3 of solid and liquid waste storage available within 4 days upon activation of 3rd party contract.	
		32.3	Access to up to 2,400 m^3 by end of Day 7	
		32.4	Decanting in accordance with National Plan guidelines to occur in daylight hours into the apex of the boom once hydrocarbon/water has settled in storage container.	
		32.5	Recovered hydrocarbons and wastes will be transferred to licensed treatment facility for reprocessing or disposal.	
		32.6	Waste management provider support staff available year-round to assist in the event of an incident with waste management as detailed in contract.	
		32.7	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
		32.8	Waste management to be conducted in accordance with Australian laws and regulations	1, 3A, 3B, 3C, 4
		32.9	Waste management services available and employed during response	
33	Management of environmental impacts of response risks	33.1	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 at identified RPAs.

Given the largest shoreline volumes ashore are predicted during Week 4 at a maximum volume of 42 m^3, and 76 m^3 of waste is expected across all shoreline clean-up operations, the capability available exceeds the need identified.

The waste management capability has the following expected performance:

- Offshore operations may generate up to an additional 1,238-5,670 m^3 during week 1 of offshore operations for CS-01.
- Shoreline and nearshore operations may generate up to 76 m^3 over 2-3 months of operations.
- 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 6.10.
- Woodside's waste contractor has access to approximately 120,000 m^3 to treat overall waste volumes. The waste management requirements are within Woodside's and its service providers existing capacity.

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5.11 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)** – 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.
- **Scientific Monitoring (SM)** - 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 SMP initiation and termination criteria during a Level 2-3 spill event refer to Table 9-2 of the Joint Industry OSM Framework.

Woodside has developed a Woodside OSM Bridging Implementation Plan[4] (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 (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 5-20 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 Petroleum 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 Petroleum Activity credible spill scenarios, including monitoring priorities, implementation timeframes and capability is provided in ANNEX C: GWF-4 Drilling and Subsea Installation OSM Activity Specific Assessment.

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 (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.

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Table 5-20: Joint industry OSM plans relevant to the Petroleum Activity activities

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	✓

5.11.1 Response need for Shoreline Clean-Up Assessment (SCAT) based on predicted consequence parameters

The following statements identify the key parameters upon which the response need can be based:

- SCAT will be mobilised to RPAs contacted at 100 g/m^2.
- The shortest timeframe for shoreline accumulation at 100 g/m^2 predicted by modelling is 15.0 days at Montebello Islands including Montebello Islands MP and Hermite Island, 18.1 days at Southern Pilbara Islands at Thevenard Island including NR, 27.5 days at Muiron Islands and Muiron MMA, 29.8 days at Exmouth including Ningaloo State MP and Ningaloo Coast WH.

In addition, a number of assumptions are required to estimate the response need for SCAT. These assumptions have been described in Table 5-21. Consequently, for planning purposes and based on the modelling results for shortest time to contact at 100 g/m^2 there are four RPAs (Montebello Islands including Montebello Islands MP and Hermite Island, Southern Pilbara Islands at Thevenard Island including NR, Muiron Islands and Muiron MMA, and Exmouth including Ningaloo State MP and Ningaloo Coast WH) requiring 4-8 SCAT specialists. These resourcing requirements can be met via the resourcing arrangements outlined in Table 8-3 of the OSM-BIP.

Table 5-21: Response Planning Assumptions – SCAT

Response planning assumptions: SCAT	
Safety considerations	Shoreline assessment 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. Personnel safety issues may include: • hydrocarbon gas and/or liquid exposure • waves and/or sea states, tidal cycle and intertidal zone limits • presence of wildlife • high ambient temperatures.
SCAT	• Deployment of 1-2 x specialists in SCAT from resource pool for each of the RPAs with predicted impacts

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5.11.2 Summary – Operational and Scientific monitoring

A detailed OSM preparedness assessment is provided in ANNEX C: GWF-4 Drilling and Subsea Installation OSM Activity Specific Assessment.

The ALARP assessment for operational and scientific monitoring (Section 6.11) 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.

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5.11.3 Environmental performance based on need

Table 5-22: 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 5.13)**
34	OSM arrangements	34.1	Maintain access to OSM expertise qualified to fulfill OSM Implementation Lead role during a Level 2/3 spill event per Joint Industry OSM Framework requirements.	3A, 3B, 3C, 4
		34.2	OSM Implementation Lead responsible for overseeing implementation of OMP and SMP components in accordance with the Woodside OSM Bridging Implementation Plan[4].	
35	Access to adequate OSM capability to provide both first strike and ongoing monitoring	35.1	Maintain contract with third-party 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 requirements described in Sections 8–10 of the OSM-BIP and the activity-specific capability assessment in Table C - 8 and Table C - 9	3A, 3B, 3C, 4
		35.2	Obtain monthly cap ability reports from OSM Service Provider to demonstrate the capability described in Section 10 of the OSM-BIP is available are available throughout any activity	
		35.3	Annual testing of OSM Service Provider standby arrangements and activation process	
36	Baseline studies assurance	36.1	Annual review of environmental baseline data for all locations where spill modelling has predicted contact within 7 days	3C
37	OSM response	37.1	OMPs and SMPs will be activated in accordance with the initiation criteria provided in the Joint Industry OSM Framework (AEP, 2021)	1
		37.2	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	
		37.3	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	
		37.4	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	
		37.5	OSM to be conducted in accordance with the Woodside OSM-BIP and, where relevant to the activity, the assessment detailed in ANNEX C: GWF-4 Drilling and Subsea Installation OSM Activity Specific Assessment	
		37.6	Monitoring prioritisation will be undertaken in accordance with the process and checklist provided in Table 13-1 of the OSM-BIP, informed by the guidance in Section C.2	

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		37.7	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	
		37.8	Implementation of OSM will comply with the minimum standards listed in Appendix A of the Joint Industry OSM Framework	
		37.9	Once OSM data reports are drafted they will be peer reviewed by an expert panel for data integrity	
		37.10	OMPs and SMPs will be terminated in accordance with the termination criteria provided in the Joint Industry OSM Framework (AEP, 2021)	
38	OSM-BIP maintenance	38.1	Annual review will be conducted according to the criteria in Section 11 of the OSM-BIP	3A, 3B, 3C, 4
39	Shoreline Clean-up Assessment Technique (SCAT)	39.1	Mobilisation within 24 hours, in agreement with WA DTMI (for Level 2/3 incidents), deployment of 2 specialist(s) in SCAT from resource pool for each of the Response Protection Areas (RPAs) with predicted impacts	1, 2, 3B, 3C, 4
		39.2	Reports from OMP: Shoreline Clean-up Assessment will be provided to the IMT daily, detailing the assessed areas to maximise effective utilisation of resources	1, 3B, 4
40	Management of Environmental Impact of the response risks	40.1	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	1
		40.2	Shallow draft vessels will be used to access remote shorelines to minimise the impacts associated with seabed disturbance on approach to the shorelines	
		40.3	Shoreline access route (foot, car, vessel and helicopter) with the least environmental impact identified will be selected by a specialist in SCAT operations	
		40.4	Vehicular access will be restricted on dunes, turtle nesting beaches an in mangroves	
		40.5	Oversight by trained personnel who are aware of the risks	
		40.6	Trained unit leaders brief personnel of the risks prior to operations	

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5.12 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 three key response planning processes detailed below. 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.

5.12.1 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 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 DM or 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.

5.12.2 Operational NEBA process

In the event of a response Woodside will confirm that the response techniques adopted at the time of Environment Plan/ Oil Pollution Emergency Plan (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 (AEP, 2021). In effect the operational NEBA will determine whether there is net environmental benefit to continue response operations.

5.12.3 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.

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5.12.4 Environmental performance based on need

Table 5-23: 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 5.13)**
41	Operational SIMA	41.1	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
		41.2	Record the evidence and justification for any deviation from the planned response activities.	
		41.3	Record the information and data from operational and scientific monitoring activities used to inform the SIMA.	
42	Stakeholder engagement	42.1	Prompt and record all notifications (including government notifications) for persons/ organisations in the region are made	
		42.2	In the event of a response, identification of relevant persons/ organisations will be re-assessed throughout the response period.	
		42.3	Undertake communications in accordance with: • Functional Support Team Guideline – Reputation • External Communication and Continuous Disclosure Procedure	
43	Personnel required to support any response	43.1	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
		43.2	A duty roster of trained and competent people will be maintained to maintain minimum manning requirements are met all year round.	3C
		43.3	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
		43.4	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.	
		43.5	Security and Emergency Management advisors will be integrated into CIMT to monitor performance of all functional roles.	
		43.6	Continually communicate the status of the spill and support Woodside to determine the most appropriate response by delivering on the responsibilities of their role.	
		43.7	Follow the Hydrocarbon Spill Australia Regulatory Framework[5], Operational Plans, FSPs, support plans and the IAPs developed.	1, 2, 3A, 4
		43.8	Contribute to Woodside's response in accordance with the aims and objectives set by the Incident Commander.	1, 2, 3B, 3C, 4

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5.13 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 and Crisis Management 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.

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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.

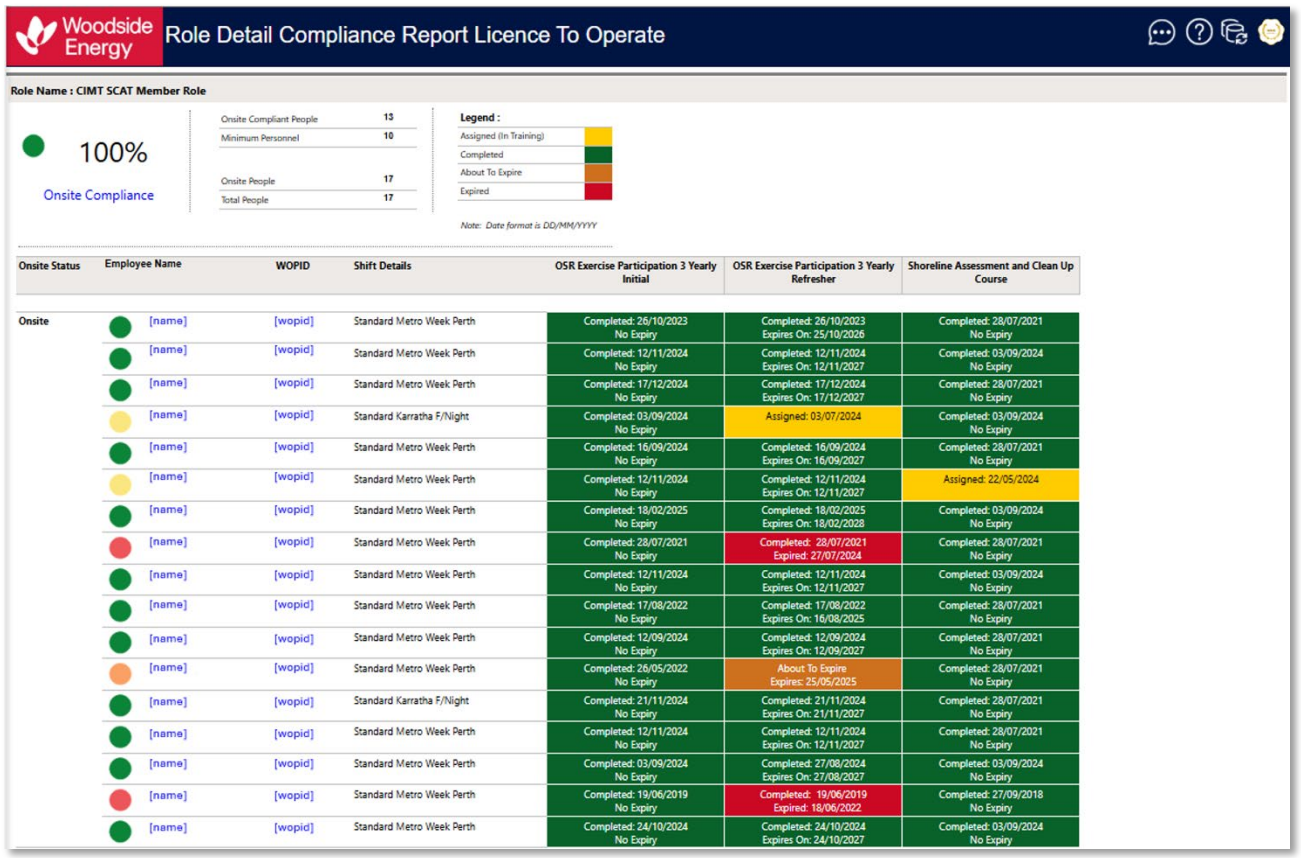


Figure 5-2: Example screenshot for the SCAT role

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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 four key control areas:

a) **Plans** – confirms all plans (including: Hydrocarbon Spill Australia Regulatory Framework[5], 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, 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[13] 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 Oil Pollution Emergency Plan (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
- Maintaining access to identified equipment, personnel and contracts.
- Ensuring compliance and assurance is undertaken in accordance with external and internal requirements.

[13] 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.

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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

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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 with those that have been selected for implementation 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**

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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 (IR, UV, 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

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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 includes the following selection of primary source control and well intervention techniques which would be conducted concurrently:

- direct ROV intervention on BOP
- debris clearance and/or removal
- capping stack (where deployment is feasible)
- relief well drilling.

6.2.1 ROV Intervention

Following confirmation of an emergency event, Woodside would mobilise inspection class ROVs to assess the status of the wellhead. The ROV available on the MODU can be deployed for this purpose within 48 hours. Work class ROVs for well intervention are also available through the existing frame agreements (timing per Table 6-1).

As Woodside holds frame agreements for vessels along with contracts for ROV providers and pilots, inspection activities using ROVs are expected to commence within seven days of an emergency event.

A hydraulic accumulator contained as part of the SFRT can be mobilised and deployed with well intervention attempted within 11 days.

Table 6-1: ROV timings

	Estimated ROV mobilisation timing for GWF-4 Drilling and Subsea Installation (days)
Source and mobilise vessel with work class ROV	2 days
Liaise with Regulator regarding risks and impacts*	4 days
Undertake ROV Inspection	1 day
TOTAL	**7 days***

** Based on timings from the Report into the Montara Commission of Enquiry, submission and discussion of revised documentation for limited activities inside the Petroleum Safety Zone (water deluge operations) to manage personnel risks and impacts was up to 20 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. With frame agreements in place, the credible Safety Case Scenario from those presented in Figure 6-4 and Figure 6-5for implementing this response would be “no safety case revision required”. Timeframes for well intervention are detailed in Figure 6-2 and Figure 6-3 and would be implemented concurrently to the actions required by the “no Safety Case” revision scenario detailed in Figure 6-4 and Figure 6-5 Figure 6-4, therefore, the Safety Case scenario will have no impact on the delivery of the strategy.

6.2.2 Debris clearance and/or removal

The Woodside Source Control Response Procedure details the mobilisation and resource requirements for implementing this strategy. Debris clearance may be required as a prerequisite to deployment of the capping stack. The AMOSC SFRT would be mobilised from Fremantle. The mobilisation of the SFRT would take place in parallel with mobilisation of the capping stack to ensure initial ROV surveys and debris clearance have commenced before the arrival of the capping stack. The SFRT comprises ROV-deployed cutters and tools that are used to remove damaged or redundant items from the wellhead and allow improved access to the well. The SFRT can be mobilised and deployed with well intervention attempted within 11 days.

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6.2.2.1 Safety Case considerations

Woodside has assessed against the NOPSEMA safety case guidance (NOPSEMA N-09000-GN1661) and can confirm that vessels conducting debris clearance and removal operations are not classified as an "associated offshore place" but as a facility and therefore require the appropriate Safety Case arrangements in place. In the event of an emergency, Woodside has access to suitable ISVs for these operations through existing frame agreements. The frame agreements for ISVs require the vessels to maintain in-force safety case approval covering a range of subsea activities. This would cover the requirement for debris clearance and removal operations such as subsea manifold installation, commissioning, cargo transfer (including bulk liquids) and ROV operations. With frame agreements in place, the credible Safety Case Scenario, from those presented in Figure 6-4 and Figure 6-5 for implementing this response would be "no safety case revision required". Timeframes for debris clearance and removal equipment deployment are detailed in Figure 6-2 and Figure 6-3 and would be implemented concurrently to the actions required by the "No Safety Case" revision scenario detailed in Figure 6-4 and Figure 6-5 , therefore, the Safety Case scenario will have no impact on the delivery of the strategy.

6.2.3 Capping stack

The GWF-4 Drilling and Subsea Installation activities will be covered by a Source Control Emergency Response Plan (SCERP) detailing the mobilisation and resource requirements for implementing this strategy. A capping stack is designed to be installed on a subsea well and provides a temporary means of sealing the well, until a permanent well kill can be performed through either a relief well or well re-entry.

In the event of a loss of well containment, the use of a subsea deployment method such as a heavy lift vessel, which is more commonly used in industry, is a more reliable and, in turn, ALARP approach. If environmental conditions permit (wind speed, wave height, current and plume radius), deployment of a capping stack with a heavy lift vessel with a 150 T crane capacity in shallower waters or 250 T crane in deeper waters could be feasible.

Woodside assumes that sourcing conventional capping stack deployment vessels would be per the SCERP. This plan has pre-identified vessel specifications for the capping stack deployment and Woodside monitors the availability and location of these vessels on a monthly basis. Woodside maintain several frame agreements with various vessel service providers and maintains the ability to call off services with a capping stack and debris clearance agreement. The supply arrangements and reliability to achieve the required mobilisation time will be revalidated prior to spud. Consideration to mobilise the capping stack from the supplier on a suitable vessel but then hand over to another vessel to conduct the capping activity will also be made to meet response time frames.

A capping stack will be mobilised to site within 16 days. Woodside will monitor the conditions around the wellsite and deployment for well intervention attempt will be undertaken once plume size is acceptable and safety and metocean conditions are suitable.

6.2.3.1 Safety Case considerations

Woodside has assessed against the NOPSEMA safety case guidance (NOPSEMA N-09000-GN1661) and can confirm that vessels conducting capping stack are not classified as an "associated offshore place" but as a facility and therefore require the appropriate Safety Case arrangements in place.

The 16-day timeframe to mobilise the vessel is based on the following assumptions:

- existing frame agreement vessel, located outside the region with approved Australian Safety Case
- a safety case revision and scope of validation is required
- vessel meets the technical requirements for deploying capping stack as per the Source Control Emergency Response Planning Guideline
- vessel has an active heave compensated crane, rated to at least 150 T for shallow waters or 250 T in deeper waters and at least 90 m in length and a deck capacity to hold at least 110 T of capping stack.

Timeframes for capping stack deployment detailed in Figure 6-2 and Figure 6-3 would be implemented concurrently with the actions required for the Safety Case revision development scenarios detailed in Figure 6-4 and Table 6-3.

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Woodside will execute the capping stack response in the fastest possible timeframe, provided the required safety and metocean conditions allow. Woodside has considered a broad range of alternate, additional, and improved options as outlined later in Section 6.2.5.

6.2.4 Relief Well drilling

The options analysis detailed in this section considers options to source, contract and mobilise a MODU and ensure necessary regulatory approvals are in place to meet timelines for relief well drilling. The screening for relief well drilling MODUs is based on the following and the process used for GWF-4 Drilling and Subsea Installation is illustrated in Figure 6-1:

- Primary – review internal Woodside drilling programs and MODU availability to source an appropriate MODU operating within Australia with an approved Safety Case.
- Alternate – source and contract a MODU through AEP MOU that is operating within Australia with an approved Safety Case.
- Contingency – Source and contract a MODU outside Australia with an approved Australian Safety Case.

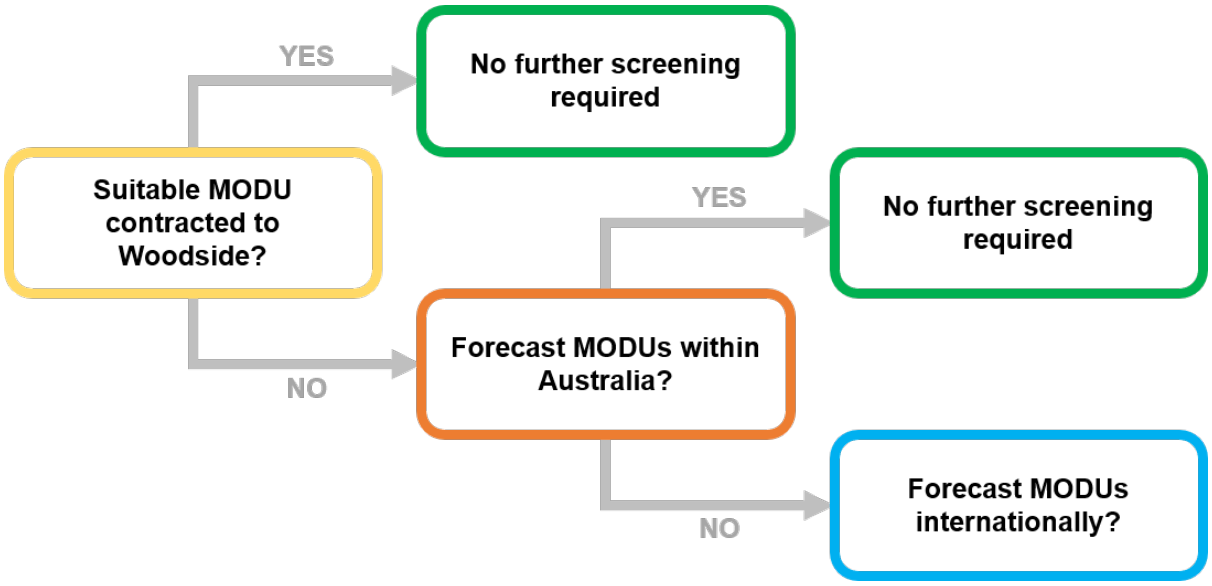


Figure 6-1: GWF-4 Drilling and Subsea Installation process for sourcing relief well MODU

In the event the Woodside contracted MODUs are unsuitable, screening is extended to all MODUs operating in Australian Waters including those outside of the North West Shelf region. Screening of a relief well MODU from international waters is undertaken where there is low confidence in local (Australian) availability. For these circumstances, Woodside will screen for suitable MODUs in closest proximity to the North West Shelf region e.g. South East Asia, and relevant additional controls will be implemented as detailed in Section 6.2.6 and/or Section 6.2.7.

If a suitable international MODU is not identified, an internal review will be undertaken, NOPSEMA notified, and the issue tabled at the Australian Energy Producers' Drilling Industry Safety Committee (AEP DISC). A review of the significance of the change in risk will be undertaken in accordance with Woodside's environment management of change requirements and relevant regulatory triggers. Based on the detail provided, mobilisation of a suitable and available MODU in North West Shelf region is expected to be achieved within 21 days and from South East Asia within 36 days. If a MODU was available in South East Australia, mobilisation is estimated to be 47 days. Woodside will seek to execute relief well drilling in the fastest possible timeframe.

The detail of these arrangements demonstrates that the risks have been reduced to ALARP and an acceptable level through the control measures and performance standards outlined in Section 5.2.

6.2.4.1 Relief Well drilling timings

The duration of a blowout (from initiation to a successful kill) for the Petroleum Activity is assessed as 70 days[2] (CS-01) or up to 76 days (CS-02). Relief wells for other wells within the field are expected to be similar duration.

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Details on the steps and time required to drill a relief well is shown in Table 6-2. Moored MODUs are suitable for the GWF-4 Drilling and Subsea Installation Petroleum Activity and have, therefore, been used as the basis for the time estimate below.

To validate the effectiveness of the relief MODU supply arrangements through the AEP MoU, an exercise to test the 21-day mobilisation period forms part of Woodside's three-yearly Hydrocarbon Spill Arrangements Testing Schedule. Testing of these arrangements are facilitated by an external party and includes suspension of the assisting operator's activities, contracting the MODU, vessel safety case revision and transit to location.

Table 6-2: Relief well drilling timings

Estimated Relief Well Duration	Moored Days (CS-01)		Moored Days (CS-02)	
Rig mobilisation				
Secure and suspend well. Complete Relief well design. Secure relief well materials.	8.0	36 days	8.0	36 days
Transit to location	17.0		17.0	
Backload and loadout bulks and equipment, complete internal assurance of relief well design.	2.0		2.0	
Contingency for unforeseen event	9.0		9.0	
Mooring activities and relief well construction operations	**20**		**26**	
Drill out shoe, conduct formation integrity test and drill towards intersection point	1.5	14 days	1.5	14 days
Execute well-specific ranging plan to accurately intersect wellbore in minimum timeframe	9.5		9.5	
Pump kill weight drilling fluid per the relief well plan. Confirm well is static with no further flow	0.5		0.5	
Contingency for unforeseen technical issues	2.5		2.5	
Total discharge duration	**70**[2]		**76**	

Woodside has considered a broad range of alternate, additional, and improved options as outlined in Section 6.2.6 and/or Section 6.2.7.

Intersect and kill duration is estimated at 14 days. This is a moderately conservative estimate. During the intersect process, the relief well will be incrementally drilled and logged to accurately approach and locate the existing well bore. This will result in the highest probability of intersecting the well on the first attempt and thus will reduce the overall time to kill the well.

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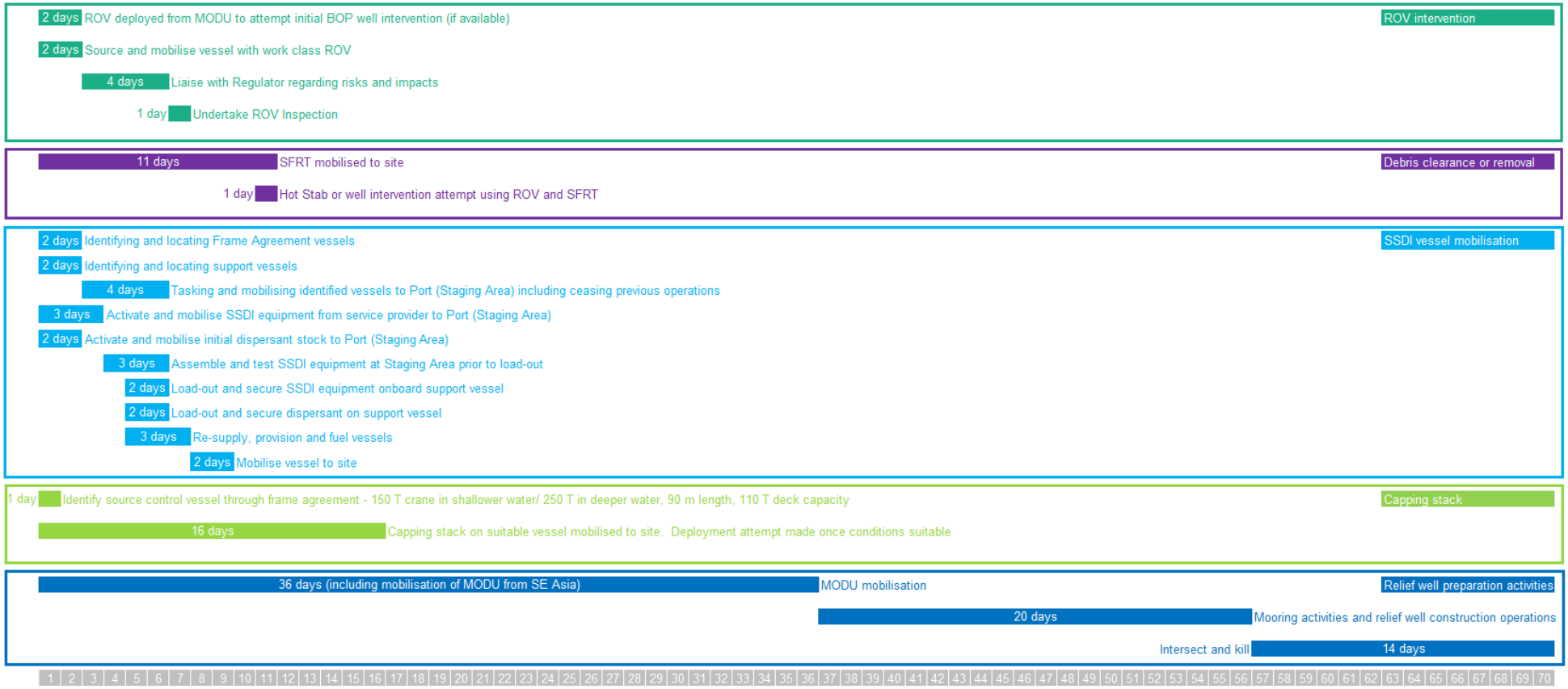


Figure 6-2: Source control and well intervention response strategy deployment timeframes for GWF-4 Drilling and Subsea Installation wells at the Wilcox Prospect

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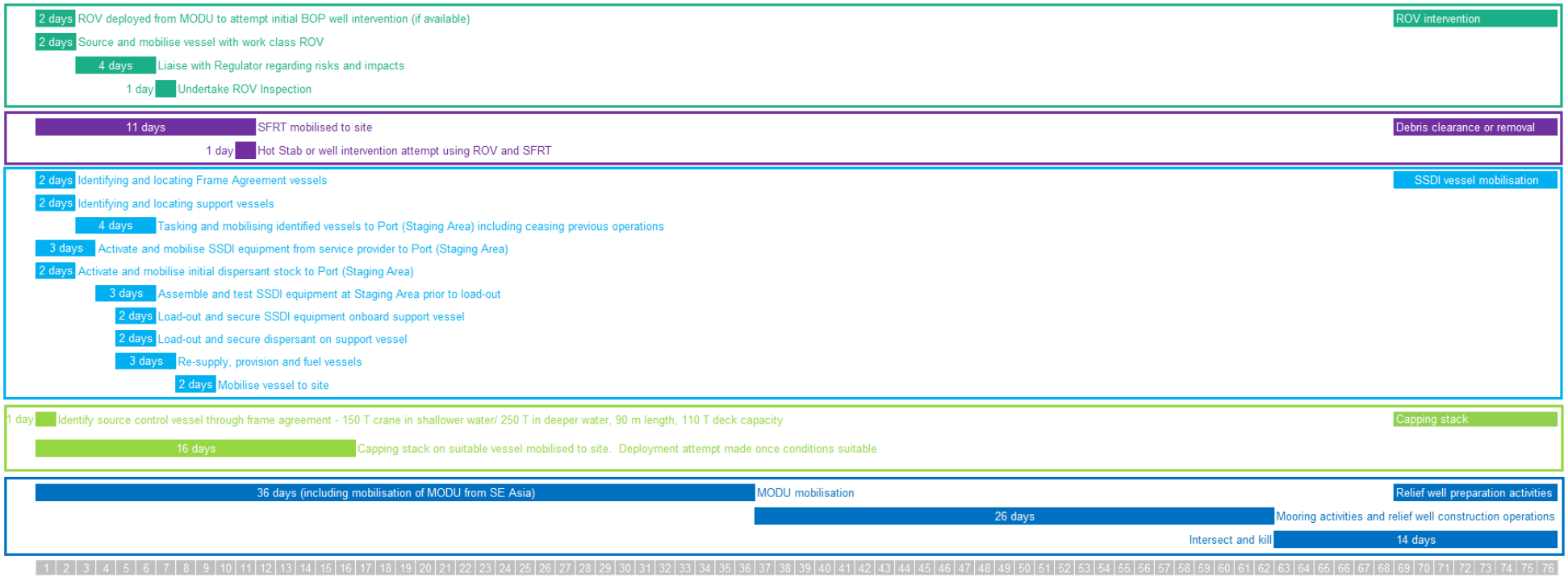


Figure 6-3: Source control and well intervention response strategy deployment timeframes for GWF-4 Drilling and Subsea Installation Yodel Updip well

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6.2.4.2 Safety Case considerations

Woodside recognises that it will not be the Operator or holder of the Safety Case for the MODU and/or vessels involved in relief well activities. In the event that a revision to the Operator's Safety Case is required for relief well drilling, Woodside has identified measures to ensure timely response and optimise preparedness as far as practicable that can be undertaken to expedite a straightforward Safety Case revision for a MODU/ vessel to commence drilling a relief well. Performance standards associated with these measures have been included in Section 5.2. Section 6.2.6.3 details ALARP controls to improve activation and mobilisation arrangements including maintenance of an 'Emergency Response Tactical Response Plan' to assist in accelerating Safety Case revision(s).

These include;

- Access to Safety and Risk discipline personnel with specialist knowledge.
- Monitoring internal and external MODUs and vessel availability in the region and extended area through contracted arrangements on a monthly basis, with a two-year lookahead.
- Prioritisation of MODUs/vessels with current or historical contracting arrangements. Woodside maintains records of previous contracting arrangements and companies. All current contracts for vessels and MODUs are required to support Woodside in the event of an emergency.
- Leverage mutual aid arrangements such as the AEP MOU for vessel and MODU support.
- Woodside Planning and Logistics, and Safety Officers (on-Roster/Call 24/7) which can articulate need for, and deliver Woodside support, in key delivery tasks including sitting with potential outside operators.
- Ongoing strategic industry engagement and collaboration with NOPSEMA to work toward time reductions in regulatory approvals for emergency events.

Woodside has identified three safety case revision development and submission scenarios for a MODU and plotted these alongside the relief well preparation activities in Figure 6-4 and Figure 6-5. The assumptions for each of the cases are detailed in subsequent Table 6-3.

A relief well Safety Case Revision would leverage the previously accepted Safety Case Revision for the Petroleum Activity, including the associated site-specific well hazards. As such, there is less new detail for the regulator to review and should present a short review timeframe with no impact expected to the commencement of relief well drilling activities.

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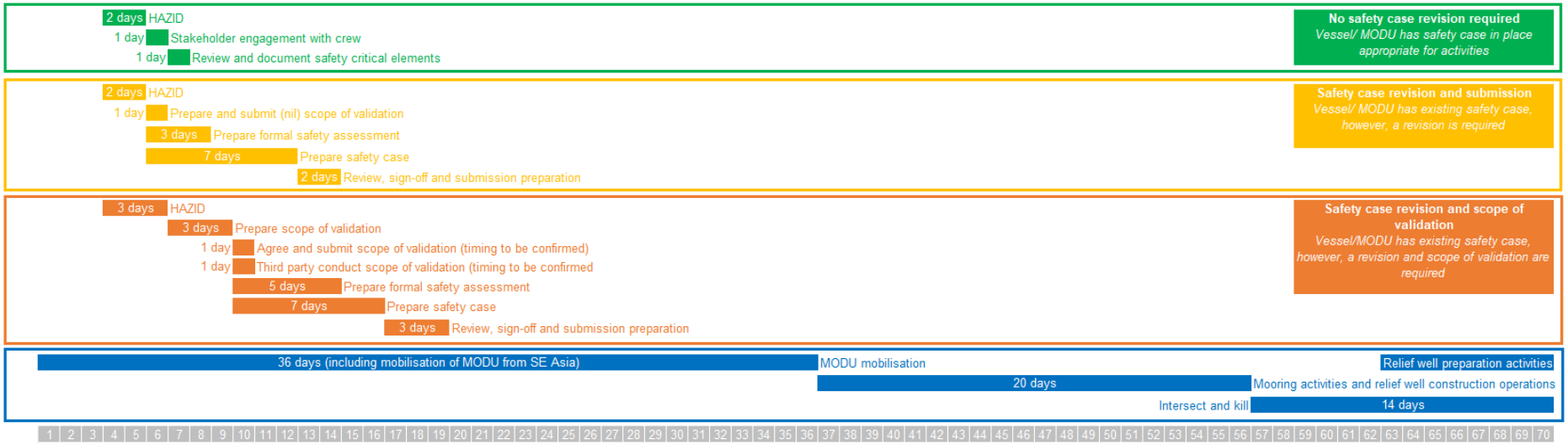


Figure 6-4: Timeline showing safety case revision timings alongside other relief well preparation activity timings for GWF-4 Drilling and Subsea Installation wells at the Wilcox Prospect

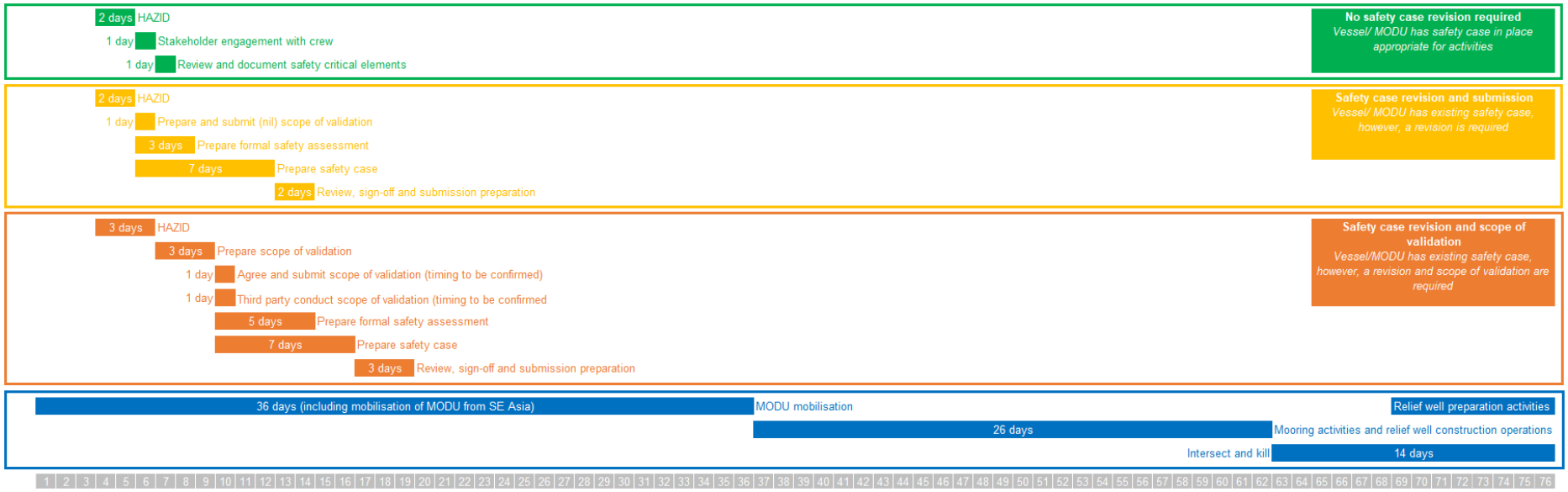


Figure 6-5: Timeline showing safety case revision timings alongside other relief well preparation activity timings for GWF-4 Drilling and Subsea Installation Yodel Updip well

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Table 6-3: 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/MODU has a safety case in place appropriate for activities.	Vessel/MODU has an existing safety case, however, a revision is required.	Vessel/MODU has an existing safety case, however, a revision is required plus scope of validation.
Conditions/ assumptions	Assumes that existing vessel/MODU 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/MODU selected and crew and available for workshops and safety case studies.	Safety case timing assumes vessel/ MODU 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. For MODU, it assumes that the relief well equipment is already part of the MODU facility and MODU 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.

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6.2.5 Source Control – Control Measure Options Analysis

The assessment described in Section 6.2.1, 6.2.2, 6.2.3 and 6.2.4 outline the primary and alternate approach respectively that Woodside would implement for relief well drilling**.**

Woodside has outlined the options considered against the activation, mobilisation (improved options), deployment (alternate and additional options) process described in Section 2.1.1 that provides an evaluation of:

- predicted cost associated with adopting the option
- predicted change/environmental benefit
- predicted effectiveness/feasibility of the option

Alternative, Additional and Improved options have been identified and assessed against the base capability described in Section 5 with those that have been selected for implementation 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.

- Alternative options, including potentially more effective and/or novel control measures are evaluated as replacements for an adopted control.
- Additional control measures are evaluated in terms of their ability to reduce an impact or risk when added to the existing suite of control measures.
- 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

Options where there is not a clear justification for their inclusion or exclusion may be subject to a detailed assessment.

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6.2.6 Activation/Mobilisation – Control Measure Options Analysis

Alternative, additional and improved options have been identified and assessed against the base capability described in Section 5.2 with those that have been selected for implementation 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.

6.2.6.1 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
Contract and run a rig on standby or warm stack on the north-west shelf, shared for all Woodside activities.	A standby MODU shared across all Woodside activities is likely to provide a moderate environmental benefit as it will maintain or may reduce the 21-day sourcing, contracting and mobilisation time. This could reduce the volume and duration of the release through shorter time to kill the well and thus may reduce impacts on receptors and sensitivities.	This option is not considered feasible for all Woodside activities as there are a large range of well depths, complexities, geologies and geophysical properties across all Woodside's operations. The large geographic area of Woodside activities also means that the MODU is unlikely to be in the correct location at the right time when required.	Estimate for 12 months of operations: US$ 500k/day (0.66FX) plus A$ 30M startup would total A$307M. This is considered disproportionate to the environmental benefit potentially achieved by reducing mobilisation time. Further, there are additional health, safety and environmental impacts associated with running a rig on standby.	The costs and complexity of having a MODU and maintaining this arrangement for the duration of the Petroleum Activities Program are disproportionate to the environmental benefit gained.	**No**
Standby MODU shared across AEP MOU Titleholders	A standby MODU shared across all titleholders who are signatories to the AEP MOU is likely to provide a minor environmental benefit as it will maintain or may reduce the 21-day sourcing, contracting and mobilisation time. This could reduce the volume and duration of the release through shorter time to kill the well and thus may reduce impacts on receptors and sensitivities. Running a MODU on standby together with the required support vessels/ aircraft, however, will result in increased atmospheric emissions from burning fuel. The MODU may also increase seabed damage. Deployment of such resources will also increase SIMOPs complexity and elevate health and safety risks to personnel.	This option is not considered feasible for a number of Titleholders due to the remote distances and regions in which Titleholders operate within Australia, as well as a substantial range of well depths, types, complexities, geologies and geophysical properties across the range of Titleholders.	Costs are dependent upon the number of AEP MOU Titleholders involved. Additional costs and complexity involved given commercial arrangements that would need to be addressed.	The costs and complexity of having a MODU and maintaining a shared arrangement for the duration of the Petroleum Activities Program, together with increased environmental, SIMOPs and health and safety risks, are disproportionate to the environmental benefit gained. .	**No**
Mobilise Equinox MODU from Victoria with associated additional time impact and water depth limitations	Longer mobilisation duration than 36 days (estimated 47 days), leading to increased relief well drilling timeframe.	This option is considered feasible however it would result in longer MODU mobilisation time.	Potential for higher cost of mobilisation compared with relief well rigs from South East Asia.	Considered not to be the primary option given increased mobilisation timeframes compared with mobilising a rig from South East Asia. Possible that this option could be activated in parallel with the South East Asia mobilisation, or in the event South East Asia rig mobilisation is unsuccessful.	**Evaluate**
Mobilise relief well MODU from further afield e.g. Africa, GOM with associated additional mobilisation time impact	Longer mobilisation duration, leading to increased relief well drilling timeframe.	This option is considered feasible, however it would result in longer mobilisation timeframes.	Potential for higher cost of mobilisation compared with relief well rigs from local/ regional vicinity.	Considered not to be the primary option given increased mobilisation timeframes compared with mobilising a rig from local/ regional vicinity.. Possible avenue in the event that attempts to mobilise a rig from local/ regional vicinity are not successful.	**Evaluate**

6.2.6.2 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					

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6.2.6.3 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
Monitor internal drilling programs for rig availability	Woodside may be conducting other campaigns that overlap with the Petroleum Activity, potentially providing availability of a relief well drilling rig within Woodside. The environmental benefit of monitoring other drilling programs internally is for Woodside to understand what other rigs may be rapidly available for relief well operations if required, potentially reducing the time to drill the relief well, resulting in less hydrocarbon to the environment.	Woodside monitors MODU availability through market intelligence services. Woodside will continually monitor other drilling and exploration activities within Australia and as available throughout the region to track rigs and explore rig availability during well intervention operations.	Associated cost of implementation is minimal to the environmental benefit gained. Related control measures and performance standards are included in Section 5.	This option is a low-cost control measure with potential to reduce the volume of hydrocarbon released to the environment.	**Yes**
Monitor external activity for rig availability	The environmental benefit achieved by monitoring drilling programs and rig movements across industry provides the potential for increased availability of suitable rigs for relief well drilling. Additional discussions with other titleholders may be undertaken to potentially gain faster access to a rig and reduce the time taken to kill the well and, therefore, the volume of hydrocarbons released.	Woodside will source a relief well drilling rig in accordance with the AEP MOU on rig sharing in the unlikely event this is required. Woodside will continually engage with other Titleholders and Operators regarding activities within Australia and as available throughout the region to track rigs and explore rig availability during well intervention operations. Commercial and operational provisions do not allow Woodside to discuss current and potential drilling programs in detail with other titleholders.	Associated cost of implementation is moderate to the environmental benefit gained.	This option is a low-cost control measure with potential to reduce the volume of hydrocarbon released to the environment.	**Yes**
Monitor status of Registered Operators/ Approved Safety cases for rigs	Woodside can monitor the status of Registered Operators for rigs operating within Australia (and therefore Safety Case status). Woodside can monitor monthly the status of Registered Operators for rigs operating within Australia (and therefore Safety Case status). This allows for a prioritised selection of rigs in the event of a response with priority given to those with an existing Safety Case.	The environmental benefit of monitoring rigs is for Woodside to understand what other rigs may be rapidly available for relief well operations if required, potentially reducing the time to drill the relief well, resulting in less hydrocarbons released to the environment.	The cost is minimal.	This option is a low-cost control measure with potential to reduce the volume of hydrocarbon released to the environment.	**Yes**
Create an 'Emergency Response Tactical Response Plan' focused explicitly on meeting the requirements of rig permissioning under accelerated timeframe requirements of a relief well scenario.	NOPSEMA require Safety Case(s) in the event of a relief well scenario. Preparing an Emergency Response Tactical Response Plan with sample Scope of Validations for a variety of rig types and additional required equipment to support relief well drilling (i.e. critical services) may streamline the process for obtaining a Safety Case in the event of a loss of well control scenario.	This option is considered feasible.	Minor administrative cost associated with the development of an Emergency Response Tactical Response Plan and maintaining its currency overtime.	This option provides benefit in terms of streamlining the process for obtaining a Safety Case in the event of relief well rig mobilisation from South East Asia. The ER Tactical Response Plan will contain sample Scope of Validations for a variety of rig types and would include any additional equipment to support relief well drilling (e.g critical services) as well as dynamic kill such as pumps. The framework will not be populated with rig specifics; these would be updated at the time of source control event.	**Yes**

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6.2.7 Deployment Options Analysis

6.2.7.1 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					

6.2.7.2 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**
Offset capping alternative to conventional capping stack deployment	While the use of an offset capping system could reduce the quantity of hydrocarbon entering the marine environment, the mobilisation lead times for both a capping system and required vessels/ support equipment, would minimise any environmental benefit gained over conventional capping.	The base case considerations for offset installation equipment (OIE) requires a coordinated response by four to seven vessels working simultaneously outside of the 500m exclusion zone, introducing complex SIMOPS issues. Due to the OIE's scale, fabrication of equipment (e.g. mooring anchors) outside of the contractor's scope of supply is likely to require engagement of international suppliers, further increasing complexity and uncertainty in associated time frames. Screening indicates that mobilising some components of the OIE (which are based in Italy) can only be done by sea and is likely to erode any time savings realised through killing the well via a relief well. The March 2019 OSRL exercise in Europe tested deployment of the OIE. It highlighted that a >600 T crane vessel would be required for deployment to allow for a useable hook-height for the crane to conduct the lift of the carrier. Vessels with such capability and a current Australian vessel Safety Case are not locally or readily available.	Due to risks, uncertainty and complexity of this option, and the inability to realise any environmental gains, any cost would be disproportionate to the benefits gained.	Woodside has confidence in availability of suitable relief well MODUs across the required drilling time frame thus the OIE would provide no advantage. Implementation of OIE has been assessed as a complex and unfeasible SIMOPs operation, precluded by a combination of the site-specific metocean and worst-case discharge conditions at the GWF-4 location. Implementation of a novel technology such as OIE culminates in low certainty of success while at the same time increasing associated health and safety risks. As such, the primary source control response and ALARP position remains drilling a relief well.	**No**
Dual vessel capping stack deployment	While the use of dual vessel to deploy the capping system could reduce the quantity of hydrocarbon entering the marine environment, this is an unproven technology. Additionally, the feasibility issues surrounding a dual vessel capping deployment in the water depths at the GWF-4 Drilling and Subsea Installation well (72-132 m), together with mobilisation lead times for both a cap and required vessels and support equipment, would minimise any environmental benefit.	A dual vessel deployment is somewhat feasible provided a large enough deck barge can be located. Deck barges of 120 m are not, however, very common and will present a logistical challenge to identify and relocate to the region. Further, the longer length barges may need mooring assist to remain centred over the well. The capping stack would be handed off from a crane vessel to the anchor handler vessel (AHV) work wire outside of the exclusion zone. The AHV would then manoeuvre the barge into the plume to get the capping stack over the well. In this method, the barge would be in the plume, but the AHV and all personnel would be able to maintain a safe position outside of the gas zone. The capping stack would actually be lowered on the AHV work wire so a crane would not be required on the barge.	Due to there being minimal environmental benefits gained by the prolonged lead times needed to execute this technique, plus a potential increase in safety issues, any cost would be disproportionate to the benefits gained.	Given there is minimal environmental benefit and an increase in safety issues surrounding SIMOPS and deployment in shallow waters, this option would not provide an environmental or safety benefit.	**No**
Subsea Containment System alternative to capping stack deployment	While the use of a subsea containment system could reduce the quantity of hydrocarbon entering the marine environment, this is an unproven technology. Additionally, the system is unlikely to be feasibly deployed and activated for at least 90 days following a blowout due to equipment requirements and logistics. No environmental benefit is therefore predicted given the release duration is 70 days (CS-01) or 76 days (CS-02) before drilling of a relief well under the adopted control measure.	The timing for mobilisation, deployment and activation of the subsea containment system is likely to be longer (>90 days), than the expected 70 day (CS-01) or 76 day (CS-02) relief well drilling operations based on the location, size and scale of the equipment required, including seabed piles that can only be transported by vessel.	Woodside has investigated the logistics of reducing this timeframe by pre-positioning equipment but the costs of purchasing dedicated equipment by Woodside for this Petroleum Activities Program is not considered reasonably practical and are considered disproportionate to the environmental benefit gained.	This option would not provide an environmental benefit.	**No**

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Pre-drill and suspend relief well overburden section, for each well.	Whilst this option may potentially decrease relief well drilling timing, it represents additional environmental impacts associated with discharge of additional drill cuttings and fluids along with benthic habitat disturbance.	This option is not considered feasible due to the uncertainties related to the location and trajectory of the intervention well, which may vary according to the actual conditions at the time the loss of containment event occurs. Top-hole may have to be relocated, due to location being unsafe or unsuitable and further works will be required each year to maintain the top holes.	Not practicable: Cost estimated at ~ $40M per well. Further, the control would not be effective as no relief well rig would be available while drilling pre-drill wells. Significant HSE impact due to increase in drilling and completions operations associated with pre-drilling relief wells.	This option would not provide an environmental benefit due to the additional environmental impacts coupled with a lack of significantly improved relief well timings.	**No**
Purchase and maintain mooring system	In theory, may provide some environmental benefit as it may reduce equipment sourcing time. However, due to the continued need for specialists to install the equipment plus the need to source a vessel suitable for installing the mooring system, the timeframe reduction would be minimal. Furthermore, this process would typically take place in parallel with relief well rig mobilisation.	Woodside is not a specialist in installing and maintaining moorings so would require specialists to come in to install the moorings and would also require specialist vessels to be sourced to undertake the work.	The cost of purchasing, storing and maintaining pre-lay mooring systems with anchors, chains, buoys and ancillary equipment is considered disproportionate to the environmental benefit gained.	This option would not provide an environmental benefit as timeframe reductions would be minimal given vessels suitable for the installation of the mooring system would still be required, and this would take place in parallel with rig mobilisation..	**No**
Purchase or rent a Kinetic Blowout Stopper (K-BOS) system	The use of a K-BOS system could reduce the quantity of hydrocarbon entering the marine environment.	The K-BOS is marketed in two configurations, either integrated (i.e. retrofitted) into the existing rig BOP through modifications to replace a traditional Blind Shear Ram (BSR)/ Casing Shear Ram (CSR) or non-integrated (i.e. standalone) device deployed as a dedicated 'spool' with appropriate connector below and wellhead hub enabling installation between the wellhead/ Xmas tree and BOP stack. **a) Integrated (i.e. retrofit)** • Removal or retrofit of either one of the existing rams bonnets of the Woodside proposed MODUs existing BOP 'double' ram bodies to accommodate the retrofit installation of the device (which would only be used in an unlikely LOWC scenario) is viewed by Woodside as an unnecessary control measure given the existing BOP system redundancy which has been validated and accepted as part of the MODU's Base Vessel Safety Case to meet ALARP for management of formation hydrocarbons entering the well. • Lead time for procuring an integrated K-BOS has been estimated at 10 months and time to install, integrate and commission system within rig contractors existing BOP stack is assumed at ~1-2 months • As install of an integrated K-BOS device would require modification of Safety Critical Equipment (i.e. BOP), rig contractor would be required to resubmit and gain regulator approval for MODU Base Vessel Safety Case, estimated to require ~6 months. Campaign specific MODU Vessel Safety Case Revision can only be submitted for regulator approval post MODU Base Vessel Safety Case approval. Accordingly, a further ~6 months had been assumed to attain MODU Vessel Safety Case Revision approval. • Based on the aforementioned, Woodside estimates an integrated/retrofit option would ultimately require ~18-24 months total when accounting for device procurement, install, commissioning and required regulator approvals. **b) Non-integrated (i.e. standalone)** • Adding a K-BOS device as a dedicated 'spool' between the wellhead/ Xmas tree and MODU BOP would result in significantly extending the height and increasing the weight of equipment attached to the wellhead and conductor system. This resulting increase in the centre of gravity would exacerbate wellhead bending and fatigue loads, adding	**a) Integrated (i.e. retrofit)** • Woodside estimates an integrated/ retrofit K-BOS option could ultimately require up to ~24 months and lead to a cost increase of ~USD 95M when accounting for device procurement, install, commissioning and rental costs, expected MODU contract termination/deferral costs, associated engineering works and regulatory approval and permitting costs. **b) Non-integrated (i.e. standalone)** • The execution of the drilling campaign using the non-integrated/standalone configuration would require running and recovery of the K-BOS spool independent of the rig BOP and on critical path operations. Each well would require 2x running events and 2x recovery events (1 each on the wellhead and 1 each on the Xmas tree). Additionally, this would preclude hopping the BOP with BOP hop tool. It is assessed this would add ~20 rig days (~4 days per well x 5 wells) to the campaign leading to an increase in campaign costs of ~USD 20M. • In addition to the ~USD 20M operational implications of utilising a non-integrated/standalone K-BOS device, the rental charge of such a device is estimated at ~USD 7M for a total of USD 27M.	It is Woodsides assessment that the application of existing controls and barriers captured in the MODU Base Vessel Safety Case, Woodside's Well Management System including: Wells Risk Management Standard; Manage Campaign Operations Standard; and Well Control Standard provide a resulting low LOWC risk level that meets ALARP without the deployment of this additional control measure. At present, and historically, it has been industry experience that rig BOP equipment and control systems in compliance with API Standard 53 Revision 5 have been widely accepted worldwide by regulatory bodies to address any given well control situation encountered and to be considered ALARP. Woodside assesses the cost/ schedule implications and additional wellhead bending/fatigue risk of this additional control measure as disproportionate to the potential environmental benefit. Accordingly, the control has not been adopted.	**No**

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		increased risk to the structural integrity of the wellbore pressure containing envelope. • Assessment of the bending and fatigue life of the already procured wellhead, conductor and surface casing does not consider the additional loads (bending and fatigue) that would be applied as a result of installation of the device between the wellhead/ Xmas tree and BOP stack. Further analysis would be required and additional engineering controls may be required to accommodate the device, such as additional tethering of the BOP or equipment replacement. Fatigue management is a focus at the GWF-4 location due to the shallow water depth. • Lead time for procuring a non-integrated /standalone KBOS has been estimated at 10 months and time to incorporate with rig contractor's existing BOP stack is assumed at ~1 month. • Use of non-integrated/standalone configuration spool to potentially shear and seal in an actual LOWC event may further complicate planning/executing a well kill and subsequent plug and abandonment operations.			
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**

6.2.7.3 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
Maintaining relief well drilling supplies	There is not predicted to be any reduction in relief well timing or spill duration from Woodside maintaining stocks of drilling supplies (mud, cement, etc.)	It would be feasible to source some relief well drilling supplies such as casing but the actual composition of the cement and mud required will need to be specific to the well. This option is also not deemed necessary as the lead time for sourcing and mobilising these supplies is included in the 21-36 days for sourcing and mobilising a rig.	The capital cost of Woodside purchasing relevant drilling supplies is expected to be approximately $600K with additional costs for storage and ongoing costs for replenishment. These costs are considered disproportionate to the environmental benefit gained.	This option would not provide an environmental benefit.	**No**

6.2.8 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
  - relief well rig mobilised from South East Asia region
  - mobilise Equinox MODU from Victoria with associated additional time impact and water depth limitations (EVALUATE)
  - mobilise relief well rig from further afield than South East Asia: Africa, GOM with associated additional mobilisation time impact (EVALUATE)
- additional
  - contract in place with Wild Well Control and Oceaneering to supply trained, competent personnel
- improved
  - monitor internal drilling programs for MODU availability
  - monitor external activity for MODU availability
  - monitor status of registered operators / approved Safety cases for MODUs
  - create an 'Emergency Response Tactical Response Plan' focused explicitly on meeting the requirements of rig permissioning under accelerated timeframe requirements of a relief well scenario.

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6.3 Source Control via Vessel SOPEP – ALARP Assessment

Alternative, additional and improved options have been identified and assessed against the base capability described in Section 5.3 with those that have been selected for implementation 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.

6.3.1 Source Control via Vessel SOPEP – Control Measure Options Analysis

6.3.1.1 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
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

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6.4 Subsea Dispersant Injection – ALARP Assessment

Alternative, additional and improved control measure 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 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 Subsea Dispersant Injection timing

The scope of existing safety cases for Frame Agreement vessels includes all relevant activities for SSDI operations. Depending on the location and availability of vessels, Woodside expects the SSDI capability can be mobilised to site for deployment within 12 days. This may be able to be achieved faster if vessels are closer to appropriate staging areas and not already involved in other operations. The following steps are included within the indicative timeframe and many of these are expected to be concurrent activities, as shown in Figure 6-2 and Figure 6-3.

1. Identifying and locating frame agreement vessels (1-2 days)
2. Identifying and locating support vessels (1-2 days)
3. Tasking and mobilising identified vessels to port (staging area) including ceasing previous operations (2-4 days)
4. Activate and mobilise SSDI equipment from service provider to port (Staging Area) (2-3 days)
5. Activate and mobilise initial dispersant stock to port (Staging Area) (1-2 days)
6. Assemble and test SSDI equipment at staging area prior to load-out (2-3 days)
7. Re-supply, provision and fuel vessels (1-2 days)
8. Load-out and secure SSDI equipment onboard vessel (1-2 days)
9. Load-out and secure dispersant on support vessel (1-2 days)
10. Contingency for unforeseen events (1 day).

6.4.2 Response Planning: Loss of well containment (CS-01)

Following a loss of well control it may take 2-5 days to complete a risk assessment, discuss and agree appropriate control measures with NOPSEMA (Safety, Environment and Well Integrity divisions), and monitor the operating environment within the Petroleum Safety Zone around a well or facilities. Subsea dispersant injection is unlikely to be deployed until approximately day 12, subject to subsea ROV survey of the site and agreement of risk assessment and recommended control measures for personnel safety.

Dispersant efficacy testing on NWS Condensate, which has a residue of 3% and similar characteristics to PYA-01 Condensate and Yodel-3 Condensate (residues of 3% and 2.5% respectively), predicts it will be amenable to dispersant with an approximate range of effectiveness from 35-72% (see Table 5-4). These results were determined in ideal laboratory conditions and represent the expected treatment of hydrocarbons that are contacted. Based on response planning assumptions outlined in Section 5.3, the subsea dispersant injection system (as part of the SFRT package) is able to deliver approximately 60-75 m^3 per day on a continuous 24 hours per day, 7-day basis.

For the purpose of capability demonstration below, Woodside has shown that once the SSDI system arrives and is able to be deployed safely, a capability exists to commence and continue SSDI until the well is killed (approximately day 70 (CS-01) or day 76 (CS-02)).

Table 6-4: Response Planning – Subsea Dispersant Injection (based on CS-02)

Subsea Dispersant Injection (SSDI)		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Week 2	Week 3	Week 4	Month 2	Month 3
Oil Release													
R1	Oil Release Rate - m^3	14,310	14,199	14,131	14,078	14,035	13,985	13,950	96,739	95,434	94,339	365,164	243,497
A	**Capability available - m^3**												
A1	Predicted oil volume treated by SSDI (lower)	0	0	0	0	0	0	0	3,600	12,600	12,600	50,400	50,400
A2	Predicted oil volume treated by SSDI (upper)	0	0	0	0	0	0	0	31,500	31,500	31,500	126,000	126,000
A3	Dispersant application volume (lower)	0	0	0	0	0	0	0	120	420	420	1,680	1,680
A4	Dispersant application volume (upper)	0	0	0	0	0	0	0	525	525	525	2,100	2,100
B	**Subsea release oil remaining - m^3**												
B1	Predicted oil volume not treated (lower)	14,310	14,199	14,131	14,078	14,035	13,985	13,950	93,139	82,834	81,739	314,764	193,097
B2	Predicted oil volume not treated (upper)	14,310	14,199	14,131	14,078	14,035	13,985	13,950	65,239	63,934	62,839	239,164	117,497

A1 and A2 – the upper and lower volumes in m^3 that subsea dispersant injection may be able to treat (based on response planning assumptions in Section 5.3 and volumes in A3 and A4). These are based on a 1:50 ratio for A1 and a 1:100 ratio for A2
A3 and A4 – the upper and lower volumes in m^3 of the associated dispersant injection volumes for A1 and A2,
B1 and B2 – the upper and lower volumes in m^3 of the subsea oil that is not treated on each day, following predicted treatment outlined in A1 and A2 (oil released minus predicted oil volume treated (R1-A1)).

The dispersant injection operation will be monitored subsea to ensure ongoing efficacy and also for any change in conditions that has the potential to cause the dispersed plume to migrate outside of the Zone of Application (ZoA) (see Figure 2-6). The ZoA is based on the following criteria:

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- 10 km from Commonwealth Marine Parks (excluding 'Multiple Use Zones')
- 10 km from State Marine Parks
- 10 km from Heritage List areas
- >20 m water depth
- 4 km from State Waters
- Within the Mainland Australian EEZ
- Avoiding sensitive reefs and shoals

If SSDI is deemed appropriate, Woodside has contracted access to both SSDI application equipment and the OSRL Global Dispersant Stockpile to enable ongoing subsea dispersant injection operations. The SSDI equipment and dispersant can be deployed by day 12 to commence treatment of the released oil.

Woodside acknowledges that no single response strategy or even combination of offshore response strategies will treat or remove 100% of hydrocarbons. Woodside would require the inclusion of other response techniques to be initiated concurrently. Woodside is committed to a realistic, scalable response capability that is commensurate to the level of risk and able to be practically implemented and sustained within the logistical constraints of remote areas.

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6.4.3 Subsea Dispersant Injection – Control Measure Options Analysis

6.4.3.1 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 vessel for SSDI mobilisation and deployment (based in Australia)	Reducing the mobilisation and deployment time of the SSDI through vessel standby/pre-positioning is unlikely to result in a significant change in environmental benefit. Under current arrangements the SSDI system can be on location from approximately day 12 depending on vessel availability where a dedicated, contracted vessel may enable the SSDI system on location from day 10. Once deployed the SSDI will be utilised to increase entrainment of released oil and to ensure safe operations for surface deployment of SFRT and other surface response techniques.	A modified Construction vessel or vessels with suitable remote operated underwater vehicles (ROVs) is required to load, transport and deploy the SSDI system. The critical element in deployment of the SSDI is the availability of an appropriate vessel. Achieving a shorter mobilisation would require the vessel's work schedule to be permanently restricted so as to permit a quicker return to Exmouth, reducing the utilisation of the vessel, or the permanent retention of a dedicated vessel. Neither option is considered reasonably practicable. Acceleration is limited by availability of the SSDI system mobilisation and this control measure is not expected to reduce the estimated extent and magnitude of impact from a well release on receptor locations compared with the proposed mobilisation plan using pre-identified or vessels available through frame agreements.	A dedicated vessel on standby in Exmouth, ready to load is estimated to cost A$20 m per annum. This is considered cost-prohibitive for the Petroleum Activity.	This response strategy is not considered as a primary response and this control measure is not adopted as the cost, complexity and feasibility is considered disproportionate to the minor environmental benefit that might be gained	**No**
Shared, contracted vessel for SSDI mobilisation and deployment (shared between Titleholders)	Reducing the mobilisation and deployment time of the SSDI through vessel standby/pre-positioning is unlikely to result in a significant change in environmental benefit. Under current arrangements the SSDI system can be on location from approximately day 12 depending on vessel availability where a dedicated, contracted vessel may enable the SSDI system on location from day 10. Once deployed the SSDI will be utilised to increase entrainment of released oil and to ensure safe operations for surface deployment of SFRT and other surface response techniques.	A modified Construction vessel or vessels with suitable remote operated underwater vehicles (ROVs) is required to load, transport and deploy the SSDI system. The critical element in deployment of the SSDI is the availability of an appropriate vessel. Achieving a shorter mobilisation would require the vessel's work schedule to be permanently restricted so as to permit a quicker return to Exmouth, reducing the utilisation of the vessel, or the permanent retention of a dedicated vessel. Neither option is considered reasonably practicable. This option is not considered feasible for a number of Titleholders due to the remote distances in Australia as well as a substantial range of well depths, types, complexities, geologies and geophysical properties across a range of Titleholders. Additionally, acceleration is limited by availability of the SSDI system mobilisation and this control measure is not expected to reduce the estimated extent and magnitude of impact from a well release on receptor locations compared with the proposed mobilisation plan using pre-identified or vessels available through frame agreements.	A dedicated vessel on standby in Exmouth, ready to load is estimated to cost A$20 m per annum. As a shared cost across a range of titleholders, this may be approximately A$2 m each. This is considered cost-prohibitive for the Petroleum Activity.	This response strategy is not considered as a primary response and this control measure is not adopted as the cost, complexity and feasibility is considered disproportionate to the minor environmental benefit that might be gained by 1-2 days of additional subsea dispersant injection.	**No**

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6.4.3.2 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
Pre-identifying/ contracting vessels through Frame Agreements for SSDI loading and operations	Ensuring the mobilisation and deployment time of the SSDI through vessel availability/ contracting strategy is likely to result in a moderate environmental benefit as using these arrangements, the SSDI will be on location from approximately day 12.	Achieving a shorter mobilisation would require the vessel being on standby with limited duties to permit a faster return to Exmouth and this is not considered reasonably practical. Woodside has established frame agreements with vessel providers and will track availability of similar vessels. These options are both considered reasonably practicable.	Associated cost of implementation is minimal to the environmental benefit gained.	This control measure is adopted as the costs and complexity are not considered disproportionate to any environmental benefit that might be realised.	**Yes**

6.4.3.3 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					

6.4.4 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
  - pre-identifying/ contracting vessels through Frame Agreements for SSDI loading and operations
- improved
  - none selected.

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6.5 Surface Dispersant Application – ALARP Assessment

Alternative, additional and improved options have been identified and assessed against the base capability described in Section 5.4 with those that have been selected for implementation 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 – Surface Dispersant Application

Woodside's existing level of capability is based on internal and third-party resources that are available 24 hours per day, 7 days per week. The capability presented below is displayed as ranges from lower to upper to incorporate operational factors such as weather, daylight, crew/vessel/aircraft location and duties prior to deployment, survey or classification society inspection requirements for vessels, overflight/port/quarantine permits and inspections, crew/pilot duty and fatigue hours, refuelling/re-stocking provisioning, and other similar logistics and operational limitations that are beyond Woodside's direct control.

Table 6-5: Existing Capability – Surface Dispersant Application

E	Existing Capability													
E1	Existing level of surface dispersant application capability available – Aerial Dispersant Application (m^3)													
Existing capability – Surface Dispersant Application		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Week 2	Week 3	Week 4	Month 2	Month 3
	By Volume – m^3												
E1.1	Predicted oil contacted by surface dispersant application (lower) – m^3	40	80	310	310	310	310	310	2170	2170	2170	8680	8680
E1.2	Predicted oil dispersed by surface dispersant application (lower) – m^3	28	57	220	220	220	220	220	1541	1541	1541	6163	6163
E1.3	Predicted oil contacted by surface dispersant application (upper) – m^3	100	1263	1263	1263	1263	1263	1263	10,838	11,700	12,563	40,950	40,950
E1.4	Predicted oil dispersed by surface dispersant application (upper) – m^3	112	1414	1414	1414	1414	1414	1414	12,141	13,108	14,074	45,876	45,876
E1.5	Dispersant delivery available (lower) – m^3	4	8	31	31	31	31	31	217	217	217	868	868
E1.6	Dispersant delivery available (upper) – m^3	8	101	101	101	101	101	101	867	936	1005	3276	3276
	By Surface Area– km^2												
E1.7	Predicted surface area treated by surface dispersant application (lower) – km^2	3	6	9	9	9	9	9	63	63	63	252	252
E1.8	Predicted surface area treated by surface dispersant application (upper) – km^2	8	20	20	20	20	20	20	220	224	228	784	784
E2	Existing level of surface dispersant application capability available – Vessel Dispersant Application (m^3)												
	By Volume – m^3												
E2.1	Predicted oil contacted by surface dispersant application (lower) – m^3	0	50	100	100	200	200	200	1500	2100	2100	8400	8400
E2.2	Predicted oil dispersed by surface dispersant application (lower) – m^3	0	36	71	71	142	142	142	1065	1491	1491	5964	5964
E2.3	Predicted oil contacted by surface dispersant application (upper) – m^3	0	376	752	752	752	1128	1128	7895	7895	7895	31,579	31,579
E2.4	Predicted oil dispersed by surface dispersant application (upper) – m^3	0	280	560	560	560	840	840	5882	5882	5882	23,526	23,526
E2.5	Dispersant delivery available (lower) – m^3	0	5	10	10	20	20	20	150	210	210	840	840
E2.6	Dispersant delivery available (upper) – m^3	0	20	40	40	40	60	60	420	420	420	1680	1680
	By Surface Area – km^2												
E2.7	Predicted surface area treated by surface dispersant application (lower) – km^2	0	1	2	2	4	4	4	30	42	42	168	168
E2.8	Predicted surface area treated by surface dispersant application (upper) – km^2	1	2	4	4	4	6	6	42	42	42	168	168

The figures above for E1 - Aerial Dispersant Application and E2 – Vessel Dispersant Application show the predicted surface oil contacted by dispersant spraying (E1.1 (lower), E1.3 (upper) and E2.1 (lower) and E2.3 (upper)) which are intended to show the volume of dispersant sprayed from available platforms contacting the floating oil. Woodside has assumed a 50-75% encounter rate of sprayed dispersant to oil.

The figures also show the predicted oil dispersed (E1.2 (lower), E1.4 (upper) and E2.2 (lower) and E2.4 (upper)) which is intended to show the effectiveness of dispersant (based on laboratory results where available) on contacted oil, along with the predicted encounter rate of dispersant sprayed to oil contacted.

Predicted surface area contacted (E1.7, E1.8, E2.7 and E2.8) is based upon a coverage for available aircraft of 3 km^2 per day (lower) to 4 km^2 per day (upper) and, for vessels, 1 km^2 per vessel per day.

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6.5.2 Response Planning: GWF-4 Drilling and Subsea Installation loss of well containment scenario (CS-01)

Modelling results at defined response thresholds (>50 g/m^2 and <10,000 cSt), where surface dispersants are likely to be effective, indicate that surface hydrocarbons arising from the subsurface release from PYA-01 well (CS-01) are expected to be available for surface dispersant operations throughout the event. Surface dispersant application would only be permitted within the Zone of Application (ZoA) (see Figure 2-6). The ZoA is based on the following criteria:

- 10 km from Commonwealth Marine Parks (excluding 'Multiple Use Zones')
- 10 km from State Marine Parks
- 10 km from Heritage List areas
- >20 m water depth
- 4 km from State Waters
- Within the Mainland Australian EEZ
- Avoiding sensitive reefs and shoals

To remove the surface hydrocarbons would require treatment of the floating hydrocarbons within in the ZoA (see Figure 2-6) that meet the minimum threshold of 50 g/m^2 i.e. 1 km^2 (249 m^3) on day 1 with a weekly peak of 19 km^2 (2,737 m^3) on day 3. This would require 0-2 FWADC able to fly 3-4 sorties per day and 0-1 surface dispersant application vessels on day 1. Woodside's capability meets the need on day 1. For day 3, this would require 2-21 FWADC, 0-4 high-capacity aircraft plus up to 0-4 surface dispersant application vessels. The required aircraft capability is not available within Australia and would not be permitted or feasible under safe simultaneous operations (SIMOPS) procedures. By day 3, Woodside has 2-4 FWADC aircraft, 1 high capacity aircraft and 2-4 surface dispersant application vessels available which would target the thickest parts (BAOAC 4-5) at the leading edge of the surface slick and as close to the spill source as is feasible. This approach aims to mitigate the spread of the oil and maximise dispersant effectiveness thus reducing shoreline accumulations. Within 48 hours, if the oil remains within the ZoA and amenable to dispersant, Woodside has access to 2-4 FWADC and 1 high-capacity aircraft per day for the duration of the spill. Further to this, surface dispersant vessel availability increases to 2 by day 2, 4 by day 3 and 6 by day 6.

Table 6-6: GWF-4 Drilling and Subsea Installation loss of well containment scenario (CS-01) – Release volumes

GWF-4 Drilling and Subsea Installation loss of well containment scenario (CS-01)		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Week 2	Week 3	Week 4	Month 2	Month 3
	Oil on sea surface												
A	**Total volume of oil released (surface) – m^3**	**13,865**	**13,653**	**13,448**	**13,250**	**13,059**	**12,912**	**12,912**	**82,369**	**75,852**	**70,434**	**241,647**	**152,005**
B	**Total volume of surface oil remaining after weathering (per day) – m^3**	**416**	**410**	**403**	**398**	**392**	**387**	**387**	**2,471**	**2,276**	**2,113**	**7,249**	**4,560**

A – This volume represents the total volume of hydrocarbons released from the identified Worst-Case Credible discharge (CS-01). The total volume for this spill is released over approximately 77 days[2] at a rate of 291-538 m^3 / hr.
B – The PYA-01 Condensate contains a relatively low proportion (~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 1.390 *cP. The pour point of the whole oil ensures that 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 48% of the oil mass should evaporate within the first 12 hours (BP < 180 °C); up to a further 19% could evaporate within the first 24 hours (180 °C < BP < 265 °C); and a further 30% should evaporate over several days (265 °C < BP < 380 °C).*

Table 6-7: GWF-4 Drilling and Subsea Installation (CS-01) – Treatable hydrocarbons

GWF-4 Drilling and Subsea Installation loss of well containment scenario (CS-01)		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Week 2	Week 3	Week 4	Month 2	Month 3
C	**Treatable hydrocarbons following weathering**												
C1	**Total volume of surface oil >50 g/m^2 – m^3**	**249**	**2,223**	**2,737**	**148**	**113**	**0**	**0**	**14,755**	**6,995**	**3,112**	**11,573**	**2,236**
C2	**Total surface area >50 g/m^2– km^2**	**1**	**10**	**19**	**1**	**1**	**0**	**0**	**95**	**45**	**20**	**91**	**16**
	Dispersible hydrocarbons												
C3	**Surface oil volume >50 g/m^2 and viscosity <10,000 cSt – m^3**	**249**	**2,223**	**2,737**	**148**	**113**	**0**	**0**	**14,755**	**6,995**	**3,112**	**11,573**	**2,236**
C4	**Surface area >50 g/m^2 and viscosity <10,000 cSt – km^2**	**1**	**10**	**19**	**1**	**1**	**0**	**0**	**95**	**45**	**20**	**91**	**16**

C1 – indicates the total remaining volume of hydrocarbons in cubic metres (m^3) on the sea surface above 50 g/m^2. Based on the information outlined in Section 2.3.3 regarding surface concentration thresholds, this is the total volume of oil that can be treated by containment and recovery and surface dispersant spraying operations.
C2 – indicates the total surface area in square kilometres (km^2) of hydrocarbons above 50 g/m^2. This is the total surface area of BAOAC 4 and above that can be treated by surface dispersant spraying operations.
C3 – indicates the total remaining volume of hydrocarbons in cubic metres (m^3) on the sea surface above 50 g/m^2 and below 10,000 cSt. This is the total volume of oil that can potentially be treated by surface dispersant spraying operations.
C4 – indicates the total surface area in square kilometres (km^2) of hydrocarbons above 50 g/m^2 and below 10,000 cSt. This is the total surface area of BAOAC 4 and above that can potentially be treated by surface dispersant spraying operations.

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6.5.2.1 Response Planning Need: GWF-4 Drilling and Subsea Installation loss of well containment scenario (CS-01) – Summary

Table 6-8: GWF-4 Drilling and Subsea Installation (CS-01)– Response Planning Need

GWF-4 Drilling and Subsea Installation (CS-01)		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Week 2	Week 3	Week 4	Month 2	Month 3
D	Response Planning Need												
D1	Bonn Agreement Oil Appearance Code (BAOAC) 5 – Continuous True oil colour												
	Surface area of BAOAC 5 (>200 g/m^2) – km^2	1	0	0	0	0	0	0	0	0	0	0	0
	Surface area of BAOAC 5 (>200 g/m^2) and <10,000 cSt – km^2	1	0	0	0	0	0	0	0	0	0	0	0
	Volume of surface oil BAOAC 5 (>200 g/m^2) – m^3	249	0	0	0	0	0	0	0	0	0	0	0
	Volume of surface oil BAOAC 5 (>200 g/m^2) and <10,000 cSt - m^3	249	0	0	0	0	0	0	0	0	0	0	0
D2	Bonn Agreement Oil Appearance Code (BAOAC) 4 – Discontinuous True oil colour												
	Surface area of BAOAC 4 (50-200 g/m^2) – km^2	0	10	19	1	1	0	0	95	45	20	91	16
	Surface area of BAOAC 4 (50-200 g/m^2) and <10,000 cSt – km^2	0	10	19	1	1	0	0	95	45	20	91	16
	Volume of surface oil BAOAC 4 (50-200 g/m^2) – m^3	0	2,223	2,737	148	113	0	0	14,755	6,995	3,112	11,573	2,236
	Volume of surface oil BAOAC 4 (50-200 g/m^2) and <10,000 cSt - m^3	0	2,223	2,737	148	113	0	0	14,755	6,995	3,112	11,573	2,236
D3	Bonn Agreement Oil Appearance Code (BAOAC) 3, 2 and 1 – Sheen												
	Volume of surface oil BAOAC 3, 2 and 1 (<50 g/m^2) – m^3	141	2,619	2,918	178	6	70	116	20,008	8,087	3,876	22,701	0

Surface dispersant operations, guided by monitor and evaluate activities, using vessels and aircraft would target the identified heavy (BAOAC 4 and 5) patches of oil to treat larger volumes and surface areas than containment and recovery. It is subject to a temporal window of opportunity prior to spreading below 50 g/m^2 and/or viscosity increasing above 10,000 cSt. Dispersant application would only be undertaken whilst the oil remains in the ZoA as illustrated in Figure 2-6.

The surface area of thickest oil (BAOAC 4 and 5, and <10,000 cSt) available for surface dispersant application for CS-01 reaches a weekly peak of 19 km^2 on day 3 where surface concentration and viscosity thresholds are met. As noted in Section 6.5.2 above, within 24 hours, Woodside has available 1-2 FWADC aircraft capable of dispersing 28 m^3 to 112 m^3 surface oil and covering an area of 3 km^2 to 8 km^2, plus up to 1 surface dispersant application vessel capable of dispersing 36 m^3 to 72 m^3 oil covering an area of ~1 km^2. Within 48 hours, Woodside has access to 2-4 FWADC and 1 high-capacity aircraft per day for the duration of the spill with a capability of dispersing 57 m^3 to 1,414 m^3 surface oil and covering an area of 6 km^2 to 20 km^2 per day. Further to this, surface dispersant vessel availability increases to 2 by day 2, 4 by day 3 and 6 by day 6. Each vessel is capable of dispersing 36 m^3 to 72 m^3 oil covering an area of ~1 km^2 per day. For the capability available, this is therefore estimated to be 142 m^3 to 840 m^3 covering an area of 4 km^2 to 6 km^2 by day 6. If ongoing dispersant operations were required and feasible, details of capability from week 2 to month 3 are included in Table 6 6.

Surface dispersant application may limit the feasible spatial area and effectiveness of containment and recovery as these operations cannot be conducted under or near the surface dispersant spraying operations for personnel safety reasons. Furthermore, floating hydrocarbons that have been treated with dispersant cannot then be recovered via containment and recovery techniques. In evaluating the response need for offshore operations, surface dispersant application is prioritised for BAOAC 5.

Woodside acknowledges that the current surface dispersant application capability may not treat the entirety of the oil released alone as no single response strategy or even combination of offshore response strategies will treat or remove 100% of the surface hydrocarbons in either surface area or volume. Woodside would require the inclusion of other response techniques to be initiated concurrently and recognises that multiple passes from aircraft and vessels may be required to meet the required dispersant to oil ratio. Woodside is committed to a realistic, scalable response capability that is commensurate to the level of risk and able to be practically implemented and sustained within the logistical constraints of remote areas.

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6.5.3 Surface Dispersant Application – Control measure options analysis

6.5.3.1 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
Dedicated Response Vessel in region (exclusive to Woodside)	The environmental benefits associated with surface dispersant application are described above. The additional environmental benefit obtained from immediate access to this equipment, permitting deployment once conditions become favourable, would result in 50-188 m^3 of oil contacted resulting in approximately 36-140 m^3 of oil treated based on one operation. This is considered to be of minor environmental benefit.	Chartering and equipping additional vessels on standby has been considered. The option is reasonably practicable but the sacrifice (charter costs and organisational complexity) is significant, particularly when compared with the anticipated availability of vessel and FWADC resources which have a similar dispersant delivery capacity and are available from Day 2 to treat the spill. The effectiveness of this control (weather dependency, availability and survivability) is rated as very low.	The cost A($15 m per annum for the Petroleum Activity) and organisational complexity of employing a dedicated response vessel is considered disproportionate to the minor environmental benefit to be realised by implementing this control.	This option is not adopted as it has low effectiveness and cost is disproportionate to the minimal potential environmental benefit.	**No**
Dedicated Response Vessel in region (shared resource)	The environmental benefit would be similar to that described above for Woodside integrated fleet vessels.	Additional resources and capability can be contracted should the need arise, and dispersant build-up is capable of satisfying additional demand.	The cost and complexity of implementing and maintain this alternative control measure is considered high given the predicted effectiveness. Even with consideration of shared costs, the minor benefit of this control measure does not justify the cost.	This option is not adopted as the complexity and cost are disproportionate to the minimal potential environmental benefit.	**No**

6.5.3.2 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
Lease/purchase additional spray systems and/or dispersant stocks (based at Exmouth/ Dampier)	Purchase of additional system(s) and/or dispersant stocks would not provide a significant environmental benefit compared to the current capability in place.	Time to set up and mobilise a marine charter vessel is ~10 days, at which point existing surface dispersant application systems are available for loading onto vessels. Adding additional spray systems would allow for extra surface dispersant application capacity but is unlikely to reduce deployment times for this strategy.	For the WCCS, additional surface dispersant (vessel) spray systems and large quantities of dispersant are already available through AMOSC and OSRL and agreements with AMSA therefore the cost is considered disproportionate to the minor benefit gained.	This option is not adopted as the current capability meets the need.	**No**
Train additional Woodside personnel in Exmouth to coordinate vessel dispersant application	Limited environmental benefit to be gained by training additional personnel.	Current capability meets need. Woodside has a pool of trained, competent offshore responders / team leaders at strategic locations to ensure timely and sustainable response. Additional personnel are available through current contracts with AMOSC and OSRL and agreements with AMSA. Marine standards & guidelines ensure vessel masters are competent for their roles. Regular audits of oil spill response organisations ensure training and competency is maintained.	Minor additional cost regarding training and maintenance of competency.	This option is not adopted as the current capability meets the need.	**No**

6.5.3.3 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
Locate vessel spraying equipment on additional in-field support vessel(s)	This option may achieve minor incremental improvements in surface oil and residual oil volumes similar to those described for integrated fleet vessels. However, given the likely vessel re-supply times involved to/from the offshore spill location, this	Woodside currently has dispersant spray systems pre-located on vessels used in-field during cargo transfer activities. Consideration of equipping additional vessels with similar equipment was made but is not being carried through to implementation.	The option is reasonably practicable and the cost (charter and operational/maintenance costs) is expected to be moderate, particularly when compared with the ability to rapidly commence spraying operations, subject to safety considerations	This option is not adopted as the current capability meets the need.	**No**

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	option is unlikely to realise material environmental benefits additional the capability selected.		but Woodside considers the existing control measures to be sufficient for the need.		

6.5.4 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
  - none selected
- improved
  - none selected.

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6.6 Containment and Recovery – ALARP Assessment

Alternative, additional and improved control measure options have been identified and assessed against the base capability described in Section 5.6. 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.

6.6.1 Existing Capability – Containment and Recovery

Woodside's exiting level of capability is based on internal and third-party resources that are available 24 hours/7 days. The capability presented below is displayed as ranges to incorporate operational factors such as weather, crew/vessel/aircraft 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.

Table 6-9: Existing Capability – Containment and Recovery

E	Existing Capability													
E3	Existing level of containment and recovery capability available (m^3 recovered per day)													
Existing capability – Containment and Recovery		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7		Week 2	Week 3	Week 4		Month 2	Month 3
	By Volume – m^3														
E3.1	Predicted oil recovered by containment and recovery (lower) – m^3	0	23	23	34	45	56	68		473	630	630		2520	2520
E3.2	Predicted oil recovered by containment and recovery (upper) – m^3	68	135	203	270	405	405	405		3915	4725	4725		18,900	18,900
	By Surface Area– km^2														
E3.3	Predicted surface area treated by containment and recovery (lower) – km^2	0	2	2	3	4	5	6		42	56	56		224	224
E3.4	Predicted surface area treated by containment and recovery (upper) – km^2	1	2	3	4	6	6	6		58	70	70		280	280

For E3 – Containment and Recovery, the range of figures shows the predicted recovery rates of surface oil at 50 g/m^2 for the lower figures and 200 g/m^2 for the upper figures using conventional booming systems in a J or U configuration with an encounter rate of 25-50% surface oil meaning 75%-50% of the area within the booming system has surface oil that is not within threshold concentrations <50 g/m^2).

6.6.2 Response Planning: GWF-4 Drilling and Subsea Installation loss of well containment scenario (CS-01)

The deterministic modelling run showing the minimum time to commencement of oil accumulation at any shoreline receptor (at threshold of 100 g/m^2) indicates that first shoreline impact is predicted to occur at Montebello Islands including Montebello Islands MP and Hermite Island on day 15 (15 m^3). The deterministic run for the cumulative oil volume accumulated across all shoreline receptors (at concentrations in excess of 100 g/m^2) predicts shoreline contact of 42 m^3 at Muiron Islands and Muiron MMA on day 27.5.

Modelling results at defined response thresholds (>50 g/m^2), where containment and recovery is likely to be effective, indicate that the surface area available for feasible response operations will reach a weekly peak of 19 km^2 on day 3. Viscosity alone is unlikely to prevent containment and recovery operations, but very high viscosity combined with low surface concentrations (<50 gm^2) are unlikely to continue to provide a net environmental benefit. As this spreading and weathering occur, there will be limitations on available surface area that can be treated as shown in Section 5.6

Table 6-10: GWF-4 Drilling and Subsea Installation loss of well containment scenario (CS-01) – Release volumes

GWF-4 Drilling and Subsea Installation loss of well containment scenario (CS-01) – Containment and Recovery		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7		Week 2	Week 3	Week 4		Month 2	Month 3
	Oil on sea surface														
A	Total volume of oil released (surface) – m^3	13,865	13,653	13,448	13,250	13,059	12,912	12,912		82,369	75,852	70,434		241,647	152,005
B	Total volume of surface oil remaining after weathering (per day) – m^3	416	410	403	398	392	387	387		2,471	2,276	2,113		7,249	4,560

A – This volume represents the total volume of hydrocarbons released from the identified Worst-Case Credible discharge (CS-01). The total volume for this spill is released over approximately 77 days[2] at a rate of 291-538 m^3 / hr
B – The PYA-01 Condensate contains a relatively low proportion (~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 1.390 *cP. The pour point of the whole oil ensures that 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 48% of the oil mass should evaporate within the first 12 hours (BP < 180 °C); up to a further 19% could evaporate within the first 24 hours (180 °C < BP < 265 °C); and a further 30% should evaporate over several days (265 °C < BP < 380 °C).*

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Table 6-11: GWF-4 Drilling and Subsea Installation loss of well containment scenario (CS-01) – Treatable hydrocarbons

GWF-4 Drilling and Subsea Installation loss of well containment scenario (CS-01)		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Week 2	Week 3	Week 4	Month 2	Month 3
C	Treatable hydrocarbons following weathering												
C1	Total volume of surface oil >50 g/m^2 – m^3	249	2,223	2,737	148	113	0	0	14,755	6,995	3,112	11,573	2,236
C2	Total surface area >50 g/m^2– km^2	1	10	19	1	1	0	0	95	45	20	91	16

C1 – indicates the total remaining volume of hydrocarbons in cubic metres (m^3) on the sea surface above 50 g/m^2. Based on the information outlined in Section 2.3.3 regarding surface concentration thresholds, this is the total volume of oil that can be treated by containment and recovery and surface dispersant spraying operations.
C2 – indicates the total surface area in square kilometres (km^2) of hydrocarbons above 50 g/m^2. This is the total surface area of BAOAC 4 and above that can be treated by containment and recovery and surface dispersant spraying operations.

6.6.2.1 Response Planning Need: GWF-4 Drilling and Subsea Installation loss of well containment scenario (CS-01) – Summary

Table 6-12: GWF-4 Drilling and Subsea Installation loss of well containment scenario (CS-01) – Response Planning Need

GWF-4 Drilling and Subsea Installation loss of well containment scenario (CS-01)		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Week 2	Week 3	Week 4	Month 2	Month 3
D	Response Planning Need												
D1	Bonn Agreement Oil Appearance Code (BAOAC) 5 – Continuous True oil colour												
	Surface area of BAOAC 5 (>200 g/m^2) – km^2	1	0	0	0	0	0	0	0	0	0	0	0
	Volume of surface oil BAOAC 5 (>200 g/m^2) – m^3	249	0	0	0	0	0	0	0	0	0	0	0
D2	Bonn Agreement Oil Appearance Code (BAOAC) 4 – Discontinuous True oil colour												
	Surface area of BAOAC 4 (50-200 g/m^2) – km^2	0	10	19	1	1	0	0	95	45	20	91	16
	Volume of surface oil BAOAC 4 (50-200 g/m^2) – m^3	0	2,223	2,737	148	113	0	0	14,755	6,995	3,112	11,573	2,236
D3	Bonn Agreement Oil Appearance Code (BAOAC) 3, 2 and 1 – Sheen												
	Volume of surface oil BAOAC 3, 2 and 1 (<50 g/m^2) – m^3	141	2,619	2,918	178	6	70	116	20,008	8,087	3,876	22,701	0

Offshore response operations will always be guided by monitor and evaluate and operational monitoring activities to target the thickest part of the slick, typically BAOAC 5 – continuous true oil colour with a surface oil concentration >200 g/m^2 and BAOAC 4 – discontinuous true oil colour with a surface oil concentration between 50 and 200 g/m^2. For a surface release, the thickest oil is typically in the leading edge of the slick, driven by wind and currents. As the spill continues to weather and spread over a number of days and weeks, the surface concentration and surface area of continuous oil colour spreads and reduces to discontinuous true oil colour and finally sheen as shown above.

The response need is calculated from the surface area and volume of treatable hydrocarbons following weathering as outlined in Table 6-11. While surface dispersant operations target the leading edge of the slick where surface concentration and viscosity thresholds are met, containment and recovery operations would be deployed behind the surface dispersant application area to target discrete patches of thick oil at BAOAC 4 and 5 and remaining oil that is not dispersed.

The surface area of thickest oil (BAOAC 4 and 5) available for containment and recovery reaches a weekly peak of approximately 19 km^2 on day 3 only where surface concentration thresholds are met. Within 24 hours, Woodside has available 1 containment and recovery operation capable of recovering up to 68 m^3 surface oil and covering an area of 1 km^2. Availability of containment and recovery operations increases to 2 by day 2, 3 by day 3, 4 by day 4, and 6 by day 5. Thus, by day 5, the recovery capacity is estimated to be up to 405 m^3 covering an area of 6 km^2. If ongoing containment and recovery operations were required and feasible, details of capability from week 2 to month 3 are included in Table 6-9.

Woodside acknowledges that the current containment and recovery capability may not treat the entirety of the oil released alone as no single response strategy or even combination of offshore response strategies will treat or remove 100% of the surface hydrocarbons in either surface area or volume. Woodside would require the inclusion of other response techniques to be initiated concurrently and recognises that multiple passes from vessels may be required to recover a greater proportion of the oil. Woodside is committed to a realistic, scalable response capability that is commensurate to the level of risk and able to be practically implemented and sustained within the logistical constraints of remote areas.

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6.6.3 Containment and Recovery – Control Measure Options Analysis

6.6.3.1 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**
Dedicated Response Vessel in region (exclusive to Woodside)	The environmental benefits associated with containment and recovery are described above. The additional environmental benefit obtained from immediate access to this equipment, permitting deployment as soon as conditions became favourable, would result in a negligible environmental benefit – 11.25-67.5 m^3 of oil recovered per operating unit per day.	Chartering and equipping additional vessels on standby has been considered. The option is reasonably practicable but the sacrifice (charter costs and organisational complexity) is significant, particularly when compared with the anticipated effectiveness of dispersant operations to treat the spill which are available from Day 2. The effectiveness of this control (encounter rate, weather dependency, availability) is rated as very low.	The cost (A$15 m per annum for the Petroleum Activity) and organisational complexity of employing a dedicated response vessel is considered disproportionate to the insignificant environmental benefit to be realised by implementing this control.	This option is not adopted as it has low effectiveness and cost is disproportionate to the minimal potential environmental benefit.	**No**
Dedicated Response Vessel in region (shared resource)	The environmental benefit would be similar to that described above for Woodside integrated fleet vessels.	Additional containment and recovery resources and capability can be contracted should the need arise.	The cost and complexity of implementing and maintain this alternative control measure is considered high given the predicted effectiveness. Even with consideration of shared costs, the minor benefit of this control measure does not justify the cost.	This option is not adopted as it has low effectiveness and cost is disproportionate to the minimal potential environmental benefit.	**No**
Regional oil spill response contractor	This option may achieve minor incremental improvements in surface oil and residual oil volumes similar to those described for integrated fleet vessels. However, given the likely vessel transit times involved to/from the offshore spill location, this option is unlikely to realise material environmental benefits additional the capability selected.	No current private response contracting capability exists that would significantly improve response timing or effectiveness in the Dampier or Exmouth regions.	N/A – not currently feasible	This option is not adopted as it is not currently feasible.	**No**

6.6.3.2 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**
Train additional Woodside personnel in Exmouth to coordinate containment and recovery operations	Limited environmental benefit to be gained by training additional personnel as the number of operations will be governed by the availability of response vessels.	Current capability meets need. Woodside has a pool of trained, competent offshore responders / team leaders at strategic locations to ensure timely and sustainable response. Additional personnel are available through current contracts with AMOSC and OSRL and agreements with AMSA. Marine standards & guidelines ensure vessel masters are competent for their roles. Regular audits of oil spill response organisations ensure training and competency is maintained.	Minor additional cost regarding training and maintenance of competency.	This option is not adopted as the current capability meets the need.	**No**

6.6.3.3 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**
Prioritise rapid sweep systems (NOFI Buster series, Desmi Speed Sweep, etc.) for mobilisation	Although each rapid sweep containment and recovery operation could remove an additional 10-45 m^3 per operation per day, the environmental benefit of containment and recovery as a response technique is minor. This response technique is not considered to be as effective as surface dispersant	Rapid sweep systems allow containment and recovery operations to be undertaken at speeds of up to 3 knots. This allows for greater encounter rates and surface coverage. AMOSC has recently purchased a Speed Sweep system and a number of	Additional costs for prioritising rapid sweep systems are negligible	Although containment and recovery remains a low-efficiency response technique, this control measure is adopted as the costs and complexity are not considered disproportionate to any environmental benefit that might be realised.	**Yes**

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from service providers	application to prevent hydrocarbons reaching the shore.	NOFI systems are available through Mutual Aid arrangements.			
Prioritise active booming systems (Ro-skim, etc.) for mobilisation from service providers	Although each active booming system could remove an additional 10-45 m^3 per operation per day, the environmental benefit of containment and recovery as a response technique is minor. This response technique is not considered to be as effective as surface dispersant application to prevent hydrocarbons reaching the shore.	Active booming systems allow containment and recovery operations without the need for an additional skimming system. This allows for greater effectiveness and continued skimming operations. Active booming systems are available through OSRL and Mutual Aid arrangements and would be prioritised for mobilisation.	Additional costs for prioritising active booming systems are negligible	Although containment and recovery remains a low-efficiency response technique, this control measure is adopted as the costs and complexity are not considered disproportionate to any environmental benefit that might be realised.	**Yes**
Pre-position additional containment and recovery equipment (Exmouth)	It is unlikely that faster mobilisation and deployment from Exmouth would significantly increase response effectiveness or removal of oil to create an increased environmental benefit	Facilities at Exmouth are currently limited by tides and draft for the loading and unloading of vessels with heavy plant and equipment. Access to the Navy Pier to provide an additional loading location is subject to Defence Force approval and cannot be relied upon for rapid approval in the event of an oil spill.	Limited additional cost considerations.	This option is not adopted as the complexity is disproportionate to the minimal potential environmental benefit due to the low efficiency of containment and recovery as a response technique.	**No**
Re-locate containment and recovery equipment on in-field vessels	The additional environmental benefit obtained from faster mobilisation and deployment would be limited by safety considerations during the initial period following the release. Once operations were considered safe, the vessels would increase recovery capacity by 11.25-67.5 m^3 per day per operation. The limited oil treatment of containment and recovery and expected effectiveness of dispersant application from vessels indicates the preference would be for greater surface dispersant application capability.	Operations close to the release location are unlikely to be feasible during the initial period due to the uncertainty of the situation and potential safety impacts on personnel. Vessels may require time to return to port and load equipment, fuel etc. to allow response duration to be the maximum possible once deployed. Shortening the timeframes for vessel availability would require equipment to be pre-positioned on-board vessels.	The cost and organisational complexity of employing two dedicated response vessels (approximately A$15 m per year per vessel) is considered disproportionate to the limited environmental benefit to be realised by adopting this control	This option is not adopted as the cost is disproportionate to the minimal potential environmental benefit due to the low efficiency of containment and recovery as a response technique.	**No**
Purchase or pre-position larger skimmers	The environmental benefit of containment and recovery for the loss of well control scenario is minor. This response strategy is not considered to be as effective as surface dispersant application to prevent hydrocarbons reaching the shore.	Larger systems such as the Desmi Octopus or Transrec with >200 m^3 per hour capacity, could improve recovery rates, however are not readily available in Australia and not easily compatible with booming, waste and hydraulic power systems. If required and deemed to be of benefit, these systems are available through Service Providers such as OSRL.	Cost of purchasing Octopus system is A$600,000 plus additional transport, training and commissioning costs and ongoing maintenance costs. Cost for pre-positioning in Australia for the life of the asset/activity is greater than the purchase costs.	This option is not adopted as the cost is disproportionate to the minimal potential environmental benefit due to the low efficiency of containment and recovery as a response technique.	**No**

6.6.4 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
  - prioritise rapid sweep systems (NOFI Buster series, Desmi Speed Sweep, etc.) for mobilisation from service providers
  - prioritise active booming systems (Ro-skim, etc.) for mobilisation from service providers
- improved
  - none selected

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6.7 Shoreline Protection and Deflection – ALARP Assessment

Alternative, additional and improved control measure options have been identified and assessed against the base capability described in Section 5.7. 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.

6.7.1 Existing Capability – Shoreline Protection and Deflection

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.

6.7.2 Response Planning: GWF-4 Drilling and Subsea Installation loss of well containment scenario (CS-01) – Shoreline Protection and Deflection

Planning for shoreline protection is based upon identification of RPAs from deterministic modelling and the logistics associated with deploying protection at these locations. The response planning scenarios indicate that this would require effective mobilisation to priority shorelines and maintenance of protection until monitor and evaluate and operational monitoring activities confirm that the locations are no longer at risk. Woodside has identified the RPAs from deterministic modelling results provided from specific scenarios.

The control measures selected provide capability to commence mobilisation of shoreline protection equipment within 24 hours (if required). For CS-01, the deterministic modelling run demonstrating the minimum time to shoreline contact at a threshold of >100 g/m^2 and the run with the greatest number of locations with accumulations at >100 g/m^2 (both Q3, Run 12) has been selected for response planning and are combined in Table 6-13 below. Initial contact is predicted within 15 days at Montebello Islands including Montebello Islands MP and Hermite Island (15 m^3). No shoreline contact is predicted for CS-03 or CS-04 and thus the capability assessment is based upon CS-01 only..

Tactical response plans exist for many of the RPAs identified. The plans identify values and sensitivities that would be protected at location. Modelling does not predict that all priority protection shorelines will be at risk of contact at the same time. Therefore, to allow for the best use of available shoreline protection and deflection resources, monitor and evaluate and operational monitoring activities will inform the response, targeting RPAs where contact is predicted above response threshold levels.

below outlines the capability required (number of RPAs predicted to be impacted) against the capability available (number of shoreline protection and deflection operations that can be mobilised and deployed).

Table 6-13: Response Planning – Shoreline Protection and Deflection (CS-01)

GWF-4 Drilling and Subsea Installation loss of well containment scenario (CS-01)		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Week 2	Week 3	Week 4	Month 2	Month 3
	Oil on shoreline (from deterministic modelling) m^3	0	0	0	0	0	0	0	0	17	42	17	0
A	Capability Required												
A1	Number of RPAs contacted (> 100 g/m^2) - GWF-4 Drilling and Subsea Installation LOWC	0	0	0	0	0	0	0	0	2	1	1	0
B	Capability Available (operations per day)												
B1	SPD operations available – per day (lower)	0	15	15	20	20	20	20	105	105	105	560	560
B2	SPD operations available – per day (upper)	0	15	15	20	20	20	20	140	140	140	560	560
C	Capability Gap (operations per day)												
C1	SPD operations gap – per day (lower)	0	0	0	0	0	0	0	0	0	0	0	0
C2	SPD operations gap – per day (upper)	0	0	0	0	0	0	0	0	0	0	0	0

A1 – the number of Response Protection Areas contacted by surface hydrocarbons above 100 g/m^2
B1 and B2 – the upper and lower number of shoreline protection and deflection operations available (based on response planning assumptions in Section 5.7),
C1 and C2 – the gap between the upper and lower number of shoreline protection and deflection operations required in A1 compared to the operations available in B1 and B2

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Table 6-14: Indicative Tactical response plan, aims and methods for identified RPAs

Tactical Response Plan	Response aims and methods
Pilbara Islands – Southern Island Group	**First Response objective:** Undertake Monitor and Evaluate strategy – Shoreline assessment techniques to be undertaken. **Second Response objective:** Pre-clean of the beach area using rakes and shovels, move any debris on the beach to above the high tide area, above the reach of any floating oil. **Third Response objective:** Shoreline Protection - prevent oil from moving into key sensitive areas within the gulf area by deployment of booms. Deflection & containment methods would be undertaken. **Fourth Response objective:** Recovery of collected oil where possible through the use of skimming systems. Although boom formations will deflect most of the spilt hydrocarbon away from sensitive areas, it may be necessary to collect and remove floating oil from additional boom formations to prevent the spread of oil down the coastline into the Gulf. **Fifth Response objective:** Clean-up of oiled shoreline using manual clean up techniques, predominantly rakes and shovels, with flushing and vacuum skimming if appropriate and required.
Muiron Islands	**First response aim:** Ongoing operational monitoring and evaluation of the hydrocarbon spill to adapt aims and response tactics to the evolving nature of the incident **Second response aim**: Pre-clean of potential impact areas (if time allows) using rakes and shovels to move any debris above the high tide line and then segregate appropriately **Third response aim**: Clean-up of the shoreline. Manual clean up techniques, use of mechanical recovery methods and techniques where appropriate **Fourth response aim**: Collection and specialist cleaning/rehabilitation of oiled wildlife
Montebello Island Champagne Bay and Chippendale channel TRP	**First response aim**: Ongoing operational monitoring and evaluation of the hydrocarbon spill to adapt aims and response tactics to the evolving nature of the incident and to assist in locating relevant booming areas. **Second response aim**: Protection of Champagne Bay. Prevent hydrocarbon passing into the inner reaches of Champagne Bay through use of shoreline booms at Chippendale Channel and the south-western sides of Champagne Bay. Formation types to deploy will be dependent on the time available until the hydrocarbon impacts the shoreline and local geographical and tidal/weather conditions. **Third response aim**: Collection and specialist cleaning/rehabilitation of oiled wildlife.
Montebello Island - Claret Bay TRP	**First response objective**: Ongoing operational monitoring and evaluation of the hydrocarbon spill to adapt aims and response tactics to the evolving nature of the incident and to assist in locating relevant booming areas. **Second response objective**: Protection of mangrove within Claret Bay through use of shoreline booms. Formation types to deploy will be dependent on the time available until the hydrocarbon impacts the shoreline and local geographical and tidal/weather conditions. **Third response objective**: Clean-up of the shoreline. Manual clean up techniques, use of mechanical recovery methods and techniques where appropriate.

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Tactical Response Plan	Response aims and methods
Montebello Island - Hermite/Delta Island Channel TRP	**First response objective**: Ongoing operational monitoring and evaluation of the hydrocarbon spill to adapt aims and response tactics to the evolving nature of the incident and to assist in locating relevant booming areas. **Second response objective:** Protection of Mansion Bay. Prevent hydrocarbon passing through the channel into Mansion Bay with the use of shoreline booms. Formation types to deploy will be dependent on the time available until the hydrocarbon impacts the shoreline and local geographical and tidal/weather conditions.
Montebello Island - Hock Bay TRP	**First response objective**: Ongoing operational monitoring and evaluation of the hydrocarbon spill to adapt aims and response tactics to the evolving nature of the incident and to assist in locating relevant booming areas. **Second response objective**: Prevent hydrocarbon passing into the inner reaches of Stephenson Channel through use of shoreline booms at Hock Bay. Formation types to deploy will be dependent on the time available until the hydrocarbon impacts the shoreline and local geographical and tidal/weather conditions.
Montebello Island - North and Kelvin Channel TRP	**First response objective**: Ongoing operational monitoring and evaluation of the hydrocarbon spill to adapt aims and response tactics to the evolving nature of the incident and to assist in locating relevant booming areas. **Second response objective**: Prevent hydrocarbon passing through North Channel and Kelvin Channel into the inner areas of the Montebello Islands through use of shoreline booms. Formation types to deploy will be dependent on the time available until the hydrocarbon impacts the shoreline and local geographical and tidal/weather conditions. **Third response objective**: Recovery of floating oil where possible through the use of skimming systems and other appropriate recovery devices. It is necessary to collect and remove floating oil at sea to reduce shoreline impact.
Montebello Island - Sherry Lagoon Entrance TRP	**First response objective**: Ongoing operational monitoring and evaluation of the hydrocarbon spill to adapt aims and response tactics to the evolving nature of the incident and to assist in locating relevant booming areas. **Second response objective**: Prevent hydrocarbon passing into Sherry Lagoon through use of shoreline booms at the entrance. Formation types to deploy will be dependent on the time available until the hydrocarbon impacts the shoreline and local geographical and tidal/weather conditions.
Montebello Island – Stephenson Channel Nth TRP	**First response objective**: Ongoing operational monitoring and evaluation of the hydrocarbon spill to adapt aims and response tactics to the evolving nature of the incident and to assist in locating relevant booming areas **Second response objective**: Prevent hydrocarbon passing into the inner reaches of Stephenson Channel through use of shoreline booms. Formation types to deploy will be dependent on the time available until the hydrocarbon impacts the shoreline and local geographical and tidal/weather conditions. **Third response objective**: Recovery of floating oil where possible through the use of skimming systems and other appropriate recovery devices. It is necessary to collect and remove floating oil at sea to reduce shoreline impact.

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Tactical Response Plan	Response aims and methods
Jurabi to Lighthouse Beaches Exmouth	**First response objective:** Ongoing operational monitoring and evaluation of the hydrocarbon spill to adapt aims and response tactics to the evolving nature of the incident and to assist in locating relevant booming areas **Second response objective**: Pre-clean of potential impact areas (if time allows) using rakes and shovels to move any debris above the high tide line and then segregate appropriately **Third response objective**: Clean-up of the shoreline. Manual clean up techniques, use of mechanical recovery methods and techniques where appropriate
Mangrove Bay	**First response objective:** Ongoing operational monitoring and evaluation of the hydrocarbon spill to adapt aims and response tactics to the evolving nature of the incident and to assist in locating relevant booming areas **Second response objective**: Protection of Mangrove Bay Lagoon. Prevent hydrocarbons ingress to lagoons through use of shore sealing booms. Complete northern lagoon first, then southern if required – depending on beach topography and tidal cycle. Formation types to deploy will be dependent on the time available until the hydrocarbon impacts the shoreline and local geographical and tidal/weather conditions **Third response objective**: Pre-clean of potential impact areas (if time allows) using rakes and shovels to move any debris above the high tide line and then segregate appropriately **Fourth response objective**: Recovery of floating oil where possible through the use of skimming systems and other appropriate recovery devices. Although boom formations will deflect most of the spilt hydrocarbon away from sensitive areas, it may be necessary to collect and remove floating oil from additional boom formations to prevent the spreading of oil down a coastline **Fifth response objective**: Clean-up of the shoreline. Manual clean up techniques, use of mechanical recovery methods and techniques where appropriate
Turquoise Bay	**First response objective:** Ongoing operational monitoring and evaluation of the hydrocarbon spill to adapt aims and response tactics to the evolving nature of the incident and to assist in locating relevant booming areas **Second response objective**: Pre-clean of potential impact areas (if time allows) using rakes and shovels to move any debris above the high tide line and then segregate appropriately **Third response objective**: Clean-up of the shoreline. Manual clean up techniques, use of mechanical recovery methods and techniques where appropriate
Yardie Creek	**First response aim:** Ongoing operational monitoring and evaluation of the hydrocarbon spill to adapt aims and response tactics to the evolving nature of the incident and to assist in locating relevant booming areas **Second response aim**: Protection of Yardie Creek entrance through the deployment of protection booming formations. Formation types to deploy will be dependent on the time available until the hydrocarbon impacts the shoreline and local geographical and tidal/weather conditions **Third response aim:** Pre-clean of potential impact areas (if time allows) using rakes and shovels to move any debris above the high tide line along the beach and then segregate appropriately

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Tactical Response Plan	Response aims and methods
	Fourth response aim: Recovery of floating oil at Yardie Creek entrance where possible through the use of skimming systems and other appropriate recovery devices **Fifth response aim:** Clean-up of the shoreline. Manual clean up techniques, use of mechanical recovery methods and techniques where appropriate **Sixth response aim**: Collection and specialist cleaning/rehabilitation of oiled wildlife

Pre-emptive mobilisation of equipment and personnel would commence as soon as practicable prior to oil contact. Additional resources would be mobilised depending on the scale of the event to increase the length or number of shorelines being protected.

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6.7.3 Shoreline Protection and Deflection – Control Measure Options Analysis

6.7.3.1 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**
Pre-position equipment at Response Protection Areas (RPAs)	Additional environmental benefit of having equipment prepositioned is considered minor. Equipment is currently available to protect RPAs and additional shorelines, within estimated minimum times until shoreline contact at RPAs, enabling mobilisation of the selected delivery options.	The incremental environmental benefit associated with these delivery options is considered minor and unlikely to reduce the environmental consequence of a significant hydrocarbon release beyond the adopted delivery options. Considering the highly unlikely nature of a significant hydrocarbon release and the costs and organisational complexity associated with prepositioning and maintenance of equipment, the sacrifice is considered disproportionate to the limited environmental benefit that might be realised. Furthermore, these options would conflict with the mutual aid philosophy being adopted under the selected delivery options. The selected delivery options for shoreline protection and deflection meet the relevant objectives of this control measure and do not require prepositioned or additional equipment in Exmouth.	Total cost to preposition protection/ deflection packages at each site of potential impact would be approx. A$6,100 per package per day.	This option is not adopted as the existing capability meets the need.	**No**

6.7.3.2 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**
Supplemented stockpiles of equipment in Exmouth to protect additional shorelines	Additional equipment would increase the number of receptor areas that could be protected from hydrocarbon contact. However, current availability of personnel and equipment is capable of protecting up to 30 km of shoreline, commensurate with the scale and progressive nature of shoreline impact. Additional stocks would be made available from international sources if long term up scaling were necessary. A reduction in environmental consequence from a 'B' rating (serious long-term impacts) is unlikely to be realised as a result of having more equipment available locally.	The incremental environmental benefit associated with these delivery options is considered minor and unlikely to reduce the environmental consequence of a significant hydrocarbon release beyond the adopted delivery options. Considering the highly unlikely nature of a significant hydrocarbon release and the costs and organisational complexity associated with prepositioning and maintenance of equipment, the sacrifice is considered disproportionate to the limited environmental benefit that might be realised. Furthermore, these options would conflict with the mutual aid philosophy being adopted under the selected delivery options. The selected delivery options for shoreline protection and deflection meet the relevant objectives of this control measure and do not require prepositioned or additional equipment in Exmouth.	Total cost for purchase supplemental protection and deflection equipment would be approximately. A$455,000 per package.	This option is not adopted as the existing capability meets the need.	**No**
Additional trained personnel	The level of training and competency of the response personnel allows the shoreline protection and deflection operation is delivered with minimum secondary impact to the environment. Training additional personnel does not provide an increased environmental benefit.	Additional personnel required to sustain an extended response can be sourced through the Woodside *People & Global Capability Surge Labour Requirement Plan*. Additional personnel sourced from contracted OSRO's (OSRL/AMOSC) to manage other responders.	Additional Specialist Personnel would cost A$2,000 per person per day.	This option is not adopted as the existing capability meets the need.	**No**

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		Response personnel are trained and exercised regularly in shoreline response techniques and methods. All personnel involved in a response will receive a full operational/safety briefing prior to commencing operations.			

6.7.3.3 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**
Faster response/ mobilisation time	Given modelling does not predict floating or shoreline impacts at threshold until day 15 (CS-01), Woodside considers that there is sufficient time for deployment of protection and deflection operations prior to impact.	Response teams, trained personnel, contracted oil spill response service providers, government agencies and the associated mitigation equipment required to enact an initial protection and deflection response will be available for mobilisation within 24-48 hrs of activation. Additional equipment from existing stockpiles and oil spill response service providers can be on scene within days. Hydrocarbons are not predicted to accumulate at threshold until day 15 at Montebello Islands including Montebello Islands MP and Hermite Island (CS-01) therefore allowing enough time to re-locate existing equipment, personnel and other resources to the most appropriate areas.	The cost of establishing a local stockpile of new mitigation equipment (including protection and deflection boom) closer to the expected hydrocarbon stranding areas is not commensurate with the need.	This option is not adopted as the existing capability meets the need.	**No**

6.7.4 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
  - none selected
- improved
  - none selected

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6.8 Shoreline Clean-up – ALARP Assessment

Alternative, additional and improved control measure options have been identified and assessed against the base capability described in Section 5.8. 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.

6.8.1 Existing Capability – Shoreline Clean-up

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.

6.8.2 Response planning: GWF-4 Drilling and Subsea Installation – Shoreline Clean-up

Woodside has assessed existing capability against the WCCS and has identified that the range of techniques provide an ongoing approach to shoreline clean-up at identified RPAs. Woodside's capability can cover all required shoreline clean-up operations for the Petroleum Activity. The control measures selected provide capability to commence mobilisation of shoreline protection equipment within 24 hours (if required).

For CS-01, the deterministic modelling run demonstrating the minimum time to shoreline contact at a threshold of >100 g/m^2 and the run with the greatest number of locations with accumulations at >100 g/m^2 (both Q3_12) has been selected for response planning and the results are detailed in Table 6-15 below. Initial contact is predicted within 15 days at Montebello Islands including Montebello Islands MP and Hermite Island (15 m^3) with ongoing accumulation over the following days, Woodside is satisfied that the current capability is managing risks and impacts to ALARP. The full list of RPAs predicted to be contacted by oil is detailed in Table 3-1 and relevant Tactical Response Plans available for identified RPAs are included in Table 6-14.

The scale of the shoreline clean-up will depend on the success of other techniques deployed offshore and nearshore that endeavour to prevent shoreline oiling. Further, the potential remoteness of a response coupled with the uncertainty of which locations will be affected precludes the stockpiling or prepositioning of equipment specific to shorelines. The most significant constraint is accommodation and transport of personnel in Exmouth to undertake clean-up operations and to manage wastes generated during the response effort. From previous assessment of facilities in Exmouth, Woodside estimates that current accommodation can cater for a range of 500-700 personnel per day.

Table 6-15 below outlines the capability required (volume of oil on the shoreline) against the capability available (number of shoreline clean-up operations that can be mobilised and deployed). This capability is based upon Woodside's access to local response personnel and equipment. In the event of a protracted or worst-case event, Woodside has access to national and international response personnel and equipment which would be scaled to meet the response need. These volumes assume that no offshore mitigations have been applied.

Woodside has identified several options which could be mobilised to achieve defined response objectives. Evaluation considers the benefit in terms of the time to respond and the scale of response made possible by each option. The evaluation of possible control measures is summarised in Section 6.8.3.

Table 6-15: Response Planning – Shoreline Clean-up

	Shoreline Clean-up (Phase 2)	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Week 2	Week 3	Week 4	Month 2	Month 3	Month 4
	Oil on shoreline (from deterministic modelling) m^3													
	Shoreline accumulation (above 100 g/m^2) - m^3	0	0	0	0	0	0	0	0	17	42	17	0	0
	Oil remaining following response operations - m^3	0	0	0	0	0	0	0	0	0	0	0	0	0
A	**Capability Required (number of operations)**													
A1	SCU operations required (lower)	0	0	0	0	0	0	0	0	2	4	2	0	0
A2	SCU operations required (upper)	0	0	0	0	0	0	0	0	2	6	9	0	0
B	**Capability Available (number of operations)**													
B1	SCU operations available - Stage 2 - Manual (lower)	0	15	15	20	20	20	20	105	105	105	560	560	0
B2	SCU operations available - Stage 2 - Manual (upper)	0	15	15	20	20	20	20	140	140	140	560	560	0
C	**Capability Gap**													
C1	SCU operations gap (lower)	0	0	0	0	0	0	0	0	0	0	0	0	0
C2	SCU operations gap (upper)	0	0	0	0	0	0	0	0	0	0	0	0	0

A1 and A2 – the number of Shoreline Clean-up operations required based on the hydrocarbon volumes ashore above 100 g/m^2
B1 and B2 – the upper and lower number of shoreline clean-up operations available (based on response planning assumptions in Section 5.8),
C1 and C2 – the gap between the upper and lower number of shoreline clean-up operations required in A1 and A2 compared to the operations available in B1 and B2

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6.8.3 Shoreline Clean-up – Control measure options analysis

6.8.3.1 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					

6.8.3.2 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**
Additional trained personnel available	The level of training and competency of the response personnel ensures the shoreline clean-up operation is delivered with minimum secondary impact to the environment. Training additional personnel does not provide an increased environmental benefit.	Additional personnel required to sustain an extended response can be sourced through the Woodside *People & Global Capability Surge Labour Requirement Plan*. Additional personnel sourced from contracted OSROs (OSRL/AMOSC) to manage other responders Response personnel are trained and exercised regularly in shoreline response techniques and methods. All personnel involved in a response will receive a full operational/safety brief prior to commencing operations.	Additional Specialist Personnel would cost A$2,000 per person per day.	This option is not adopted as the existing capability meets the need.	**No**
Additional trained personnel deployed	Maintaining a span of control of 200 competent personnel is deemed manageable and appropriate for this activity. Additional personnel conducting clean-up activities may be able to complete the clean-up in a shorter timeframe, but modelling predicts ongoing stranding of hydrocarbons over a period of weeks. Managing a smaller, targeted response is expected to achieve an environmental benefit through ensuring the shoreline clean-up response is suitable and scalable for the shoreline substrate and sensitivity type. This will ensure there is no increased impact from the shoreline clean-up through the presence of unnecessary personnel and equipment.	The figure of 200 personnel is broken down to include on 1-2 x Trained Supervisors managing 8-10 personnel/labour hire responders. This allows for multiple operational teams to operate along the extended shoreline at different locations. Typically, an additional 30-50% of the tactical workforce is required to support ongoing operations including On-Scene control, logistics, safety/medical/welfare and transport. Personnel on site will include members with the appropriate specialties to ensure an efficient shoreline clean-up. Additional personnel are available through existing contracts with oil spill response organisations, labour hire organisations and environmental panel contractors	Additional Specialist Personnel would cost A$2,000 per person per day.	This option is not adopted as the existing capability meets the need.	**No**

6.8.3.3 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**
Faster response/ mobilisation time	Given modelling does not predict floating or shoreline impacts at threshold until day 15 (CS-01), Woodside considers that there is sufficient time for	Response teams, trained personnel, contracted oil spill response service providers, government agencies and the associated mitigation equipment required to enact an initial shoreline clean-up	The cost of establishing a local stockpile of new shoreline clean-up equipment closer to the expected hydrocarbon stranding areas is not commensurate with the need.	This option is not adopted as the existing capability meets the need.	**No**

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	deployment of protection and deflection operations prior to impact.	response will be available for mobilisation within 24-48 hrs of activation. Additional equipment from existing stockpiles and oil spill response service providers can be on scene within days. Hydrocarbons are not predicted to accumulate at threshold until day 15 at Montebello Islands including Montebello Islands MP and Hermite Island (CS-01) therefore allowing enough time to re-locate existing equipment, personnel and other resources to the most appropriate areas.			

6.8.4 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
  - none selected
- improved
  - none selected

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6.9 Oiled Wildlife Response – ALARP Assessment

Alternative, additional and improved control measure options have been identified and assessed against the base capability described in Section 5.9. 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.

6.9.1 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.

6.9.2 Oiled Wildlife Response - Control Measure Options Analysis

6.9.2.1 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
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**

6.9.2.2 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 an earliest impact on day 12, 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.	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	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**

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	The potential environmental benefit of training additional personnel is expected to be low.	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.			

6.9.2.3 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**

6.9.3 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

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6.10 Waste Management – ALARP Assessment

Alternative, additional and improved control measure options have been identified and assessed against the base capability described in Section 5.10. 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.

6.10.1 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.

6.10.2 Waste Management - Control Measure Options Analysis

6.10.2.1 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					

6.10.2.2 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**

6.10.2.3 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	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 predicted shoreline contact times.	This option is not adopted as the existing capability meets the need.	**No**

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	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 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.				

6.10.3 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

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6.11 Operational and Scientific Monitoring – ALARP Assessment

Alternative, additional and improved options have been identified and assessed against the base OSM capability described in Section 5.11 and the Woodside OSM-BIP with 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.

6.11.1 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 limitations that are beyond Woodside's direct control.

6.11.2 Operational and Scientific Monitoring – Control Measure Options Analysis

6.11.2.1 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
Analytical laboratory facilities closer to the likely spill affected area	The environmental consideration of having access to suitable laboratory facilities in Karratha to carry out the hydrocarbon analysis would provide faster turnaround in reporting of results only by a matter of days (as per the time to transport samples to laboratories).	SM01 water quality monitoring requires water samples to be transported to NATA-rated laboratories in Perth or over to the East coast. Consider the benefit of laboratory access and transportation times to deliver water samples and complete lab analysis. There is a time lag from collection of water samples to being in receipt of results and confirming hydrocarbon contact to sensitive receptors.	Laboratory facilities and staff available at locations closer to the spill affected area can reduce reporting times only to a moderate degree (days) with associated high costs of maintaining capability do not improve the environmental benefit.	This control measure is not adopted as the costs and complexity are considered disproportionate to any environmental benefit that might be realised.	**No**
Dedicated contracted SMP vessel (exclusive to Woodside)	Would provide faster mobilisation time of scientific monitoring resources, however, the environmental benefit associated with faster mobilisation time would be minor compared to selected options.	Chartering and equipping additional vessels on standby for scientific monitoring has been considered. The option is reasonably practicable, but the sacrifice (charter costs and organisational complexity) is significant, particularly when compared with the anticipated availability of vessels and resources within in the required timeframes. The selected delivery provides capability to meet the scientific monitoring objectives, including collection of pre-emptive data where baseline knowledge gaps are identified for receptor locations where spill predictions of time to contact are >10 days.	The cost and organisational complexity of employing a dedicated response vessel is considered disproportionate to the potential 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**

6.11.2.2 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 first strike 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 within ANNEX C: GWF-4 Drilling and Subsea Installation OSM Activity Specific Assessmentindicates that up to 27 monitoring teams	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	**No**

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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
		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 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.		coverage, particularly given the scale of the existing response and monitoring deployment already planned.	
Purchase water quality / hydrocarbon sampling kits for pre-positioning on nearby support vessels and develop technical procedure for sample collection	The availability of first strike 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 first strike water quality sampling.	Implementing this additional control measure will involve time and effort to source and supply first strike 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 first strike 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 initial 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**

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6.11.2.3 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 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	Understanding vessel specification requirements for OSM at priority locations will result in quicker mobilisation times, and more effective monitoring, as correctly equipped vessels will be made available at the commencement the monitoring effort.	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**

6.11.3 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 first strike 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.

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6.11.4 ALARP and Acceptability Summary

<table>
<tr><th colspan="3">ALARP and Acceptability Summary</th></tr>
<tr><th colspan="3">Operational and Scientific Monitoring</th></tr>
<tr><td rowspan="4">ALARP Summary</td><td>X</td><td>Known, reasonably practicable control measures have been adopted</td></tr>
<tr><td>X</td><td>No additional, alternative and improved control measures would provide further benefit</td></tr>
<tr><td>X</td><td>No reasonably practical additional, alternative, and/or improved control measure exists</td></tr>
<tr><td colspan="2">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 one alternative control measures to provide further benefit.</td></tr>
<tr><td>Acceptability Summary</td><td colspan="2">• 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 well control.
• 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 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.</td></tr>
<tr><td colspan="3">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.</td></tr>
</table>

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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:

- Drill cuttings and drilling fluids environmental impact assessment for relief well drilling
- Vessel operations and anchoring
- Presence of personnel on the shoreline
- Increase in entrained hydrocarbons
- Toxicity of dispersant
- Human presence (manual cleaning)
- Vegetation cutting
- 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.

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Table 7-1: Analysis of risks and impacts

Response technique	Environmental Value						
	Soil and Groundwater	Sediment Marine Quality	Water Quality	Air Quality	Ecosystems/ Habitat	Species	Socio-Economic
Monitor and evaluate	✓		✓	✓		✓	
Source control		✓	✓	✓	✓		
Subsea dispersant injection		✓	✓	✓	✓	✓	✓
Surface dispersant application		✓	✓	✓	✓	✓	✓
Containment and recovery			✓	✓		✓	✓
Shoreline protection and deflection	✓	✓			✓	✓	✓
Shoreline clean-up	✓	✓			✓	✓	✓
Oiled wildlife				✓	✓	✓	
Operational and Scientific monitoring	✓	✓	✓	✓			
Waste management	✓	✓	✓				✓

7.3 Evaluation of impacts and risks from implementing response techniques

Drill cuttings and drilling fluids environmental impact assessment for relief well drilling

The identified potential impacts associated with the discharge of drill cuttings and fluids during a relief well drilling activity include a localised reduction in water and seabed sediment quality, and potential localised changes to benthic biota (habitats and communities).

A number of direct and indirect ecological impact pathways are identified for drill cuttings and drilling fluids as follows:

- Temporary increase in total suspended solids (TSS) in the water column;
- Attenuation of light penetration as an indirect consequence of the elevation of TSS and the rate of sedimentation;
- Sediment deposition to the seabed leading to the alteration of the physio-chemical composition of sediments, and burial and potential smothering effects to sessile benthic biota; and
- Potential contamination and toxicity effects to benthic and in-water biota from drilling fluids.

Potential impacts from the discharge of cuttings range from the complete burial of benthic biota in the immediate vicinity of the well site due to sediment deposition, smothering effects from raised sedimentation concentrations as a result of elevated Total Suspended Solids (TSS), changes to the physico-chemical properties of the seabed sediments (particle size distribution and potential for reduction in oxygen levels within the surface sediments due to organic matter degradation by aerobic bacteria) and subsequent changes to the composition of infauna communities to minor sediment loading above background and no associated ecological effects. Predicted impacts are generally confined to within a few hundred metres of the discharge point (International Association of Oil and Gas Producers 2016) (i.e. within the EMBA for a hydrocarbon spill event).

The discharge of drill cuttings and unrecoverable fluids from relief well drilling is expected to increase turbidity and TSS levels in the water column, leading to an increased sedimentation rate above ambient levels associated with the settlement of suspended sediment particles near to the seabed or below sea surface, depending on location of discharge. Cuttings with retained (unrecoverable) drilling fluids are discharged below the water line at the MODU location, resulting in drill cuttings and drilling fluids rapidly diluting, as they disperse and settle through the water column. The dispersion and fate of the cuttings is determined by particle size and density of the retained (unrecoverable) drilling fluids, therefore, the sediment particles will primarily settle in

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proximity to the well locations with potential for localised spread downstream (depending on the speed of currents throughout the water column and seabed) (IOGP 2016). The finer particles will remain in suspension and will be transported further before settling on the seabed.

These conclusions were supported by discharge modelling which was undertaken by Woodside in support of the Greater Enfield Development EP Modelling results indicating that the TSS plume of suspended cuttings will typically disperse to the south-west while oscillating with the tide and diminish rapidly with increasing distance from the well locations. Maximum TSS concentrations predicted for 100 m; 250 m and 1 km distances from the wellsite were 7, 5 and 1 mg/L, respectively. Furthermore, water column concentrations below 10 mg/L remain within 235 m of the discharge location for each modelled well. For all well discharge locations (outside of direct discharge sites), TSS concentration did not exceed 10 mg/l. Nelson et al. (2016) identified <10 mg/L as a no effect or sub-lethal minimal effect concentration.

The low sensitivity of the deep-water benthic communities/habitats within and in the vicinity of relief well locations, combined with the relatively low toxicity of water based muds (WBM and non-water based muds (NWBMs, no bulk discharges of NWBM and the highly localised nature and scale of predicted physical impacts to seabed biota indicate that any localised impact would likely be of a slight magnitude (especially when considering the broader consequence of the loss of well containment (LOC) event a relief well drilling activity would be responding too).

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.

Distribution of entrained hydrocarbons

Surface dispersant application in intended to treat floating hydrocarbons, thereby reducing the risk of air breathing marine fauna (e.g. cetaceans, dugongs, marine turtles, seabirds and shorebirds) from becoming oiled. It also has the potential to reduce/eliminate contamination of sensitive intertidal habitats such as mangroves, coral reefs, salt marshes and sandy shores (recreational and tourist areas) through the reduction in shoreline loadings.

Chemical dispersants act to break up hydrocarbons by reducing surface tension between the oil and the surrounding water. Dispersants, whether applied on the surface or subsea, result in the breakup of hydrocarbons into micron-sized droplets, which are easier to disperse throughout the water column. These small, dispersed hydrocarbons droplets are degraded by bacteria due to the increased surface area presented by the small droplets. The application of dispersants can enhance biodegradation and dissolution, reducing the volume of hydrocarbons that have the potential to impact shorelines.

Surface application of dispersants results in the micron-sized droplets being mixed into the upper layer of the water column, usually the first 10 to 20 m, through wave and wind energy. These elevated concentrations of dispersed hydrocarbons within the upper layer of the water column are rapidly diluted through vertical and horizontal mixing. The application of surface dispersants may result in a greater risk that water column and subtidal habitats could be exposed to elevated concentrations of dispersed hydrocarbons.

Toxicity of dispersants

The evaluation of the potential impacts to the receiving environment needs to consider not only the redistribution of hydrocarbons into the water column, but also the potential toxic nature of the dispersant applied and the toxicity effects of dispersed hydrocarbons.

The potential toxicity to the marine environment can be from the chemical/dispersant itself but also chemical dispersion of hydrocarbon can increase the concentration of toxic hydrocarbon compounds in the water column (Anderson et al 2014). Subtidal habitats and communities such as coral reefs, seagrass meadows, plankton,

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fish, known spawning grounds and periods of increased reproductive outputs (early life stages of fish and invertebrates i.e. meroplankton) are susceptible to toxic effects of chemically dispersed hydrocarbons.

Presence of personnel on the shoreline

Presence of personnel on the shoreline during shoreline operations could potentially result in disturbance to wildlife and habitats. During the implementation of response techniques, it is possible that personnel may have minimal, localised impacts on habitats, wildlife and coastlines. The impacts associated with human presence on shorelines during shoreline surveys may include:

- Damage to vegetation/habitat to gain access to areas of shoreline oiling;
- Damage or disturbance to wildlife during shoreline surveys;
- Removal of surface layers of intertidal sediments (potential habitat depletion); and
- Excessive removal of substrate causing erosion and instability of localised areas of the shoreline.

Human presence

Human presence for manual clean-up operations may lead to the compaction of sediments and damage to the existing environment especially in sensitive locations such as mangroves and turtle nesting beaches. However, any impacts are expected to be localised 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 containment and recovery and shoreline clean-up operations
- Semi-solids/solids (oily solids), collected during containment and recovery and shoreline clean-up operations
- Debris (e.g. seaweed, sand, woods, plastics), collected during containment and recovery and shoreline clean-up operations and oiled wildlife response.

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.

Cutting back vegetation could allow additional oil to penetrate the substrate and may also lead to localised habitat loss. However, any loss is expected to be localised in nature and lead to an overall net environmental benefit associated with the response by reducing exposure of wildlife to oiling.

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

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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.

Vessel operations and access in the nearshore environment

- The boom will be monitored and maintained to ensure trapped fauna are released as early as possible, with Containment and Recovery activities occurring in daylight hours only (Performance Standard (PS) 21.1)
- 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 (PS 21.2, PS 24.1, PS 27.1, PS 40.1)
- Shallow draft vessels will be used to access remote shorelines to minimise the impacts associated with seabed disturbance on approach to the shorelines (PS 21.3, PS 24.2, PS 27.2, PS 40.2)

Distribution of entrained hydrocarbons

- Surface dispersants will only be applied in the Zone of Application and on BAOAC 4 and 5 oil (PS 17.1)
- Surface dispersant efficacy monitoring will be conducted in accordance with the Woodside OSM-BIP and OM4: Dispersant Effectiveness and Fate Assessment (AEP, 2021) (PS 13.3)
- Subsea dispersant injection efficacy monitoring will be conducted in accordance with the Woodside OSM-BIP and OM4: Dispersant Effectiveness and Fate Assessment (AEP, 2021) (PS 13.2)

Toxicity of dispersants

- OSCA approved dispersants will be prioritised for use (PS 13.1, PS 17.2)

Presence of personnel on the shoreline

- Oversight by trained personnel who are aware of the risks (PS 27.6, PS 40.5)
- Trained unit leaders brief personnel of the risks prior to operations (PS 27.7, PS 40.6)

Human Presence

- Shoreline access route (foot, car, vessel and helicopter) with the least environmental impact identified will be selected by a specialist in SCAT operations (PS 27.4, PS 40.3)
- Vehicular access will be restricted on dunes, turtle nesting beaches and in mangroves (PS 27.3, PS 40.4)

Waste generation

- All shoreline clean-up sites will be zoned and marked before clean-up operations commence to prevent secondary contamination and minimise the mixing of clean and oiled sediment and shoreline substrates (PS 25.4)
- Removal of vegetation will be limited to moderately or heavily oiled vegetation (PS 27.5)
- Teams will segregate liquid and solid wastes at the earliest opportunity (PS 33.1).

Additional stress or injury caused to wildlife

- 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 OWRP and the relevant regional plan (PS 31.1).

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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.

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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).

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11 GLOSSARY AND ABBREVIATIONS

11.1 Glossary

Term	Description / Definition
ALARP	Demonstration through reasoned and supported arguments that there are no other practicable options that could reasonably be adopted to reduce risks further.
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.
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.
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.
Dependency	The degree of reliance on other systems in order for the control measure to be able to perform its intended function.
Environment that may be affected	The summary of quantitative modelling where the marine environment could be exposed to hydrocarbons levels exceeding hydrocarbon threshold concentrations.
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.
Major Environment Event	The events with potential environment, reputation, social or cultural consequences of category C or higher (as per Woodside's operational risk matrix) which are evaluated against credible worst-case scenarios which may occur when all controls are absent or have failed.
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.
Preparedness	Measures taken before an incident in order to improve the effectiveness of a response
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])
Receptors at risk	Physical, biological and social resources identified as at risk from hydrocarbon contact using oil spill modelling predictions.
Receptor areas	Geographically referenced areas such as bays, islands, coastlines and/or protected 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.
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.

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Term	Description / Definition
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.
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 – ≥1 g/m^2, dissolved – ≥10 ppb and entrained hydrocarbon concentrations – ≥10 ppb.
Zone of Application	The zone in which Woodside may elect to apply dispersant. The zone is determined based on a range of considerations, such as hydrocarbon characteristics, weathering and metocean conditions. The zone is a key consideration in the Net Environmental Benefit Analysis for dispersant use.

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11.2 Abbreviations

Abbreviation	Meaning
ADIOS	Automated Data Inquiry for Oil Spills
AEP	Australian Energy Producers (formerly APPEA)
ALARP	As low as reasonably practicable
AMOSC	Australian Marine Oil Spill Centre
AMP	Australian Marine Park
AMSA	Australian Maritime Safety Authority
AUV	Autonomous Underwater Vehicle
BACI	Before/ After Control Impact
BAOAC	Bonn Agreement Oil Appearance Code
BOP	Blowout Preventer
CIMT	Corporate Incident Management Team
COP	Common Operating Picture
cSt	Centistokes
DM	Duty Manager
DTMI	Western Australia Department of Transport and Major Infrastructure
DBCA	Western Australia Department of Biodiversity, Conservation and Attractions
EMBA	Environment that May Be Affected
EMSA	European Maritime Safety Agency
EP	Environment Plan
Environment Regulations	Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023
ESI	Environmental Sensitivity Index
ESD	Emergency Shut Down
ESP	Environmental Services Panel
FSP	First Strike Plan
GIS	Geographic Information System
GPS	Global Positioning System
HSP	Hydrocarbon Spill Preparedness
IAP	Incident Action Plan
IC	Incident Commander
IMT	Incident Management Team
Ipieca	Global oil and gas association for advancing environmental and social performance
ITOPF	International Tanker Owners Pollution Federation
IUCN	International Union for Conservation of Nature
KBSF	King Bay Supply Facility
KSAT	Kongsberg Satellite
LOWC	Loss of Well Containment
MODU	Mobile Offshore Drilling Unit

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Abbreviation	Meaning
MoU	Memorandum of Understanding
NEBA	Net Environmental Benefit Analysis
NOAA	National Oceanic and Atmospheric Administration
NRT	National Response Team
OILMAP	Oil Spill Model and Response System
OMP	Operational Monitoring Program
OPEP	Oil Pollution Emergency Plan
OPGGSA	Offshore Petroleum and Greenhouse Gas Storage Act
OSM	Operational and Scientific Monitoring
OSRL	Oil Spill Response Limited
OSTM	Oil Spill Trajectory Modelling
OWR	Oiled Wildlife Response
PEARL	People, Environment, Asset, Reputation, and Livelihood
PBA	Pre-emptive Baseline Areas
PPA	Priority Protection Area
PPB	Parts per billion
PPM	Parts per million
ROV	Remotely Operated Vehicle(s)
RPA	Response Protection Area
SCAT	Shoreline Contamination Assessment Techniques
S&EM	Security and Emergency Management
SIMA	Spill Impact Mitigation and Assessment
SIMAP	Integrated Oil Spill Impact Model System
SSDI	Subsea Dispersant Injection
SFRT	Subsea First Response Toolkit
SMP	Scientific Monitoring Program
SOP	Standard Operating Procedure
TRP	Tactical Response Plan
UAS	Unmanned Aerial Systems
UAV	Unmanned Aerial Vehicles
VOC	Volatile Organic Compound
WHA	World Heritage Area
Woodside	Woodside Energy Limited
WCC	Woodside Communication Centre
WWCI	Wild Well Control Inc
WCCS	Worst Case Credible Scenario
ZoA	Zone of Application

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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 CS-01, CS-02, CS-03 and CS-04. The complete list of potential receptor locations within the EMBA within the Petroleum Activity is included in Section 4 of the EP.

The locations utilised for the NEBA were limited to the identified RPAs 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 (>10 g/m^2)
- Surface contact (>50 g/m^2)
- Shoreline accumulation (>100 g/m^2) at any time

The NEBA assessment outcomes are shown below. The GWF-4 Drilling and Subsea Installation preoperational NEBAs contains the full assessments.

Table A-1: NEBA assessment technique recommendations for a loss of well containment (CS-01 and CS-02)

Receptor	Monitor and Evaluate	Source Control	Dispersant application: sub-sea	Dispersant application: >20 m water depth and >10 km from shore/ reefs	In situ burning	Mechanical dispersion	Containment and Recovery	Shoreline protection	Shoreline clean-up (manual)	Shoreline clean-up (mechanical)	Shoreline clean-up (chemical)	Oiled Wildlife Response
Montebello Islands including MP, MMA and Hermite Island	Yes	Yes	Potentially	Potentially	No	No	Potentially	Yes	Yes	No	No	Yes
Exmouth/ Ningaloo WH/ Ningaloo (State)	Yes	Yes	Potentially	No	No	No	No	Yes	Yes	No	No	Yes
Barrow Islands MMA	Yes	Yes	Potentially	No	No	No	No	Not applicable	Not applicable	No	No	Yes
Rankin Bank	Yes	Yes	Potentially	Potentially	No	No	Potentially	Not applicable	Not applicable	No	No	Yes
Tryal Rocks	Yes	Yes	Potentially	No	No	No	No	Not applicable	Not applicable	No	No	Yes
Muiron Islands and MMA	Yes	Yes	Potentially	No	No	No	No	Yes	Yes	No	No	Yes
Southern Pilbara Islands (including Peak island)	Yes	Yes	Potentially	No	No	No	No	Yes	Yes	No	No	Yes

Overall assessment

Receptor	Monitor and Evaluate	Source Control	Dispersant application: sub-sea	Dispersant application: >20 m water depth and >10 km from shore/reefs	In situ burning	Mechanical dispersion	Containment and Recovery	Shoreline protection	Shoreline clean-up (manual)	Shoreline clean-up (mechanical)	Shoreline clean-up (chemical)	Oiled Wildlife Response
Is this response Practicable?	Yes	Yes	Potentially	Potentially	No	No	Potentially	Yes	Yes	No	No	Yes
NEBA identifies response potentially of net environmental benefit?	Yes	Yes	Potentially	Potentially	No	No	Potentially	Yes	Yes	No	No	Yes

Table A-2: NEBA assessment technique recommendations for loss of MDO due to vessel collision (CS-03 and CS-04)

Receptor	Monitor and Evaluate	Source Control (via vessel SOPEP)	Dispersant application: sub-sea	Dispersant application: >20 m water depth and >10 km from shore/ reefs	In situ burning	Mechanical dispersion	Containment and Recovery	Shoreline protection	Shoreline clean-up (manual)	Shoreline clean-up (mechanical)	Shoreline clean-up (chemical)	Oiled Wildlife Response
Montebello Marine Park	Yes	Yes	Not applicable	No	No	No	No	No	No	No	No	Yes

Overall assessment

Receptor	Monitor and Evaluate	Source Control (via vessel SOPEP)	Dispersant application: sub-sea	Dispersant application: >20 m water depth and >10 km from shore/reefs	In situ burning	Mechanical dispersion	Containment and Recovery	Shoreline protection	Shoreline clean-up (manual)	Shoreline clean-up (mechanical)	Shoreline clean-up (chemical)	Oiled Wildlife Response
Is this response Practicable?	Yes	Yes	Not applicable	No	No	No	No	No	No	No	No	Yes
NEBA identifies response potentially of net environmental benefit?	Yes	Yes	Not applicable	No	No	No	No	No	No	No	No	Yes

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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[14]	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))

.

[14] 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

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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

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Operational Monitoring Operational Plan	Objectives	Activation triggers	Termination criteria
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.

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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).

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ANNEX C: GWF-4 DRILLING AND SUBSEA INSTALLATION OSM ACTIVITY SPECIFIC ASSESSMENT

The Woodside OSM-BIP [6] 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 GWF-4 Drilling and Subsea Installation 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 GWF-4 Drilling and Subsea Installation activity (hereafter referred to as the Petroleum Activity) credible spill scenarios (as shown in Figure C - 1) fit within the Combined OSM Planning Area (Figure 2-1 in the OSM-BIP).

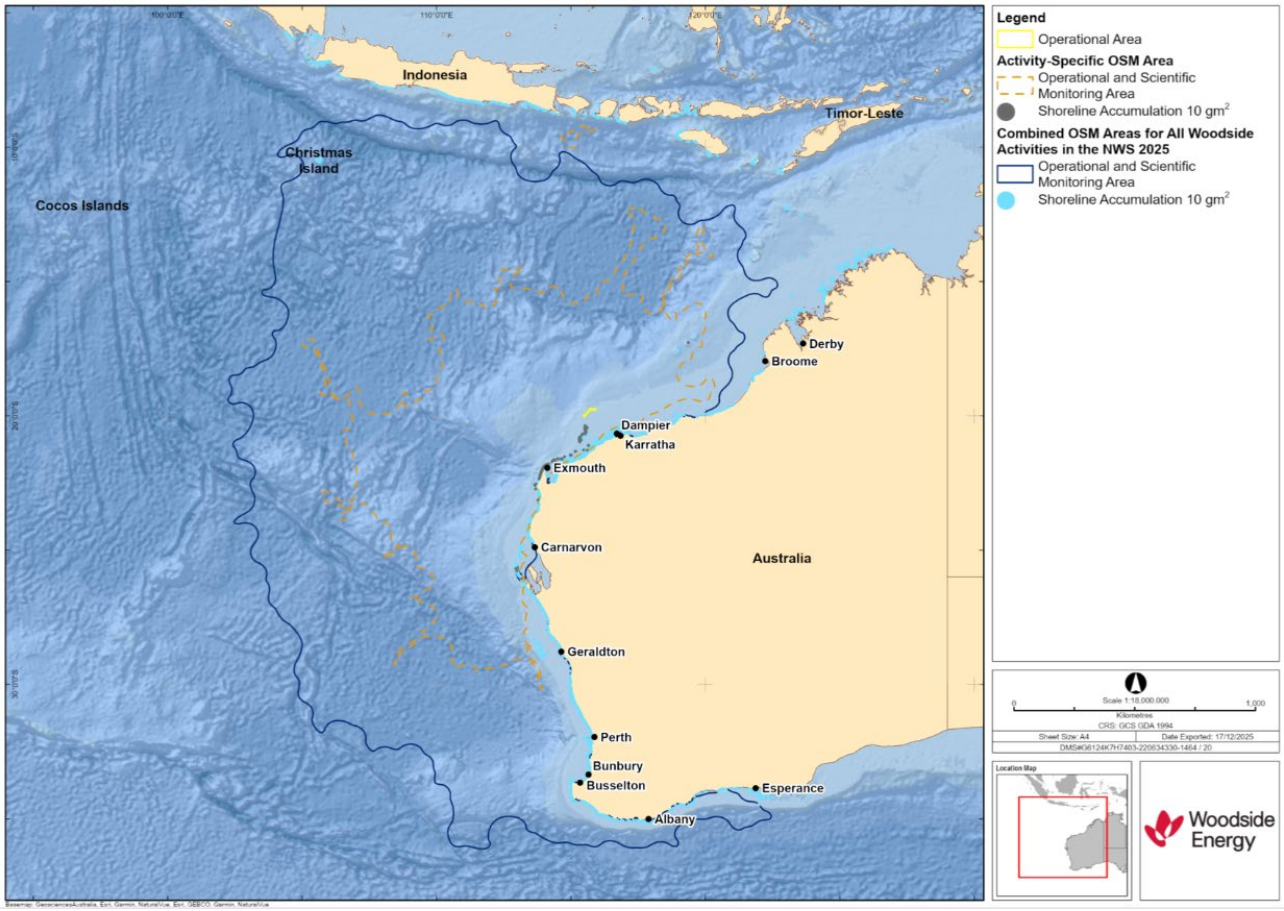


Figure C - 1: OSM Planning Area based on the area potentially contacted by the low (below ecological impact) hydrocarbon thresholds in the event of the worst-case credible spill scenario (CS-01, CS-02, CS-03 an CS-04)

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[6], identified receptors contacted at a higher probability of rapid contact. Table C - 1 presents the receptors contacted within 14 days at a probability >10%

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at the low threshold for dissolved (≥10 ppb), entrained (≥10 ppb), floating (≥1 g/m^2), and shoreline contact (≥10 g/m^2).

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 the Petroleum Activity (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. The following Key Ecological Features (KEFs) (and their distances to the Operational Area) are noted in Table 4-17 of the EP:

- Ancient coastline at 125 m depth contour (overlaps Operational Area)
- Continental Slope demersal fish communities (5 km north)
- Glomar Shoals (70 km east)
- Exmouth Plateau (120 km west)
- Canyons linking the Cuvier Abyssal Plain and the ape Range Peninsula (180 km south west)
- Commonwealth waters adjacent to Ningaloo Reef (225 km south west
- Mermaid Reef and commonwealth waters surrounding Rowley Shoals (375 km north east)
- Wallaby Saddle (720 km south west)
- Canyons linking the Argo Abyssal plain with the Scott Plateau (690 km north east)
- Western Demersal slope and associated fish communities (690 km south west)
- Western Rock lobster (870 km south west)
- Ancient coastline at 90 – 120 m depth (875 km south west)
- Commonwealth marine environment surrounding the Houtman Abrolhos Island (910 km south west)
- Perth Canyon and adjacent shelf break, and other west coast canyons (910 km south west)

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 and Appendix C of the EP. These KEFs include subsea receptors (benthic and pelagic habitats; demersal fish communities; marine fauna aggregations) that may be at risk from subsea releases, such as the loss of containment scenario associated with the Petroleum Activity (refer to Table 2-1). 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 - 9).

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 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.

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

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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.

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Table C - 1: Petroleum Activity credible spill scenarios stochastic modelling results for locations with a probability of contact ≥10% and <14 days

Receptor	Total contact probability (%) floating oil ≥1 g/m²	Min. arrival time floating oil ≥1 g/m² (days)	Total contact probability (%) shoreline accumulation ≥10 g/m²	Min. arrival time shoreline accumulation ≥10 g/m² (days)	Probability (%) entrained oil at ≥10 ppb	Min. arrival time entrained oil ≥10 ppb (days)	Probability (%) dissolved oil at >10 ppb	Min. arrival time dissolved oil ≥10 ppb (days)
CS-01: Loss of well containment in the Wilcox Prospect – 707,729 m³ PYA-01 Condensate [2]								
Gascoyne MP*	5	14.5	NA	NC	100	10.3	95	11.38
Montebello MP*	100	0.0	NA	NC	100	0.0	100	0.04
Ningaloo MP*	10	12.1	NA	NC	98	11.0	97	11.25
Exmouth	1	24.1	22	20.7	87	12.5	74	14.21
Barrow Island	4	7.9	14	20.0	99	5.0	99	5.63
Bessieres Island	1	31.3	8	21.8	85	11.8	63	15.29
Boodie Island	NC	NC	14	29.1	88	8.8	46	14.75
Flat Island	NC	NC	1	64.9	75	9.9	49	15.13
Hermite Island	4	14.7	38	14.5	88	9.3	72	10.29
Lowendal Islands	NC	NC	12	27.7	77	11.0	28	24.92
Middle Island	NC	NC	14	29.1	89	7.8	49	19.29
Montebello Islands	5	14.6	38	14.5	95	5.6	78	9.29
Muiron Islands	8	13.3	50	10.5	89	9.7	84	10.08
Peak Island	1	18.8	35	18.1	89	9.0	67	9.04
Serrurier Island	NC	NC	NC	NC	69	10.4	33	16.38
Southern Pilbara - Islands	4	9.1	35	16.1	99	6.7	95	8.25
Sunday Island	NC	NC	14	27.4	73	10.4	51	10.46
Table Island	NC	NC	NC	NC	49	13.7	9	20.13
Thevenard Island	NC	NC	11	16.1	88	12.8	51	15.67
Tortoise Island	NC	NC	NC	NC	51	13.7	9	30.21
Barrow Island MMA*	7	5.5	NA	NC	100	4.7	99	5.17
Barrow Island MP (State)*	2	16.9	NA	NC	99	5.1	98	5.25
Montebello Islands MP	12	5.5	38	14.5	100	2.7	94	5.54
Muiron Islands MMA	9	10.8	50	10.5	93	9.5	91	9.79
Ningaloo Coast WH	10	12.1	22	20.7	98	11.0	97	11.25
Ningaloo MP (State)	9	14.5	22	20.7	94	11.1	86	13.29
Boodie, Double Middle Islands Nature Reserve NR	NC	NC	14	29.1	91	7.8	52	13.75
Thevenard Island NR	NC	NC	11	16.1	84	12.7	49	15.92
Brewis Reef*	NC	NC	NA	NC	76	12.7	43	19.17
Dailey Shoal*	NC	NC	NA	NC	65	11.7	26	25.63
Glomar Shoal*	3	13.8	NA	NC	26	12.5	22	13.17
Montebello Shoals*	4	14.6	NA	NC	95	6.1	77	9.25
Ningaloo Reef*	7	24.8	NA	NC	90	13.7	78	13.92
North West Reef*	NC	NC	NA	NC	80	12.1	56	15.63
Outtrim Patches*	2	12.7	NA	NC	87	9.5	71	9.79
Penguin Bank*	2	13.1	NA	NC	99	6.2	93	7.88
Poivre Reef*	NC	NC	NA	NC	91	6.3	65	12.67
Rankin Bank*	47	1.8	NA	NC	88	1.7	84	1.75
Rosily Shoals*	1	13.9	NA	NC	98	8.3	81	9.46
Trap Reef*	NC	NC	NA	NC	91	10.0	61	15.63

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Receptor	Total contact probability (%) floating oil ≥1 g/m²	Min. arrival time floating oil ≥1 g/m² (days)	Total contact probability (%) shoreline accumulation ≥10 g/m²	Min. arrival time shoreline accumulation ≥10 g/m² (days)	Probability (%) entrained oil at ≥10 ppb	Min. arrival time entrained oil ≥10 ppb (days)	Probability (%) dissolved oil at >10 ppb	Min. arrival time dissolved oil ≥10 ppb (days)
Tryal Rocks*	47	2.0	NA	NC	100	2.0	100	2.54
CS-02: Loss of well containment from the Yodel Updip development well – 993,860 m³ over 76 days of Yodel-3 Condensate								
Argo-Rowley Terrace MP	NC	NC	NA	NC	38	13.46	9	19.17
Gascoyne MP	1	13.33	NA	NC	95	8.17	69	9.25
Montebello MP	38	2.42	NA	NC	100	1.58	100	1.79
Ningaloo MP	1	11.50	NA	NC	80	7.96	68	9.29
Airlie Island	NC	NC	NC	NC	39	7.67	13	8.71
Barrow Island	NC	NC	1	67.92	58	6.46	40	8.83
Bessieres Island	NC	NC	1	41.96	56	7.79	44	8.25
Boodie Island	NC	NC	NC	NC	33	11.00	10	11.04
Flat Island	NC	NC	6	21.29	62	8.17	48	8.46
Fly Island	NC	NC	NC	NC	35	9.58	10	22.79
Hermite Island	1	70.38	NC	NC	40	4.96	17	20.25
Middle Island	NC	NC	NC	NC	32	11.00	8	19.46
Montebello Islands	1	70.38	NC	NC	43	4.58	25	10.42
Muiron Islands	1	59.67	6	17.25	65	8.88	57	9.79
Observation Island	NC	NC	NC	NC	46	9.00	22	10.92
Peak Island	1	68.29	2	68.88	66	8.33	55	8.54
Round Island	NC	NC	NC	NC	53	8.46	26	8.71
Serrurier Island	NC	NC	1	37.33	58	8.04	42	8.38
Southern Pilbara - Islands	1	68.29	6	21.29	65	7.08	55	7.33
Sunday Island	NC	NC	NC	NC	60	9.04	37	9.42
Table Island	NC	NC	NC	NC	49	8.08	22	10.17
Thevenard Island	NC	NC	NC	NC	42	8.17	12	14.21
Tortoise Island	NC	NC	NC	NC	37	9.75	8	30.33
Barrow Island MMA	1	68.38	NA	NC	62	5.33	41	8.54
Barrow Island MP (State)	1	14.17	NA	NC	54	7.13	36	8.71
Montebello Islands MP	1	70.38	NC	NC	55	4.25	42	4.58
Muiron Islands MMA	1	21.79	6	17.25	69	8.71	64	9.04
Ningaloo Coast WH	1	11.50	1	69.13	80	7.96	68	9.29
Ningaloo MP (State)	1	68.83	1	69.13	69	8.83	52	10.96
Boodie, Double Middle Islands Nature Reserve NR	NC	NC	NC	NC	37	10.67	13	11.04
Thevenard Island NR	NC	NC	NC	NC	40	8.21	12	14.21
Baylis Patches	NC	NC	NA	NC	23	9.63	3	65.75
Beryl Reef	NC	NC	NA	NC	27	13.71	6	37.46
Brewis Reef	NC	NC	NA	NC	45	8.67	18	13.71
Combe Reef	NC	NC	NA	NC	53	9.58	22	12.79
Dailey Shoal	NC	NC	NA	NC	57	8.58	37	8.96
Exmouth Reef	NC	NC	NA	NC	38	10.71	9	22.13
Fairway Reef	NC	NC	NA	NC	46	8.63	20	9.58
Glennie Patches	NC	NC	NA	NC	13	13.79	NC	NC
Glomar Shoal §	NC	NC	NA	NC	10	8.54	9	10.92
Hayman Rock	NC	NC	NA	NC	31	9.54	5	29.50

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Receptor	Total contact probability (%) floating oil ≥1 g/m²	Min. arrival time floating oil ≥1 g/m² (days)	Total contact probability (%) shoreline accumulation ≥10 g/m²	Min. arrival time shoreline accumulation ≥10 g/m² (days)	Probability (%) entrained oil at ≥10 ppb	Min. arrival time entrained oil ≥10 ppb (days)	Probability (%) dissolved oil at >10 ppb	Min. arrival time dissolved oil ≥10 ppb (days)
Hood Reef	NC	NC	NA	NC	55	8.50	28	9.04
Locker Reef	NC	NC	NA	NC	30	9.58	6	26.79
Montebello Shoals	NC	NC	NA	NC	43	4.67	25	10.42
Ningaloo Reef	1	68.83	NA	NC	60	10.71	40	13.33
North West Reef	NC	NC	NA	NC	57	11.58	31	14.08
Otway Reef	NC	NC	NA	NC	53	9.08	28	9.17
Outtrim Patches	NC	NC	NA	NC	63	8.71	54	9.46
Penguin Bank	NC	NC	NA	NC	60	7.00	42	7.13
Poivre Reef	NC	NC	NA	NC	44	7.58	18	11.00
Rankin Bank §	100	0.21	NA	NC	100	0.21	100	0.25
Ripple Shoals	NC	NC	NA	NC	28	13.08	3	44.83
Rosily Shoals	NC	NC	NA	NC	59	7.38	42	7.71
Santo Rock	NC	NC	NA	NC	40	9.63	3	74.13
Spider Reef	NC	NC	NA	NC	42	9.08	13	19.25
Sultan Reef	NC	NC	NA	NC	32	8.25	5	30.04
Taunton Reef	NC	NC	NA	NC	31	7.71	6	19.88
Trap Reef	NC	NC	NA	NC	51	7.83	25	8.79
Tryal Rocks	NC	NC	NA	NC	73	4.21	60	4.42
Web Reef	NC	NC	NA	NC	35	9.17	11	11.21
CS-03: Instantaneous Surface Release of 1,000 m³ of Marine Diesel within Montebello AMP								
Barrow Island	NC	NC	NC	NC	15	3.33	2	*Data not available*
Montebello Islands	NC	NC	NC	NC	16	4.33	2	*Data not available*
Muiron Islands MMA-WHA	NC	NC	NC	NC	24	7.42	1	*Data not available*
Ningaloo Coast North	NC	NC	NC	NC	15	8.79	NC	*Data not available*
Ningaloo Coast North WHA	NC	NC	NC	NC	28	8.42	3	*Data not available*
Ningaloo RUZ	NC	NC	NC	NC	28	8.42	3	*Data not available*
Pilbara Islands – Southern Island Group	NC	NC	NC	NC	17	4.79	1	*Data not available*
Montebello MP	100	0.04	NC	NC	89	0.04	65	*Data not available*
Montebello State Marine Park	NC	NC	NC	NC	22	2.46	5	*Data not available*
Muiron Islands	NC	NC	NC	NC	23	7.46	1	*Data not available*
Gascoyne MP	NC	NC	NC	NC	27	10.0	2	*Data not available*
CS-04: Instantaneous Surface Release of 1,000 m³ of Marine Diesel at GDA05 well								
Gascoyne MP	NC	NC	NC	NC	14	10.1	1	*Data not available*
Montebello MP	1	3.6	NC	NC	34	1.4	9	*Data not available*
Rankin Bank	1	1.2	NC	NC	20	0.8	3	*Data not available*

Key
Receptor contacted within 7 days
Receptor contacted within 7–14 days
Receptor only contacted by entrained hydrocarbons at a probability >10% and a concentration ≥10 ppb

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Table C - 2: Baseline data assessment versus SMPs for identified Petroleum Activity monitoring priorities

Receptor	SM1: Water quality impact	SM2: Sediment quality impact	SM3: Intertidal and coastal habitat	SM4: Seabirds and shorebirds	SM5: Marine megafauna – reptiles[15]	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
Ningaloo (including Ningaloo WHA, Ningaloo Coast North)					Turtles Sea snakes	Whale shark			(Locations to be determined in consultation with key stakeholders to reflect current fishing zones/effort)	(Locations to be determined in consultation with key stakeholders)
Muiron Islands					Turtles Sea snakes					
Southern Pilbara Islands & Shoreline	Ashburton Port	Ashburton Port		Urala Station, Onslow, Airlie, Serrurier & Thevenard Isl.	Turtles: Onslow, Thevenard & Airlie Islands Turtles elsewhere Sea snakes			Green sawfish		
Barrow Island	Barrow Isl Port	Barrow Isl Port		Double Island	Flatback turtle Green & hawksbill turtles Sea snakes					
Lowendal Islands			Mangroves at Varanus Isl.	Seabirds Shorebirds	Turtles at Varanus Isl. Sea snakes Turtles elsewhere		-			
Montebello Islands				Wedge-tailed shearwater at Ah Chong Is						
Argo-Rowley Terrace AMP			N/A							
Gascoyne AMP			N/A							
Montebello AMP			N/A							
Ningaloo AMP			N/A							
Rankin Bank* and Glomar Shoals*			NA	NA						
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 remain 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.

[15] 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.

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Table C - 3: Receptors predicted to be contacted at >10% probability and <14 days 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															
Argo-Rowley Terrace AMP*	✓	✓	✓	-	✓	✓	✓	-	^	^	^	✓	✓	✓	✓
Gascoyne AMP*	✓	✓	✓	-	✓	✓	✓	-	^	^	^	✓	✓	✓	✓
Montebello AMP*	✓	✓	✓	-	✓	✓	✓	-	^	^	^	✓	✓	✓	✓
Ningaloo AMP*	✓	✓	✓	-	✓	✓	✓	-	^	^	^	✓	✓	✓	✓
Coastlines															
Exmouth	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Southern Pilbara – Islands and Shoreline	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Islands															
Lowendal Islands	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Montebello Islands (including Hermite Island)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Barrow Island (including Boodie and Middle Islands)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Muiron Islands	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Peak Island															
Southern Pilbara – Islands	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Marine Parks (MP)															
Barrow Islands MMA and Barrow Island MP (State)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Montebello Islands MP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Muiron Islands MMA	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ningaloo Coast WH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ningaloo MP (State)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Nature Reserves															
Boodie, Double Middle Islands Nature Reserve NR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Thevenard Island NR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Reefs, Shoals and Banks	✓	✓	✓	-	✓	✓	✓	-	^	^	^	✓	✓	✓	^
KEFs (within 100 km of Operational Area)															
Ancient Coastline at 125 m depth contour	-	✓	✓	-	✓	✓	✓	-	^	^	^	✓	-	-	-
Continental Slope Demersal Fish Communities	-	✓	✓	-	✓	✓	✓	-	^	^	^	✓	✓	-	-
Glomar Shoals	-	✓	✓	-	✓	✓	✓	-	^	^	^	✓	✓	-	-
BIAs															
Whale shark BIA	-	✓	-	-	✓	✓	-	-	-	-	✓	-	-	-	✓
Pygmy blue whale BIA	-	✓	-	-	✓	✓	-	-	-	-	✓	-	-	-	-
Dugong BIA	-	✓	-	-	✓	✓	-	-	-	-	✓	✓	-	-	-
Humpback whale BIA	-	✓	-	-	✓	✓	-	-	-	-	✓	-	-	-	-
Southern right whale BIA	-	✓	-	-	✓	✓	-	-	-	-	✓	-	-	-	-
Flatback turtle BIAs	-	✓	-	✓	✓	✓	✓	-	-	✓	-	✓	-	-	-
Fairy tern BIA	-	✓	-	✓	✓	✓	✓	-	✓	-	-	-	-	-	-
Lesser crested tern	-	✓	-	✓	✓	✓	✓	-	✓	-	-	-	-	-	-
Roseate tern BIA	-	✓	-	✓	✓	✓	✓	-	✓	-	-	-	-	-	-
Wedge-tailed shearwater BIA	-	✓	-	✓	✓	✓	✓	-	✓	-	-	-	-	-	-

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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
Ningaloo Coastline and WHA (also includes most of the Carnarvon sector)	**World Heritage Area**	N/A	N/A	5	5	High
	Mangroves	N/A	High	3	3	Medium
	Turtles Loggerhead (*Caretta caretta*) (vulnerable) site, green turtle (*Chelonia mydas*) (endangered), hawksbill turtle (*Eretmochelys imbricata*) (critically endangered) nesting	Main nesting: Hawksbill July-Mar Green Sept-Mar Flatback Sept-Mar Loggerhead Sept-Mar	Low	4	3	Medium
	Marine mammals Pygmy blue whales (*Balaenoptera musculus brevicauda*) (endangered) foraging area. Humpback whale (*Megaptera novaeangliae*) (least concern) migration area. Australian humpback dolphin (*Sousa sahulensis*) (vulnerable), Indo-Pacific bottlenose dolphin (*Tursiops aduncus*) (unknown) and orca (*Orcinus orca*) (data deficient). Dugongs (*Dugong dugon*) (vulnerable) breeding and foraging.	Pygmy blue whale migration: Apr to Aug (north bound) and Oct to Dec (south bound) Humpback whale migration: Jun to Oct	High	3	2	Medium
	Sharks and rays Seasonal aggregations of whale sharks (*Rhincodon typus*) (endangered) and manta rays	Whale sharks – Mar to Jul	High, with the exception of whale shark	3	4	High
	Birds Internationally important shorebird area. Biologically important breeding habitat for seabirds: fairy tern (*Sternula nereis*) (vulnerable); wedge-tailed shearwater (*Ardenna pacifica*) (least concern); roseate tern (*Sterna dougallii*) (least concern)	Shorebirds: Aug to Apr Seabirds: species specific	High	5	4	High
	Coral and other subsea benthic primary producers	Coral spawning: Mar & Oct	Low	3	4	Medium
	Socio-economic and heritage Tourism – significant fishing/charter boat tourism, camping and use of nearshore sanctuary zones (fishing, snorkelling)	Year-round	High	2	2	Medium
Southern Pilbara – Islands and Shoreline	**Mangroves**	N/A	Low	3	3	Low
	Turtles Critical nesting habitat for green turtle (*Chelonia mydas*) (endangered), flatback turtle (*Natator depressus*) (data deficient), hawksbill turtle (*Eretmochelys imbricata*) (critically endangered) and loggerhead (*Caretta caretta*) (vulnerable).	Oct to Apr	Low	4	3	Medium
	Marine mammals Humpback whale (*Megaptera novaeangliae*) (least concern) migration area. Australian humpback dolphin (*Sousa sahulensis*) (vulnerable), Indo-Pacific bottlenose dolphin (unknown) and dugong (*Dugong dugon*) (vulnerable) utilise the shallow intertidal waters around islands.	Humpback whale migration: Jun to Oct	High	3	2	Medium
	Birds Staging point/feeding area for migratory shore birds. Seabird nesting, resting and foraging on and around islands.	Migratory shorebirds: Aug to Apr Seabirds: Species dependant	Low	3	2	Low
	Fish Green sawfish (*Pristis zijsron*) (critically endangered).	Unknown	Low	4	5	High
	Coral and other subsea benthic habitats	Coral spawning: Mar & Oct	High	3	4	High
	Socio-economic Recreational fishing/ charter boats, tourism related to water-based activities and nature. Camping beaches.	Year-round	High	4	4	High
Montebello Islands	**Mangroves** Montebello Islands' mangrove communities are regarded as globally unique.	N/A	High	3	3	Medium
	Turtles Nesting area for green (*Chelonia mydas*) (endangered), flatback (*Natator depressus*) (data deficient), and hawksbill (*Eretmochelys imbricata*) (critically endangered) turtles. The islands are recognised as critical habitat for flatback turtles and for hawksbill turtles, with key sites for the latter including Ah Chong Island, South East Island, and Trimouille Island.	Turtle nesting Nov to Mar	High	4	3	High
	Marine mammals Pygmy blue whale (vulnerable) and humpback whale (*Megaptera novaeangliae*) (least concern) migration area. Resident populations of Indo-Pacific bottlenose dolphin (*Tursiops aduncus*) (unknown and Australian humpback dolphins (*Sousa sahulensis*) (vulnerable). Dugong (*Dugong dugon*) (vulnerable) foraging.	Pygmy blue whale migration: Apr to Aug Humpback whale migration: Jun to Oct	High	3	2	Medium
	Birds Significant seabird nesting and foraging areas. Staging point/feeding area for migratory shore birds.	Seabird: Species dependant Migratory shorebirds: Aug to Apr	High, with the exception of wedge-tailed shearwater on Ah Chong Island (low)	3	2	Medium

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Receptor	Key sensitivities / values	Relevant key periods	Baseline Priority	DTMI Ranking (Floating oil)	DTMI Ranking (Dissolved oil)	Initial Monitoring Priority
	Coral and other subsea benthic primary producers	Coral spawning: Mar & Oct	High	3	4	High
	Socio-economic Pearling (inactive/pearling zones). Very significant for recreational fishing and charter boat tourism (Marine Management Area). Social amenities and other tourism. Nominated place (National Heritage).	Year-round	High	3	2	Medium
Barrow Island	**Mangroves**	N/A	High	3	3	Medium
	Turtles Regionally and nationally significant green turtle (*Chelonia mydas*) (endangered) (western side) and flatback turtle (*Natator depressus*) (data deficient) (eastern side) nesting. Small numbers of hawksbill turtle (*Eretmochelys imbricata*) (critically endangered) nesting.	Year round, peaking Oct to Jan	High, with the exception of nesting flatback turtles (low)	4	3	High
	Marine mammals Humpback whale (*Megaptera novaeangliae*) (least concern) migration area. Resident populations of bottlenose dolphins and Australian humpback dolphin (*Sousa sahulensis*) (vulnerable). Dugong (*Dugong dugon*) (vulnerable) foraging.	Humpback whale migration: Jun to Oct	High	3	2	Medium
	Birds Nationally significant site for migratory shorebirds, serving both as a key staging area during migration and as a non-breeding destination. Double Island has important bird nesting sites (shearwaters and sea eagles).	Migratory shorebirds: Aug to Apr	Low	2	1	Low
	Coral and other subsea benthic primary producers	Coral spawning: Mar & Oct	High	3	4	High
	Socio-economic Significant for recreational fishing and charter boat tourism, Nominated place (National heritage), Industry – Reverse Osmosis Plant and port operations. Petroleum Activities such as Barrow Island petroleum production.	Year-round	High	5	5	High
Lowendal Islands	**Mangroves**	N/A	High, with the exception of Varanus & Bridled Islands (low)	3	3	Medium
	Coral and other subsea benthic primary producers	Coral spawning: Mar and Oct	High	3	4	High
	Turtles Flatback turtle (*Natator depressus*) (data deficient) , hawksbill turtle (*Eretmochelys imbricata*) (critically endangered), and green turtle (*Chelonia mydas*) (endangered) nesting.	Nesting all year, Hawksbill nesting peak Oct to Jan Flatback turtles nesting peaks Dec to Jan	High, with the exception of turtles at Varanus Island (low)	4	3	High
	Birds Significant seabird nesting and foraging areas.	Year-round	High for shorebirds Low for seabirds at Varanus, Abutilon, Beacon, Bridled, & Parakeelya Islands	2	1	Low
	Marine mammals Humpback whale (*Megaptera novaeangliae*) (least concern) migration area. Dugong (*Dugong dugon*) (vulnerable) foraging.	N/A	High	3	2	Medium
	Socio-economic and heritage Social amenities and other tourism, very significant for recreational fishing and charter boat tourism.	N/A	High	2	2	Low
Muiron Islands	**Turtles** Turtle nesting – major loggerhead (*Caretta caretta*) (vulnerable) site, significant green turtle (*Chelonia mydas*) (endangered) nesting site, low density hawksbill turtle (*Eretmochelys imbricata*) (critically endangered) nesting, occasional flatback (*Natator depressus*) (data deficient) presence	Loggerhead peak nesting: Nov to Jan Green peak nesting Dec to Jan	High	4	3	High
	Coral and other subsea benthic primary producers	Coral spawning: Mar & Oct	Low	3	4	Medium
	Birds Seabird nesting and foraging. Internationally important shorebird area	Seabird nesting: approximately Sep–Feb Migratory shorebirds: Aug to Apr	High	2	1	Low
	Marine mammals Humpback whale (*Megaptera novaeangliae*) (least concern) migration area.	Humpback whale migration: Jun to Oct	High	3	2	Medium
	Fish Shallow macroalgal habitats identified as important juvenile habitat for blue-spotted emperor (*Lethrinus punctulatus*) (least concern).	Year-round	Low	1	1	Low
	Socio-economic and heritage Exmouth gulf prawn fishery (Muiron is western boundary); significant for recreational fishing and charter boat tourism	Prawn fishery – April to November	High	1	2	Low
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		High	3	4	High

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Receptor	Key sensitivities / values	Relevant key periods	Baseline Priority	DTMI Ranking (Floating oil)	DTMI Ranking (Dissolved oil)	Initial Monitoring Priority
	Biologically important habitat for whale shark (*Rhincodon typus*) (endangered)					
	Marine mammals Humpback whale (*Megaptera novaeangliae*) (least concern) migration area.	Jun to Oct	High	3	2	Medium
	Socio-economic Pearling (inactive/pearling zones). Very significant for recreational fishing and charter boat tourism (Marine Management Area). Shipwreck (Tryal).	Year-round	High	3	2	Medium
Gascoyne AMP	**Birds** Biologically important breeding habitat for seabirds: wedge-tailed shearwater (*Ardenna pacifica*) (least concern); roseate tern (*Sterna dougallii*) (least concern)	Species specific	High	3	2	Medium
	Turtle Biologically important internesting habitat for turtles	Main nesting: Hawksbill July-Mar Loggerhead Sept-Mar	High	3	3	Medium
	Marine mammals Humpback whale (*Megaptera novaeangliae*) (least concern) migration area. Pygmy blue whales (*Balaenoptera musculus brevicauda*) (endangered) foraging and migration area.	Pygmy blue whale migration: Apr to Aug (north bound) and Oct to Dec (south bound) Humpback whale migration: Jun to Oct	High	3	2	Medium
Ningaloo AMP	**Coral and other subsea benthic primary producers** Commonwealth waters adjacent to Ningaloo Reef (valued for high productivity and aggregations of marine life).	Coral spawning: Mar & Oct	Low	3	4	Medium
	Fish Continental slope demersal fish communities (valued for high levels of endemism and diversity).	-	Low	1	1	Medium
	Shark Foraging habitat for whale sharks (*Rhincodon typus*) (endangered)	Whale sharks – Mar to Jul	Low	3	4	High
	Birds Biologically important breeding habitat for seabirds: fairy tern (*Sternula nereis*) (vulnerable); wedge-tailed shearwater (*Ardenna pacifica*) (least concern); roseate tern (*Sterna dougallii*) (least concern)	Species specific	High	3	2	Medium
	Turtle Biologically important internesting habitat for turtles	Main nesting: Hawksbill July-Mar Green Sept-Mar Flatback Sept-Mar Loggerhead Sept-Mar	Low	4	3	Medium
	Marine mammals Humpback whale (*Megaptera novaeangliae*) (least concern) migration area. Pygmy blue whales (*Balaenoptera musculus brevicauda*) (endangered) foraging and migration area. Dugong (*Dugong dugon*) (vulnerable) breeding, calving, foraging and nursing habitat.	Pygmy blue whale migration: Apr to Aug (north bound) and Oct to Dec (south bound) Humpback whale migration: Jun to Oct	High	3	2	Medium
Argo-Rowley Terrace AMP	**Benthic habitat** The marine park contains ecosystems typical of two provincial settings: the Northwest Transition, with shelf break, continental slope, and much of the Argo Abyssal Plain, where Mermaid, Clerke, and Imperieuse Reefs form a biodiversity hotspot; and the Timor Province, dominated by warm, nutrient-poor waters in which submarine canyons are key drivers of productivity and marine life aggregations (Parks Australia n.d.).	-	High	3	4	High
	Birds Biologically important resting and breeding habitat for seabirds.	Species specific	High	3	2	Medium
	Marine mammals Migratory pathway for pygmy blue whales (*Balaenoptera musculus brevicauda*). The marine park contains submarine canyons that link the deep Argo Abyssal Plain with the shallower Rowley Terrace and Scott Plateau. These canyons transport sediments downslope and modify currents, creating periodic upwelling that increases surface-water productivity and provides important habitat for the pygmy blue whale.	April to December	High	3	2	Medium
Glomar Shoals	**Benthic habitat** Rocky hard substrates support diverse sessile benthic communities, including hard and foliose corals, sponges, octocorals, coralline algae and macroalgae. These coral, algal and filter-feeder assemblages provide essential habitat structure and food resources for demersal fish and sea snake populations.	-	Medium	3	4	High
	Fish Important habitat for several commercially and recreationally targeted fish species, including Rankin cod (*Epinephelus multinotatus*), brown-striped snapper (*Lutjanus vitta*), red emperor (*Lutjanus sebae*), crimson snapper (*Lutjanus erythropterus*), bream (*Lethrinus spp.*) and yellow-spotted triggerfish (*Pseudobalistes fuscus*).	-	Medium	1	2	Low
	Turtle Turtle foraging area, green turtles (*Chelonia mydas*) primarily feed on macroalgae, while flatback turtles (*Natator depressus*) feed on benthic filter feeders.	-	High	3	2	Medum
Rankin Bank	**Benthic habitat** Benthic communities dominated by hard corals, macroalgae and filter feeders, particularly sponges and octocorals, with assemblage patterns strongly influenced by depth and seabed rugosity.	-	Medium	3	4	High
	Fish	-	Medium	1	2	Low

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Receptor	Key sensitivities / values	Relevant key periods	Baseline Priority	DTMI Ranking (Floating oil)	DTMI Ranking (Dissolved oil)	Initial Monitoring Priority
	Rankin Bank supports diverse and abundant demersal fish assemblages strongly associated with hard coral and sponge habitats. Fish abundance and diversity are higher than at nearby Glomar Shoal, with the greatest richness occurring in shallow hard coral habitats.					
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

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C.3 Mobilisation and timing of OMP and SMP implementation

Table C - 5 provides a list of OMPs and SMPs relevant to the Petroleum Activity, as well as indicative timeframes for mobilisation of each OMP and SMP for key receptors. 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. SCAT teams will begin mobilisation within 48–72 hours of notification and will also document fauna observations. 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 • OM4a: Surface Chemical Dispersant Effectiveness (commencing with Tier 1 SMART Protocol) • 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) • OM4b: Subsea dispersant injection effectiveness monitoring	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) predicted to be contacted week 1–2	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 • OM2: Hydrocarbons in Water Assessment • OM3: Hydrocarbons in Sediment Assessment • OM5: Rapid Marine Fauna Surveillance • OM6: Shoreline Clean-up Assessment	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. 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 • SM3: Intertidal and Coastal Habitat 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

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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 loss of well containment from the Yodel Updip development well releasing 993,860 m^3 Yodel-3 Condensate (CS-02) was identified as the worst-case scenario, affecting the most locations within 14 days and determined to require the greatest OSM capability.

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 Section 4.6 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. To help define OSM resourcing requirements, deterministic modelling has been used (Table C - 7), where applicable to the nature and scale of the activity and spill scenarios.

Table C - 6: Monitoring units for the Petroleum Activity relevant to stochastic modelling results

Receptors within each Unit	Type
Barrow	
Humpback whale (migration)	BIA
Marine turtle	BIA
Pygmy blue whale (distribution)	BIA
Seabird and shorebird s	BIA
Whale shark (foraging)	BIA
Barrow Island (including Boodie and Middle Islands)	Islands
Lowendal Islands	Islands
Barrow Island MP (State)*	Marine Parks
Barrow Islands MMA	Marine Parks
Poivre Reef*	Reef, Shoals and Banks
Ancient Coastline at 125 m depth contour	KEF
Continental Slope Demersal Fish Communities*	KEF
Exmouth Plateau*	KEF

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Receptors within each Unit	Type
Middle Pilbara	
Humpback whale (migration)	BIA
Marine turtle s	BIA
Pygmy blue whale (distribution)	BIA
Seabird and shorebird	BIA
Middle Pilbara – Islands and Shoreline Airlie Island	Coastline
Great Sandy Island NR	Islands?
Penguin Bank*	Reef, Shoals and Banks
Ripple Shoals*	Reef, Shoals and Banks
Trap Reef*	Reef, Shoals and Banks
Montebello	
Montebello AMP*	AMP
Humpback whale (migration)	BIA
Marine turtle s	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
Ancient Coastline at 125 m depth contour	KEF
Continental Slope Demersal Fish Communities	KEF
Ningaloo nearshore	
Ningaloo AMP*	AMP
Exmouth and islands (including Rivoli Island)	Coastline
Exmouth Gulf South East	Coastline
Exmouth Gulf West	Coastline
Ningaloo Coast World Heritage	Heritage
Ningaloo MP (State)*	Marine Parks
Cape Range	National Park
Ningaloo Reef*	Reef, Shoals and Banks
North West Reef*	Reef, Shoals and Banks
Commonwealth Waters Adjacent to Ningaloo Reef	KEF
Continental Slope Demersal Fish Communities	KEF
Ningaloo offshore	
Gascoyne AMP*	AMP
Dugong	BIA
Marine turtle s	BIA
Pygmy blue whale (foraging and migration)	BIA
Seabird and shorebird s	BIA
Whale shark (foraging)	BIA
Canyons linking the Cuvier Abyssal Plain and the Cape Range Peninsula	KEF
Commonwealth waters adjacent to the Ningaloo Reef	KEF
Continental Slope Demersal Fish Communities	KEF
Exmouth Plateau	KEF
Southern Pilbara	
Humpback whale (migration)	BIA

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Receptors within each Unit	Type
Marine turtle s	BIA
Pygmy blue whale (distribution)	BIA
Seabird and shorebird	BIA
Southern Pilbara – Islands and Shoreline Ashburton Island Bessieres Island Flat Island Fly Island Locker Island Observation Island Peak Island Round Island Serrurier Island Table Island Thevenard Island Tortoise Island	Coastline
Ashburton	Coastline
Thevenard Island NR	Nature Reserve
Muiron Islands	Islands
Muiron Islands MP MMA	Marine Parks
Australind Shoal*	Reef, Shoals and Banks
Baylis Patches*	Reef, Shoals and Banks
Brewis Reef*	Reef, Shoals and Banks
Combe Reef*	Reef, Shoals and Banks
Dailey Shoal*	Reef, Shoals and Banks
Fairway Reef*	Reef, Shoals and Banks
Glennie Patches*	Reef, Shoals and Banks
Hood Reef*	Reef, Shoals and Banks
Inner North West Patch*	Reef, Shoals and Banks
Locker Reef*	Reef, Shoals and Banks
Outtrim Patches*	Reef, Shoals and Banks
Otway Reef*	Reef, Shoals and Banks
Rosily Shoals*	Reef, Shoals and Banks
Roller Shoals*	Reef, Shoals and Banks
Santo Rock*	Reef, Shoals and Banks
Spider Reef*	Reef, Shoals and Banks
Tongue Shoals*	Reef, Shoals and Banks
Web Reef*	Reef, Shoals and Banks
Continental Slope Demersal Fish Communities	KEF
Ancient Coastline at 125 m depth contour	KEF
Canyons linking the Cuvier Abyssal Plain and the Cape Range Peninsula*	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	

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Receptors within each Unit	Type
Control sites	All

**Submerged receptor that has no features above the sea surface.*

Deterministic modelling

To better understand worst-case capability OSM requirements for this activity, deterministic modelling was undertaken for the loss of well containment from the Yodel Updip development well releasing 993,860 m^3 Yodel-3 Condensate (CS-02). The deterministic run with the most receptors contacted by dissolved hydrocarbons at ≥10 ppb within 14 days (Run Q3, 09) was selected for further analysis. Deterministic modelling enables oil spill planners to assess the results of a single run from the stochastic oil spill modelling results, helping to assess the possible worst-case capability requirements. The results of this deterministic assessment are presented in Table C - 7.

To help understand which Monitoring Units will be contacted by the worst-case single spill, Figure C - 2 shows the Monitoring Units predicted to be contacted by the floating, shoreline and dissolved hydrocarbon phases.

The resources required to commence operational and scientific monitoring components during weeks 1–2 are presented in Table C - 8 and Table C - 9 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 deterministic trajectory outlined in Table C - 6, 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 the OSM capability requirements for the Petroleum Activity (Table C - 8 and Table C - 9) are satisfied by the existing capability arrangements in the OSM-BIP.

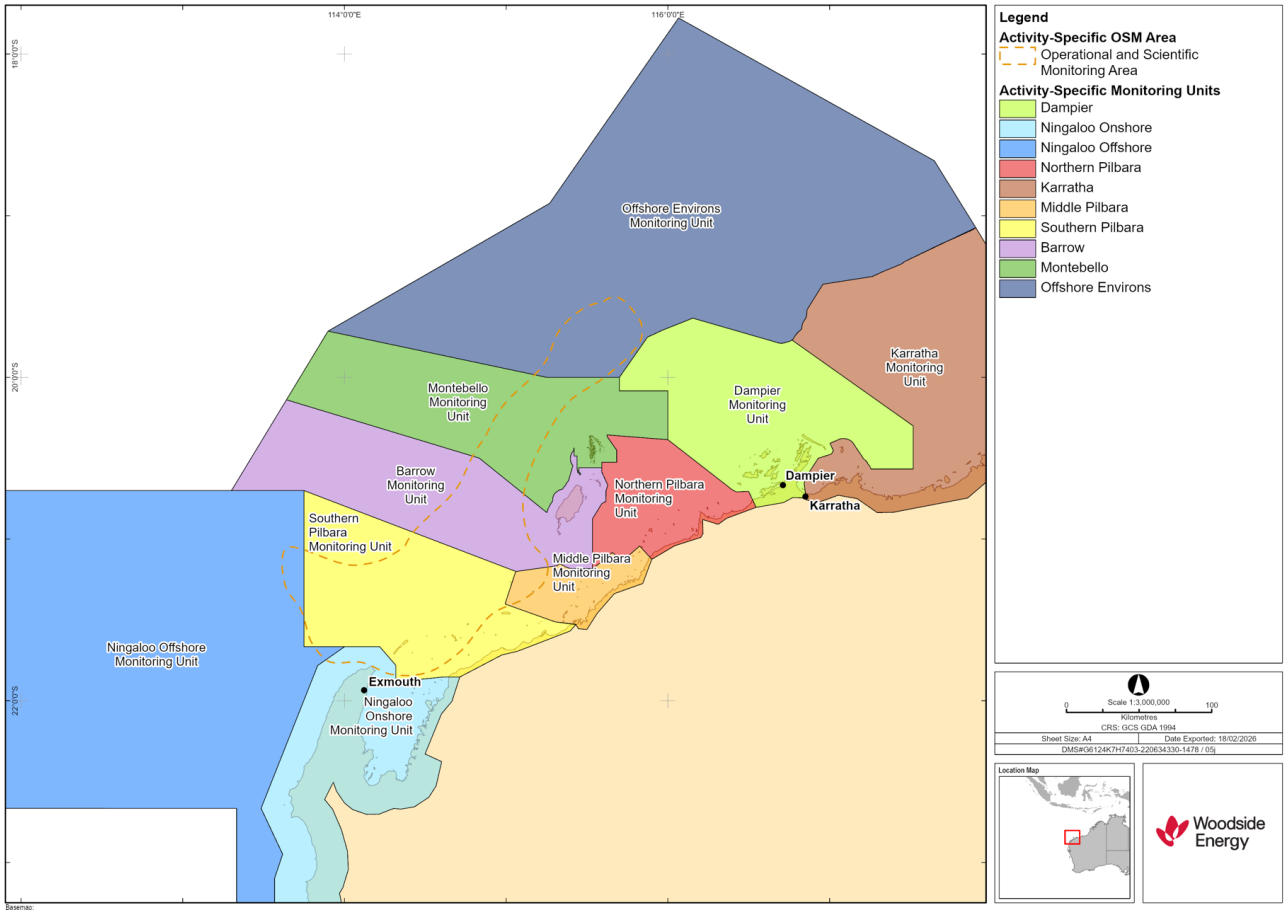


Figure C - 2: Monitoring Units predicted to be contact by Petroleum Activity worst case deterministic scenario

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Table C - 7: Deterministic modelling results (Q3, Run 09) – CS-02: Loss of well containment from Yodel Updip development well (993,860 m^3 Yodel-3 Condensate)

Scientific monitoring priority area	Minimum time (days) for contact by floating oil at ≥ 1 g/m²	Minimum time (days) for accumulation on shoreline at≥ 10 g/m²	Minimum time (days) for contact by entrained oil at≥ 10 ppb	Maximum entrained oil concentration (ppb)	Minimum time (days) for contact by dissolved hydrocarbons at ≥ 10 ppb	Maximum dissolved hydrocarbons concentration (ppb)
Gascoyne MP*	NC	NA	8.17	444	9.25	190
Montebello MP*	2.58	NA	1.58	3,162	1.79	4,492
Ningaloo MP*	NC	NA	7.96	561	9.29	72
Bessieres Island	NC	NC	7.79	177	8.25	122
Flat Island	NC	NC	8.17	657	8.46	171
Muiron Islands	NC	NC	8.88	374	9.79	134
Observation Island	NC	NC	9.00	334	10.92	16
Peak Island	NC	NC	8.33	427	8.54	41
Round Island	NC	NC	8.46	276	8.71	165
Serrurier Island	NC	NC	8.04	325	8.38	119
Southern Pilbara – Islands	NC	NC	7.50	657	7.67	306
Sunday Island	NC	NC	9.04	219	9.42	63
Table Island	NC	NC	8.08	237	10.17	17
Muiron Islands MMA	NC	NC	8.71	374	9.04	469
Ningaloo Coast WH	NC	NC	7.96	561	9.29	266
Ningaloo MP (State)	NC	NC	8.83	246	11.04	266
Combe Reef*	NC	NA	9.58	164	13.17	151
Dailey Shoal*	NC	NA	8.58	271	8.96	93
Fairway Reef*	NC	NA	8.63	238	9.58	116
Hood Reef*	NC	NA	8.50	207	9.04	264
Otway Reef*	NC	NA	9.08	300	9.17	85
Outtrim Patches*	NC	NA	8.71	248	9.46	53
Rankin Bank*	1.17	NA	0.38	4,050	0.42	9,064
Rosily Shoals*	NC	NA	7.54	127	10.17	48
Web Reef*	NC	NA	9.17	248	11.21	13

Key
Receptor contacted within 7 days
Receptor contacted within 14 days

**Submerged receptor that has no features above the sea surface. Modelling indicates 'contact' with these receptors when the hydrocarbons pass over the receptor on the sea surface*
NA = not applicable
NC = no contact

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Table C - 8: Resources required for initially implementing operational monitoring plans for Petroleum Activity spills[#]

OMP	Week 1 (total)	Week 2 (total)	Arrangement
OM1: Hydrocarbon characterisation*^	1 team spill site and surrounds [#] 1 team Montebello Unit **Total 2 teams**	1 team spill site and surrounds [#] 1 team Montebello Unit 1 team Ningaloo Offshore Unit 1 team Ningaloo Nearshore Unit 1 team Southern Pilbara Unit **Total 5 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
OM4a: Surface dispersant effectiveness monitoring	**1 team** for visual observations, which may be performed by trained aerial observers used during monitor and evaluate if trained in observation and verification of chemical dispersant effectiveness For water quality observations, refer to OM2: Hydrocarbon in water assessment		OSRL OSM Supplementary Service Agreement Australian Marine Oil Spill Centre (AMOSC) Master Services Agreement (MSA) Woodside Contracted Vessel Providers
OM4b: Subsea dispersant injection effectiveness monitoring	No subsea dispersant injection until week 2 due to mobilisation requirements	**1 team**	OSRL OSM Supplementary Service Agreement AMOSC MSA Woodside Contracted Vessel Providers
OM5: Rapid marine fauna surveillance	1 team to conduct aerial surveys for spill site and surrounds and Montebello Unit, 1 team for Ningaloo Offshore, Ningaloo Nearshore and Southern Pilbara (2 observers per aircraft) **Total 2 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
OM6: Shoreline clean-up assessment	Detail on resources required for shoreline clean-up assessment is presented in Section 5.11.		Australian Marine Oil Spill Centre (AMOSC) Master Services Agreement (MSA) and/or OSRL OSM Supplementary Service Agreement Woodside Contracted Vessel Providers State/Territory Response Teams and AMSA National Response Team
OM7: Air quality modelling (responder health and safety)	1 model	1 model	3rd party modelling provider / OSRO
Total number of teams	**5 teams**	**9 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.

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Table C - 9: 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 spill site and surrounds 1 team Montebello Unit 1 team control site(s) **Total 3 teams**	1 spill site and surrounds 1 team Montebello Unit 1 team Ningaloo Offshore Unit 1 team Ningaloo Nearshore Unit 1 team Southern Pilbara Unit 1 team control site(s) **Total 6 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 14 days) **Total 0 ground-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
SM4: Seabirds and shorebirds^	1 team to conduct initial aerial surveys for spill site and surrounds, and Montebello Units **Total 1 aerial team** 1 team spill site and surrounds 1 team Montebello Unit 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**	1 team to conduct initial aerial surveys for spill site and surrounds, and Montebello Units **Total 1 aerial team** 1 spill site and surrounds 1 team Montebello Unit 1 team Ningaloo Offshore Unit 1 team Ningaloo Nearshore Unit 1 team Southern Pilbara Unit 1 team control site(s) (surveys would include all fauna [birds, reptiles, cetaceans, dugong and whale shark]) **Total 6 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	• 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

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SMP	Week 1 (total)	Week 2 (total)	Arrangement
	Ground based survey refer to SMP: Seabird and shorebirds (including 1 member experienced with ground turtle surveys)	Ground based survey refer to SMP: Seabird and shorebirds (including 1 member experienced with ground turtle surveys)	
SM6: Benthic habitat assessment	1 team spill site and surrounds 1 team Montebello Unit 1 team control site(s) **Total 3 teams**	1 spill site and surrounds 1 team Montebello Unit 1 team Ningaloo Offshore Unit 1 team Ningaloo Nearshore Unit 1 team Southern Pilbara Unit 1 team control site(s) **Total 6 teams**	OSRL OSM Supplementary Service Agreement Woodside Contracted Vessel Providers Laboratory arrangement
SM7: Marine fish and elasmobranch assemblages assessment	1 team spill site and surrounds 1 team Montebello Unit 1 team control site(s) **Total 3 teams**	1 spill site and surrounds 1 team Montebello Unit 1 team Ningaloo Offshore Unit 1 team Ningaloo Nearshore Unit 1 team Southern Pilbara Unit 1 team control site(s) **Total 6 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**	**27 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.

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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

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Enderby Island – Dampier
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

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APPENDIX H FIRST STRIKE PLAN

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Woodside Energy

Greater Western Flank Phase 4 Drilling and Subsea Installation – Oil Pollution First Strike Plan

Corporate HSE

Hydrocarbon Spill Preparedness

April 2026
Revision 0

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TABLE OF CONTENTS

CONTROL AGENCIES AND INCIDENT CONTROLLERS.....5

SPILLS IN STATE/PORT WATERS.....5

RESPONSE PROCESS OVERVIEW.....6

1. NOTIFICATIONS.....7

2. RESPONSE TECHNIQUES.....9

3. RESPONSE PROTECTION AREAS.....12

4. DISPERSANT APPLICATION.....14

APPENDIX A – CREDIBLE SPILL SCENARIOS AND HYDROCARBON INFORMATION.....15

APPENDIX B – NOTIFICATION FORMS.....16

APPENDIX C – SPILL ASSESSMENT QUESTIONS.....18

APPENDIX D – COORDINATION STRUCTURE FOR A CONCURRENT HYDROCARBON SPILL IN BOTH COMMONWEALTH AND STATE WATERS/ SHORELINES.....19

APPENDIX E – WOODSIDE INCIDENT MANAGEMENT STRUCTURE.....20

APPENDIX F – WOODSIDE LIAISON OFFICER RESOURCES TO DTMI.....21

APPENDIX G – DTMI LIAISON OFFICER RESOURCES TO WOODSIDE.....24

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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/PORT 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 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.

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RESPONSE PROCESS OVERVIEW

For guidance on credible scenarios and hydrocarbon characteristics, refer to APPENDIX A

<table>
<tr><td>ALL INCIDENTS</td><td colspan="2">Notify the Woodside Communication Centre (WCC) on:
[1]</td></tr>
<tr><td></td><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="2">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></td><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="3">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 on 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 on Table 2-1 taking into consideration seasonal sensitivities and current situational awareness.
Commence validated strategies.</td></tr>
<tr><td></td><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 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>

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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

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]	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 Marine Park Compliance Duty Officer is notified in the event of oil pollution within a marine park, or where an oil spill response action must be taken within a marine park, so far as reasonably practicable, prior to response action being taken. This notification should include: • titleholder details • time and location of the incident • proposed response arrangements and locations as per the OPEP • contact details for the response coordinator • confirmation of access to relevant monitoring and evaluation reports when available.	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.

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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 Greater Western Flank Phase 4 Drilling and Subsea Installation. 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 Greater Western Flank Phase 4 Drilling and Subsea Installation 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)	Rescue Coordination Centre (RCC)	[10]	Verbally notify AMSA RCC 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	

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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	Cond.					
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 24 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	**Yes**	**Yes**	**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 monitoring – shoreline assessment	**Yes**	**Yes**	**ALL**	Consider the need to mobilise resources to undertake shoreline assessment surveys.	Planning or Environment	In agreement with WA DTMI, deployment of 2 specialists trained in Shoreline Clean-up Assessment Technique (SCAT) for each of the RPAs with predicted impacts.	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.
Operational and Scientific Monitoring	**Yes**	**Yes**	**ALL**	Consider the need to mobilise OSM resources via third party service provider.	Environment	**WITHIN 4 HOURS**: Contact OSM Services Provider and verbally notify their Duty Manager of the incident, requesting provision of OSM Implementation Lead to the IMT. **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 (AEP, 2021)	
Surface dispersant	**No**	**Potentially**	**L2/3**	Use of surface dispersant would also only be permitted and/or only appropriate where favourable metocean conditions are present, a net environmental benefit can be demonstrated e.g. minimising shoreline accumulations, and where application is undertaken only within the pre-defined ZoA as illustrated in Section 4 of this plan. If surface dispersant is deemed appropriate, dispersant mobilised from Woodside and AMOSC (Dampier and Exmouth) stockpiles. Consideration of mobilisation of interstate/ international dispersant stockpiles.	Logistics, Marine and Planning	**WITHIN 24 HOURS**: One FWADC aircraft with minimum payload of 1850 litres mobilised to site within four hours of activation. One additional FWADC mobilised to site within another 20 hours of activation. Access to dispersant stockpiles within 24-48 hours. 2 offtake support vessels from integrated fleet will undertake dispersant trials within 24 hours of the release	Surface Dispersant Operational Plan *Logistics Section to download and follow steps*
Containment and recovery	**No**	**Potentially**	**L2/3**	Whilst modelling predicts floating hydrocarbons at suitable thresholds for containment and recovery (>50 g/m^2), the highly	Logistics and Planning	**WITHIN 48 HOURS:**	Containment and Recovery Operational Plan

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Technique	Spill type		Level	Pre- Identified Tactics	Responsible	ALARP Commitment Summary	Link to Operational Plans for notification numbers and actions
	MDO	Cond.					
				volatile nature of condensate and/or metocean conditions may preclude safe response operations If containment and recovery is considered feasible and safe, mobilise equipment from Woodside, AMOSC and DTMI stockpiles with relevant personnel. Consider mobilisation of interstate/ international containment and recovery equipment and relevant personnel (i.e. OSRL).		Two vessel-based containment and recovery operations deployed.	*Logistics Section to download and follow steps*
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**	**Yes**	**L2/3**	Equipment from Woodside, AMOSC and State stockpiles mobilised. Consideration of mobilisation of interstate/ international shoreline protection equipment (i.e. OSRL).	Operations and Planning	**5 DAYS PRIOR TO CONTACT:** In agreement with WA DTMI, activate relevant Tactical Response Plans (TRPs). In agreement with WA DTMI, mobilise teams to RPAs 5 days prior to operational monitoring predicting impacts. In agreement with WA DoT (for Level 2/3 incidents), equipment mobilised from closest stockpile 5 days prior to operational monitoring predicting impacts. Supplementary equipment mobilised from AMOSC and State stockpiles (if required). Supplementary equipment mobilised from OSRL (if required).	Protection and Deflection Operational Plan *Logistics Section to download immediately and follow steps*
Shoreline clean-up	**No**	**Yes**	**L2/3**	Equipment from Woodside, AMOSC and State stockpiles and relevant personnel mobilised. Consideration of mobilisation of interstate/ international shoreline clean-up equipment and relevant personnel (i.e. OSRL).	Logistics and Planning	**5 DAYS PRIOR TO CONTACT:** In agreement with WA DTMI, activate relevant Tactical Response Plans (TRPs). In liaison with WA DoT (for Level 2/3 incidents), mobilise and deploy shoreline clean-up operations to RPAs 24 hours prior to predicted impact. In agreement with WA DoT (for Level 2/3 incidents), equipment mobilised from closest stockpile 24 hours prior to predicted impact. Access to ~2,400 m^3 of solid and liquid waste storage available within 7 days upon activation of 3rd party contract. Supplementary equipment mobilised from AMOSC and State stockpiles (if required). Supplementary equipment mobilised from OSRL (if required).	Shoreline Clean-up Operational Plan *Logistics Section to download immediately and follow steps*
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. Consider whether additional equipment is required from local suppliers.	Logistics and Planning		Oiled Wildlife Response Operational Plan
SOURCE CONTROL TECNIQUES							
Subsea First Response Toolkit	**No**	**Yes**	**L2/3**	As per Source Control Emergency Response Planning Guideline.	Source Control	**WITHIN 48 HOURS:** Remotely Operated Vehicle (ROV) on Mobile Offshore Drilling Unit (MODU) ready for deployment within 48 hours.	Source Control Emergency Response Planning Guideline Link Subsea Dispersant Application Operational Plan Link
Subsea Dispersant	**No**	**Potentially**	**L2/3**	Use of subsea dispersant injection would only be permitted and/or appropriate where favourable metocean conditions are present, in appropriate water depths, a net environmental benefit can be demonstrated e.g. minimising surface expression or shoreline accumulations, to facilitate access to the wellhead for execution of	Source Control	**WITHIN 24 HOURS:** Mobilisation of SSDI toolkit and subsea dispersant (500 m^3 available from AMOSC stockpiles) to site. **DAY 5:**	

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Technique	Spill type		Level	Pre- Identified Tactics	Responsible	ALARP Commitment Summary	Link to Operational Plans for notification numbers and actions
	MDO	Cond.					
				other source control techniques, and where the plume would be predicted to remain within the pre-defined Zone of Application (ZoA) illustrated in Section 4 of this plan. If subsea dispersant is deemed appropriate, mobilise subsea dispersant stockpile (Fremantle) from AMOSC and SFRT equipment (Jandakot) from AMOSC/ Oceaneering. Mobilise deep sea water quality monitoring equipment via IMR global contract. Suitable vessel required. This response strategy is not recommended.		SSDI equipment and dispersant mobilised to site. Support vessels available to begin application on within 24-48 hours. **DAY12:** Subsea dispersant application able to be conducted at an application volume of 75m^3 per day. Response established within 12 days of release.	
Capping Stack	**No**	**Potentially**	**L2/3**	Capping stack deployment is not considered feasible where water depths are <100 m. For the wells located in >100 m water depth, conventional/ vertical capping stack deployment with a heavy lift vessel will be attempted if plume and environmental conditions permit (wind speed, wave height and current) and will be assessed on a case-by-case basis and at the discretion of the vessel master.	Source Control	**DAY 16:** Capping stack deployed by a chartered construction vessel.	
Relief Well	**No**	**Yes**	**L2/3**	As per Source Control Emergency Response Planning Guideline.	Source Control	**WITHIN 24 HOURS:** Identify source control vessel availability within 24 hours.	

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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 modelling results, no sensitive receptors are identified as priority protection areas, as they do not have the potential to be contacted by hydrocarbon at or above impact threshold levels within 48 hours of a spill.

Hydrocarbon spill modelling results indicate the sensitive receptors listed below have the potential to be contacted by hydrocarbons beyond 48 hours of a spill:

- Montebello Islands including Montebello MP and Hermite Island
- Southern Pilbara Islands at Thevenard Island including NR
- Muiron Islands and Muiron MMA
- Exmouth including Ningaloo State MP and Ningaloo Coast WH

Tactical Response plans for these 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 beyond 48 hours of a spill.

Figure 3-1 illustrates the location of regional sensitive receptors in relation to the Greater Western Flank 4 Drilling and Subsea Installation Operational Area and identifies priority protection areas.

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 Greater Western Flank 4 Drilling and Subsea Installation Operational Area.

Table 3-1: Assets in the vicinity of the Greater Western Flank 4 Drilling and Subsea Installation Operational Area

Asset	Distance and direction from Wilcox Prospect	Distance and direction from Yodel Updip	Operator
Pluto Platform	13.2 km, west	46.5 km south-west	Woodside
Wheatstone Platform	13.8 km, north-west	41.3 km south-west	Chevron
Goodwyn Platform	59.8 km, north-east	23.7 km, north-east	Woodside
John Brookes Platform	63.5 km, south-west	100.0 km, south-west	Santos
Reindeer Platform	85.7 km, east	68.0 km, east-south-east	Santos
Stag Platform	88.0 km, south-east	82.7 km, south-east	Jadestone
North Rankin Complex	81.5 km, north-east	46.6 km, north-east	Woodside
Okha FPSO	110.2 km, north-east	77.4 km, east-north-east	Woodside
Angel Platform	128.4 km, north-east	95.4 km, east-north-east	Woodside

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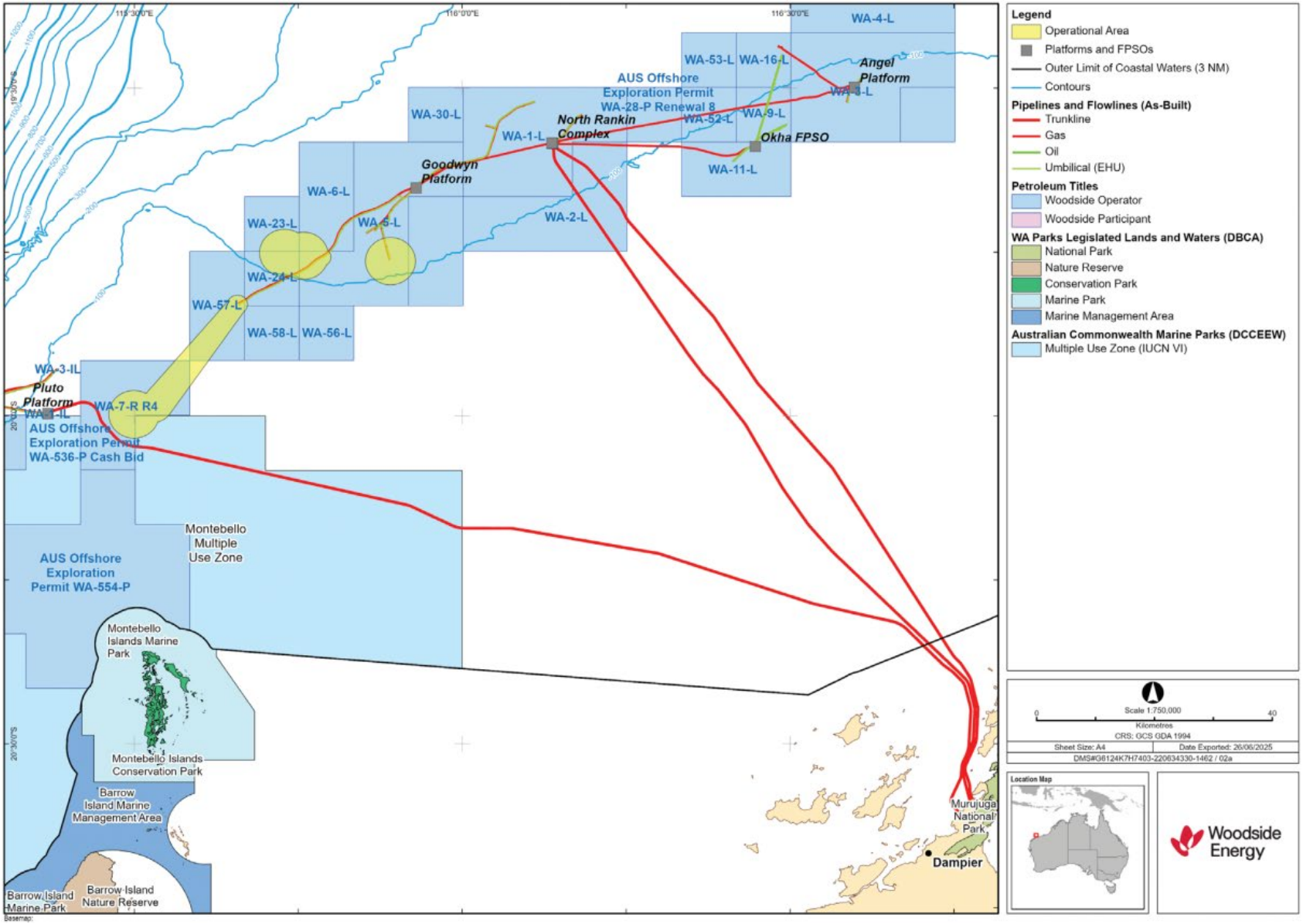


Figure 3-1: Operational area

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4. DISPERSANT APPLICATION

Woodside has included surface dispersant spraying as a potential response technique in the instance that operational monitoring observes sufficient oil concentrations for it to be deployed.

INSTRUCTIONS

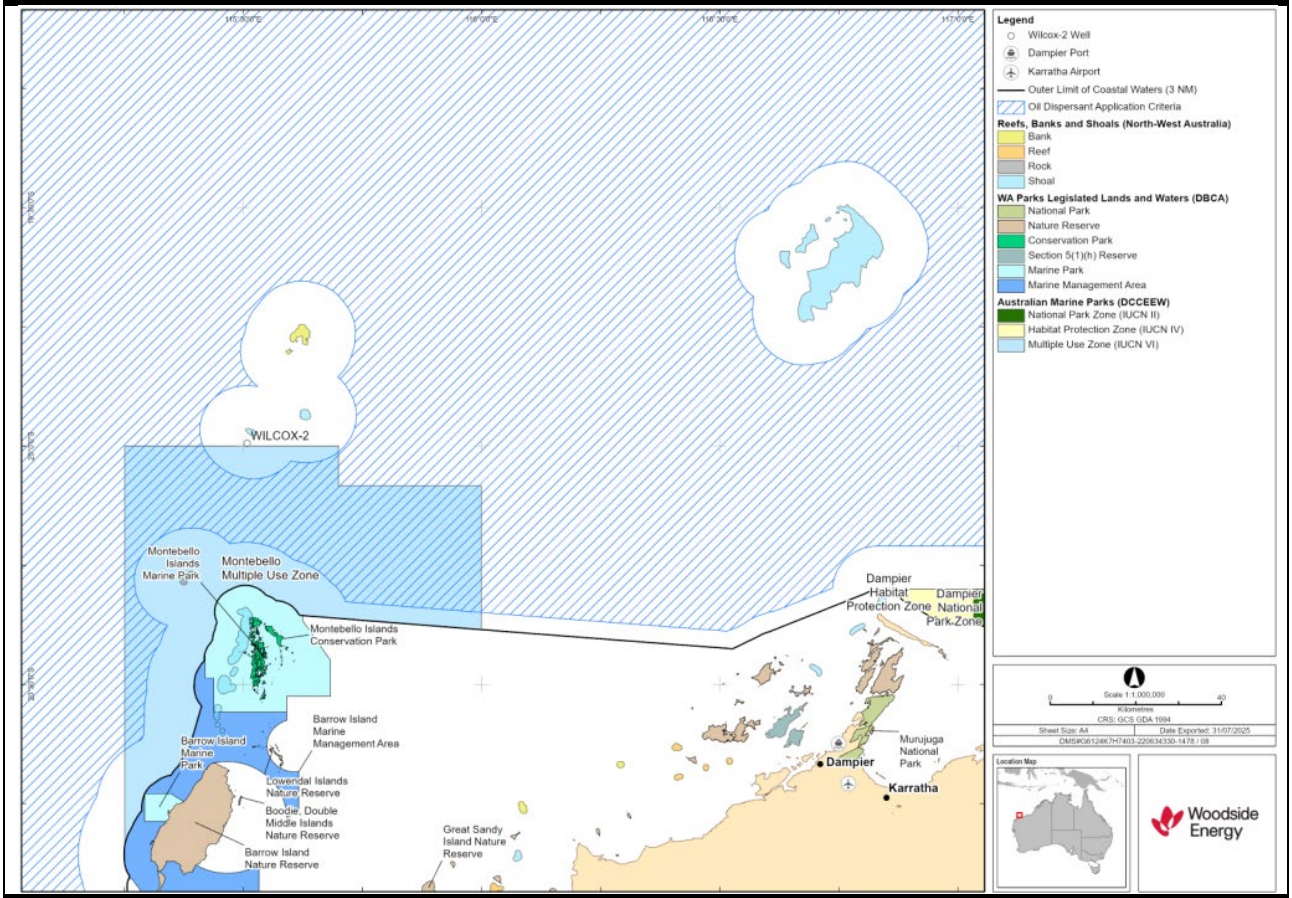
DISPERSANTS ARE PRE-APPROVED UNDER THE ENVIRONMENT PLAN FOR USE IN THE BLUE STRIPED ZONE ONLY. OSCA APPROVED OR TRANSISTIONAL DISPERSANTS ARE PRE-APPROVED FOR USE.

The shape file for the approved dispersant zone of application (ZoA) is saved in Woodside's Geospatial Corporate Geodatabase and adheres to the following criteria:

- 10km from Commonwealth Marine Parks (excluding 'Multiple Use Zones')
- 10km from State Marine Parks
- 10km from Heritage List areas
- >20m water depth
- 4km from State Waters
- Within the Mainland Australian EEZ
- Avoiding sensitive reefs and shoals

The Surface Dispersants Operational Plan should be used to mobilise dispersant operations immediately

PRE-APPROVED DISPERSANT ZONE



DISPERSANT VOLUMES

Current dispersant volumes available should be checked in the following document:
Oil Spill Preparedness - Dispersant Stockpiles Database

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APPENDIX A – CREDIBLE SPILL SCENARIOS AND HYDROCARBON INFORMATION

Table A - 1: Credible spill scenarios and hydrocarbon information

Scenario	Product	Volume	Residue	Weathering rate		Suggested ADIOS2 Analogue[3]
CS-01 (WCCS) Hydrocarbon release caused by a well loss of containment over 70[4] days	PYA-01 Condensate	707,729 m^3	3% (21,232 m^3)	12 hours (BP < 180 °C)	48%	*NWS Condensate*
				24 hours (180 °C < BP < 265 °C)	19%	
				Several days (265 °C < BP < 380 °C)	30%	
CS-02 Hydrocarbon release caused by a well loss of containment over 76 days	Yodel-3 Condensate	993,860 m^3	2.5% (24,847 m^3)	12 hours (BP < 180 °C)	63.1%	*NWS Condensate*
				24 hours (180 °C < BP < 265 °C)	25.3%	
				Several days (265 °C < BP < 380 °C)	9.1%	
CS-03 Instantaneous hydrocarbon release due to a vessel collision[5]	MDO	1,000 m^3	5% (50 m^3)	12 hours (BP < 180 °C)	6%	*Diesel Fuel Oil – Southern USA 1 (API 37.2°)*
				24 hours (180 °C < BP < 265 °C)	34.6%	
				Several days (265 °C < BP < 380 °C)	54.4%	
CS-04 Instantaneous hydrocarbon release due to a vessel collision [6]	MDO	1,000 m^3	5% (50 m^3)	12 hours (BP < 180 °C)	6%	*Diesel Fuel Oil – Southern USA 1 (API 37.2°)*
				24 hours (180 °C < BP < 265 °C)	34.6%	
				Several days (265 °C < BP < 380 °C)	54.4%	

[3] 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.

[4] Modelling for a loss of well integrity in the Wilcox Prospect was originally undertaken in 2023 based on a preliminary estimated relief well duration of 77 days resulting in a release of circa 745,012 m^3. Contemporary studies estimate that a relief well could be executed within 70 days (including mobilisation of a MODU from South East Asia) releasing circa 707,729 m^3. Given the decreased duration and volume, the existing modelling is deemed conservative and therefore additional modelling was not required.

[5] Modelling for a release of 2,000 m^3 MDO was available within 6.6 km of the Wilcox Prospect area, and closer to shore than the Operational Area for this activity. It was originally undertaken in 2021 using NOPSEMA's contemporary modelling thresholds. The largest tank of the vessel proposed for the activity is circa 1,000 m^3, 50% smaller than the modelled volume (2,000 m^3). Given that spill risk parameters and geographic location for this activity fall within the envelope of the existing modelling, it is an appropriate surrogate and therefore additional modelling was not required.

[6] Modelling for a release of 1,000 m^3 MDO was available within title WA-5-L (one of the northern Operational Areas for this activity). It was originally undertaken in 2020 using NOPSEMA's contemporary modelling thresholds. The largest tank of the vessel proposed for the activity is also 1,000 m^3. Given that spill risk parameters and geographic location for this activity align with the existing modelling, it is an appropriate surrogate and therefore additional modelling was not required.

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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

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FORM 1 – RECORD OF INITIAL VERBAL NOTIFICATION TO NOPSEMA

Woodside Energy

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]**	

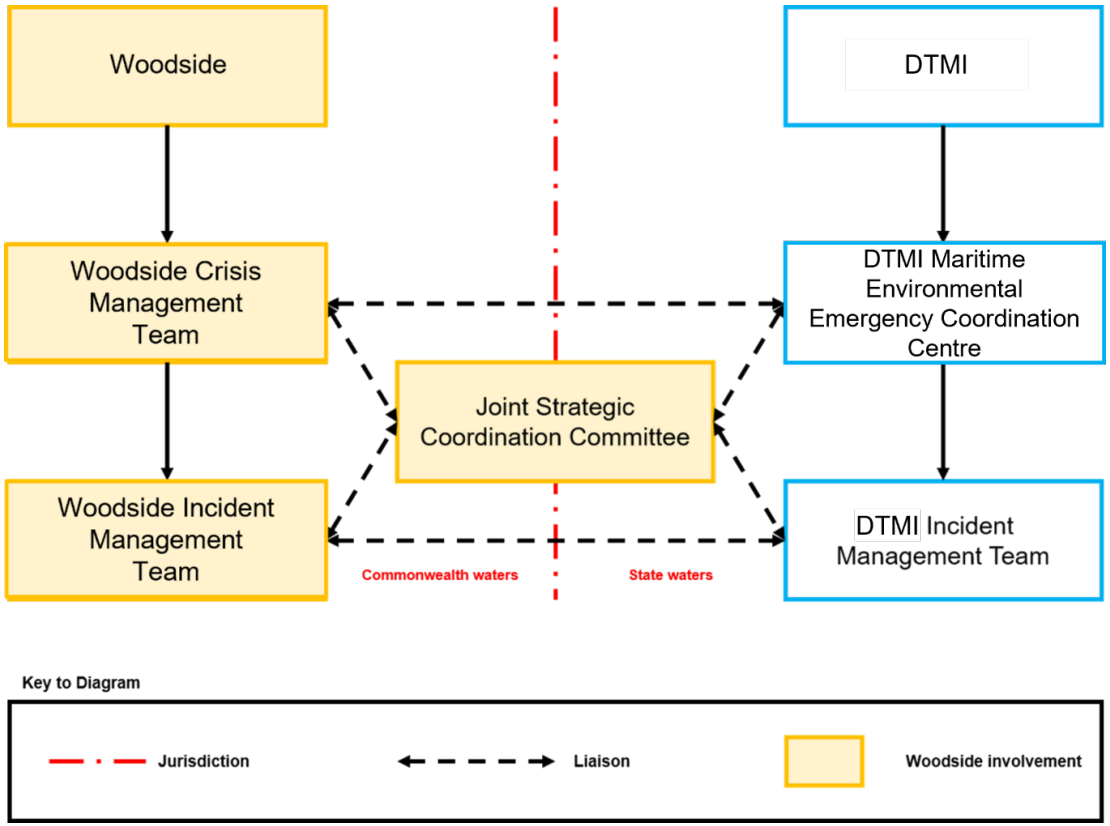
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APPENDIX C – SPILL ASSESSMENT QUESTIONS

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		

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APPENDIX D – COORDINATION STRUCTURE FOR A CONCURRENT HYDROCARBON SPILL IN BOTH COMMONWEALTH AND STATE WATERS/ SHORELINES[7]



The Control Agency for a hydrocarbon spill in Commonwealth waters resulting from an offshore petroleum activity is Woodside (the Petroleum Titleholder).

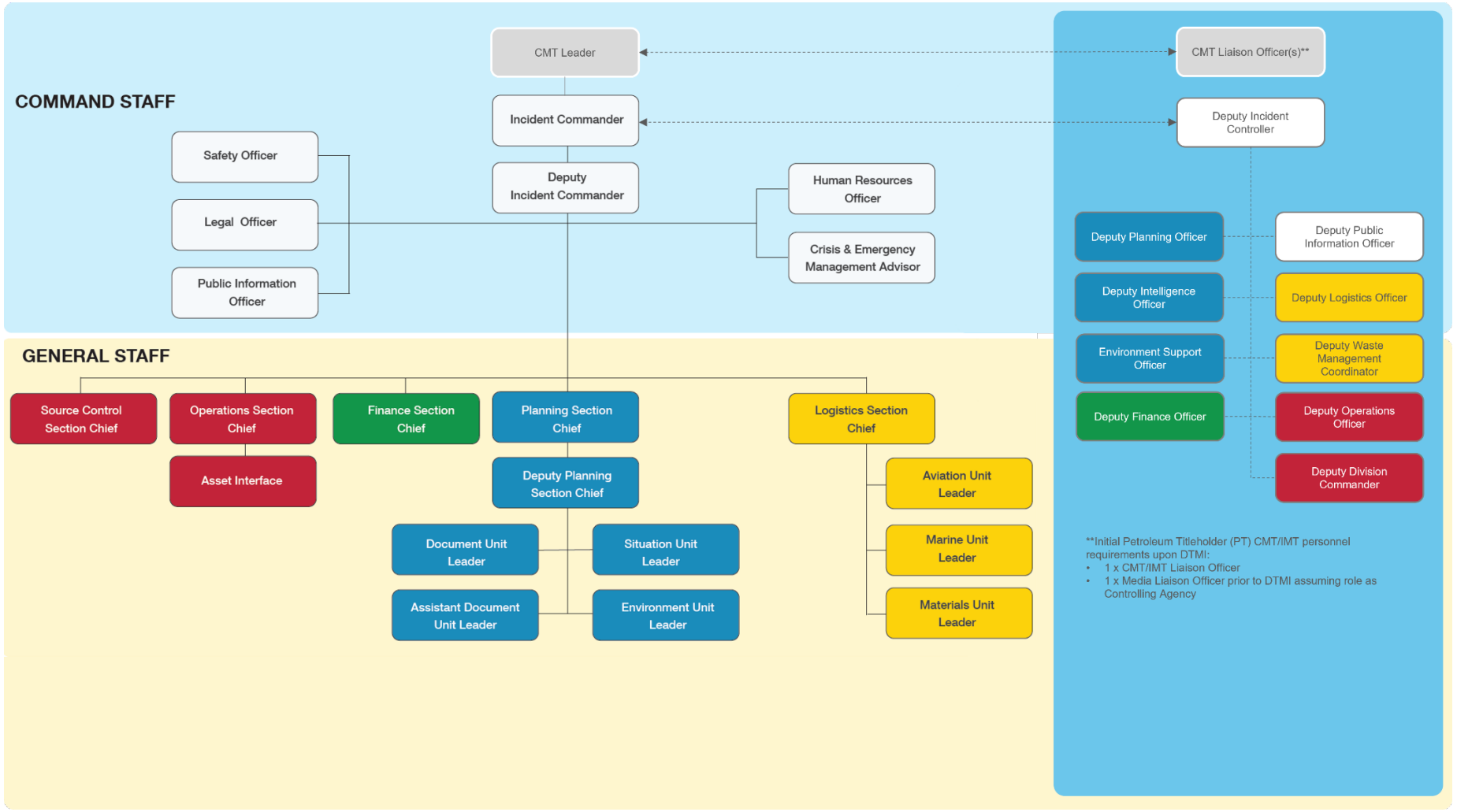
The Control Agency/ Hazard Management Agency (HMA) for a hydrocarbon spill in State waters/shorelines resulting from an offshore petroleum activity is DTMI. DTMI will appoint an Incident Controller and form a separate IMT to only manage the spill within State waters/shorelines.

[7] 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.

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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.



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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[8]	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.	1

[8] *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 [11]*

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Area	Role	Woodside personnel[8]	Key Duties	#
			• Facilitate in requesting, obtaining and interpreting environmental monitoring data originating from the PT IMT. • 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

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Area	Role	Woodside personnel[8]	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

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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

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